

Internship Report on Frontend Web Development at SoftwindTech LTD

by

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*Internship report (CSE4099) submitted in partial fulfillment of the
requirements for the degree of*

Bachelor of Science in Computer Science and Engineering

Under the supervision of

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DECLARATION

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I declare that this internship report entitled *Internship Report on Frontend Web Development at SoftwindTech* is the result of my own work except as cited in the references. The internship report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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CERTIFICATE

This is to certify that the internship report entitled **Internship Report on Frontend Web Development at SoftwindTech LTD**, submitted by **Parsia Noor Ethila** (Student ID: 223014131) is a undergraduate student of the **Department of Computer Science and Engineering** has been examined. Upon recommendation by the examination committee, we hereby accord our approval of it as the presented work and submitted report fulfill the requirements for its acceptance in partial fulfillment for the degree of *Bachelor of Science in Computer Science and Engineering*.

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Parsia Noor Ethila

University of Liberal Arts Bangladesh

Date: April 21, 2026

Dedicated to
My supportive Family – *Parsia Noor Ethila*

EXECUTIVE SUMMARY

This internship was completed as a requirement of my academic program to gain practical experience in a real industry environment and to bridge the gap between theoretical knowledge and real-world software development. I successfully completed a three month internship at SoftwindTech, a software-based IT company that provides web development and digital solutions to various clients. Gaining practical experience in frontend web programming and learning how contemporary web apps are developed and maintained in a professional environment were the primary goals of this internship. I collaborated closely with the development team and made contributions to practical initiatives during this time. Using HTML, CSS and Javascript specifically dynamic html functionality using DOM manipulation, I was responsible for creating responsive user interfaces using Bootstrap, enhancing website layouts, resolving UI problems and guaranteeing a seamless user experience. I also worked with backend developers to update and maintain CMS (Content Management System) based websites which improved my understanding of how frontend and backend systems are integrated. I worked in a team environment and followed organized growth strategies during the internship. I helped with a variety of duties including enhancing design responsiveness, updating website content and supporting continuing project development. Improving UI performance and fixing layout problems that improved the user experience overall was one of my major accomplishments. The internship helped me to develop important technical skills such as frontend coding, responsive design, use of Git and Github and working with modern development tools. It also improved my understanding of real-world project workflows. Along with technical growth, I gained valuable soft skills including communication, teamwork, problem solving and time management. Overall, this experience played a significant role in my personal and professional development. It strengthened my interest in frontend web development and prepared me for a future career in the software industry.

Keywords: Responsive Design, Dynamic HTML, CMS (Content Management System), Git and Github, Bootstrap.

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Chapter 1

Introduction

The software industry and the current IT sector are presented in this chapter which also serves as a fundamental summary of the internship report. The main objectives achieved during the internship at SoftwindTech are therefore clearly described.

1.1 Introduction

One of the most significant industries in today's digital world is software development which is essential to communication, corporate expansion and technological improvement. Organizations increasingly rely significantly on web applications and software systems to effectively run their operations, provide services and engage with users due to the quick advancement of information technology. With a preference on creating user-friendly interfaces and guaranteeing seamless user experiences, frontend web development has grown to be an essential component of this sector. Modern websites must integrate advanced technologies like HTML, CSS, Javascript and other frontend frameworks in order to be responsive, interactive and visually impressive. In order to ensure appropriate data handling and functionality, cooperation with backend systems is crucial.

One example of a contemporary software business that supports this changing digital landscape by offering web development and IT solutions is SoftwindTech. In order to satisfy customer demands, the company concentrates on developing effective, scalable and user-centered apps.

During my internship at SoftwindTech, I worked as a frontend web development intern where I gained practical experience in designing and developing web interfaces. I was involved in creating responsive layouts, improving user experience

and maintaining website performance. In addition, I collaborated with backend developers especially in managing and maintaining CMS (Content management System) based websites. This collaboration helped me to understand how frontend and backend systems work together to deliver complete web solutions.

This report provides a detailed overview of my internship experience including the tasks I performed, tools and technologies I used and the knowledge I gained. It also highlights how real-world development processes work in a professional environment and how teamwork plays a vital role in successful project completion.

1.2 Objective of the internship report

- **Application of Academic Knowledge:** To demonstrate how theoretical knowledge of frontend web development was applied in real-world projects within a professional environment.
- **Frontend Development Work:** To describe my involvement in designing user interfaces, developing responsive web pages and improving user experience using modern web technologies.
- **CMS Maintenance and Backend Collaboration:** To explain my work with backend developers in maintaining and updating CMS based websites and understanding the integration between frontend and backend systems.
- **Use of Tools and Technologies:** To highlight the use of development tools, frameworks and structured workflows followed during the internship.
- **Challenges and Problem-solving:** To identify the challenges faced during the internship such as understanding requirements, fixing UI issues and adapting to new technologies along with the solutions applied.
- **Skill Development:** To reflect the development of technical skills(coding, UI design) as well as soft skills like communication, teamwork, problem solving and time management.
- **Professional Growth:** To present how the internship contributed to my personal and professional growth and prepared me for a career in frontend web development.

- **Future Career Preparation:** To show how the experience gained has increased my confidence, interest and readiness to pursue a career in the software development field.

Chapter 2

Background

The background information about SoftwindTech a developing software development and digital solutions company is given in this chapter. It describes the organization's overall position in the competitive IT sector as well as its mission and vision. It also describes the goals of the internship as well as the tasks that must be carried out throughout the internship. The organizational environment and the real-world situation in which the learning event occurred are clearly explained in this section.

2.1 Overview of SoftwindTech LTD

SoftwindTech Ltd. is a software development and IT solutions company established in 2014 and located in Banani, Dhaka, Bangladesh. The company operates in the fast-growing technology sector where it provides modern digital solutions to meet the evolving needs of business. Since its establishment, SoftwindTech has focused on delivering efficient, scalable and user-friendly software products. The company offers a wide range of services including custom software development, web and mobile application development, CMS solutions, e-commerce platforms, UI/UX design and digital marketing services. These services help organizations improve their online presence, automate business processes and enhance overall operational efficiency.

SoftwindTech is supported by a team of skilled professionals including frontend developers, backend developers, designers, SEO teams and project managers who work collaboratively to deliver complete solutions. The company follows modern development practices and structured workflows to ensure quality and efficiency



Figure 2.1: Logo of the company

in project delivery. In addition to its local operations in Bangladesh, SoftwindTech also maintains international connections through its sister company which allows it to work with global clients and follow international development standards. This global presence helps the company expand its service capabilities and maintain competitiveness in the international market.

Over the years, SoftwindTech has completed a number of web based and software development projects and continues to grow by adopting new technologies and improving its service quality. Its focus on innovation, user experience and client satisfaction has helped it establish a strong position in the IT industry.

2.2 Mission of SoftwindTech LTD

The mission of SoftwindTech is to transform the business ideas into effective digital solutions while ensuring high levels of customer satisfaction. The company aims

to bridge the gap between business challenges and technology through innovative and efficient services. The key objectives of the company's mission are:

- To develop customized and scalable software solutions based on client requirements.
- To provide high-quality web and application development services.
- To ensure reliable and user-friendly digital products.
- To contribute to digital transformation by solving real world business problems.
- To maintain long term relationships through continuous support and service.

2.3 Vision of SoftwindTech LTD

The vision of SoftwindTech is to become a leading software development company recognized for innovation, reliability and quality service. The company aims to continuously improve by adopting modern technologies and development practices. It strives to become a trusted technology partner for organizations that want to digitize their operations and improve efficiency. Through continuous growth and innovation, softwindTech aims to play an important role in the global digital transformation process.

2.4 Industry Environment and Marketplace

The global software development and IT services industry is highly dynamic and competitive due to rapid technological advancements. Organizations are increasingly relying on web applications, mobile solutions, cloud services and CMS platforms to improve efficiency and remain competitive. In this environment, SoftwindTech has positioned itself as a reliable provider of digital solutions with a focus on modern technologies and user-centered design. The company emphasizes delivering practical and efficient solutions that meet client needs.

The key strengths of SoftwindTech in the marketplace include:

- **Diverse Service Portfolio:** The company offers a wide range of services including web development, CMS solutions, e-commerce systems and custom software development, allowing it to serve different industries.
- **Technical Expertise:** SoftwindTech uses modern technologies in both frontend and backend development, enabling it to build responsive and scalable applications.
- **Client-Oriented Approach:** The company focuses on understanding client requirements and delivering solutions that align with business goals.
- **Global Connectivity:** Through its sister company and international exposure, SoftwindTech is able to serve clients beyond the local market and follow global standards.

2.5 Purpose of the Internship

The purpose of the internship at SoftwindTech was to gain practical industry experience in frontend web development and bridge the gap between academic learning and real-world application.

The internship provided an opportunity to understand how modern web applications are designed, developed and maintained in a professional environment. It also aimed to develop practical skills in frontend technologies and improve knowledge of responsive design and user experience.

Another important objective of the internship was to gain experience working with CMS-based websites and to understand how frontend components interact with backend systems. This helped in developing a clear understanding of full-stack collaboration.

Additionally, the internship provided exposure to teamwork, professional communication and structured development processes. It helped prepare for future professional roles in the software development field.

2.6 Role and Responsibilities During the Internship

During the internship, I worked at SoftwindTech as a Frontend Web Development Intern and actively participated in the development and maintenance of web-based

applications.

My primary responsibility was to design and develop user interfaces using HTML, CSS and JavaScript. I worked on creating responsive and user-friendly web pages to ensure compatibility across different devices and screen sizes. I also focused on improving UI design, fixing layout issues and enhancing the overall user experience. A significant part of my work involved collaborating with backend developers, especially in maintaining and updating **CMS (Content Management System)** based websites. This included modifying frontend components, updating content structures and ensuring smooth integration between frontend and backend functionalities.

In addition, I worked on a gaming blog website named **Gamescreed** where I was responsible for recreating the frontend part of the website. In this task, I converted **static designs into dynamic** and responsive layouts using HTML and CSS. This helped me understand how to transform a static approach into a more functional and interactive web interface.

I was also involved in **website monitoring and reporting issues** of functionality. This included regularly checking website performance, identifying UI or functional issues and preparing reports based on observations. These activities helped ensure that the websites were running smoothly and maintained a good user experience. Throughout the internship, I followed a structured workflow and worked closely with team members to complete assigned tasks within deadlines. This experience provided me with practical exposure to real-world development practices and improved my skills in problem-solving, teamwork and professional communication.

Chapter 3

Scope of Work

This chapter details the duties, assignments and projects I completed while interning at SoftwindTech. It describes the type of work done, the practical experience I obtained in front-end web development and how these activities supported organizational objectives and my professional development.

This chapter offers a concise synopsis of every internship activity as well as a methodical justification of the tasks performed during the internship.

3.1 Engagement in Frontend Development Activities

I was employed as a Frontend Web Development Intern at SoftwindTech. The internship gave me hands-on experience with real-world web development in a formal setting. Creating user interfaces, enhancing website design and guaranteeing a seamless user experience were the primary goals of my work.

I contributed to frontend development duties for several web-based projects. Understanding project requirements, putting UI designs into practice and creating responsive layouts with HTML, CSS and JavaScript were all part of my duties. Additionally, I learnt how backend systems and frontend programming work together in practical applications.

A significant part of my employment involved maintaining websites where CMS (Content Management System) was crucial. I worked on the front end of CMS-driven websites, updating layouts, modifying UI elements and making sure dynamic content managed from the backend was displayed correctly rather than creating the CMS itself. This made it easier for me to comprehend how content is dynamically regulated and shown on the user interface.

In addition, I rebuilt the frontend design for Gamescreed a gaming blog website. Using HTML and CSS, I transformed static designs into dynamic responsive web pages for this work. My comprehension of converting static layouts into useful and user-friendly interfaces has improved as a result of this experience.

I worked with backend engineers and team members during the internship which improved my understanding of collaboration, communication and actual development processes.

3.2 Frontend Development Tasks and Responsibilities

I was given a variety of responsibilities involving UI development and website upkeep as a frontend development intern. Creating responsive user interfaces that function on various screens and devices was one of my primary duties.

I worked on creating and modifying web pages using HTML, CSS and basic JavaScript. I also converted static designs into more dynamic HTML structures to improve flexibility and usability. Fixing UI issues such as layout misalignment, responsiveness problems and styling inconsistencies was also part of my daily tasks.

I managed frontend maintenance, content formatting and layout modifications while working with CMS-based systems. I made sure the frontend presented dynamically managed items from the backend correctly.

I was also responsible for website monitoring and reporting. This included checking websites regularly, identifying UI or functional issues and preparing reports based on findings. This helped maintain overall website performance and user experience.

3.3 Tools and Technologies Used

I utilized a variety of tools and technologies to effectively do my work throughout the internship. For frontend programming, my main tools were HTML, CSS and simple JavaScript.

I used frontend frameworks like **Tailwind CSS** and **Bootstrap** to create layouts that were both visually consistent and responsive. With the aid of these frameworks, I was able to swiftly produce mobile-friendly designs while maintaining appropriate styling on various screen sizes.

My primary code editor for authoring, modifying and organizing code was **Visual Studio Code**. I used **Git and GitHub** for version control and collaboration which helped me manage various code versions, keep track of changes and work well with teammates.

I obtained hands-on experience managing dynamic material using CMS-based systems while working on website maintenance. To make sure that content controlled from the backend was appropriately presented on the website, I worked on the frontend portion.

All things considered, these technologies and tools helped me comprehend contemporary frontend development techniques, maintain code quality and enhance my development workflow.

3.4 Team Support and Professional Development

I actively assisted with team activities and ongoing projects in addition to technical duties. I participated in team discussions, finished assignments on time and obeyed senior developers' instructions.

Working in a collaborative setting enhanced my capacity for problem-solving, flexibility and communication. I also gained knowledge about effective task management and working on actual projects.

All things considered, the internship gave me invaluable practical frontend development experience. It enhanced my comprehension of practical workflows, improved my technical expertise and equipped me for positions in the software development industry in the future.

Chapter 4

Internship Activities

4.1 Introduction of the Organization/Institution

This section gives an overview of SoftwindTech in a nutshell, its history, its services, its operational geographic location and its structure. It gives the important details about the facilities of the company, management hierarchy and market positioning providing a clear picture of the innovative technology company where my Frontend Web Development internship was done.

In Banani, Dhaka, Bangladesh, SoftwindTech Ltd. is a software development and IT solutions firm that was founded in 2014. The organization is led by its Chief Executive Officer (CEO) **Moinur Hussain Chowdury** who plays a key role in guiding the company's strategic direction and growth. The business works in the quickly expanding technology industry and offers a variety of digital services, such as e-commerce systems, UI/UX design, web application development and custom software solutions. The company has established a solid reputation for providing scalable, user-friendly and business-focused solutions throughout the years.

The company has modern facilities that facilitate productive software development and teamwork. The majority of technical operations and project activities are managed at the Banani office which acts as the primary development hub. Additionally, the business keeps up ties with foreign activities through its sister firm which aids in managing clients from across the world and broadening the scope of its services. Their core offerings and the projects that they represent are divided in the table below as seen in their portfolio:

Service / Category	Project Name & Short Summary
Web Design & Development	Robi Corporate Website – Responsive UI and UX improvement
	Airtel Corporate Website – Modern frontend with smooth navigation
	CBL Munchee Website – Interactive product showcase system
	Obhijan Platform – Dynamic content-based web system
	Corporate Business Websites – Multi-client scalable frontend solutions
Web Application / Portal	BAT Music Portal – Digital content management system
	Business Management Portal – Workflow and internal system
	Analytics Dashboard – Reporting and data visualization system
E-commerce Development	E-commerce Platform – Product listing and order processing system
	Online Transaction System – Digital commerce solution
UI/UX Design	Pureit Landing Page – Campaign-based UI design
CMS / SEO Optimization	CMS-Based Website – Dynamic content management system
	SEO Optimization – Search ranking and visibility improvement
Advanced Web Solutions	Business Automation System – Workflow optimization tool
	Progressive Web App (PWA) – Cross-device responsive application
React Development	React Interactive UI – Dynamic frontend application development

Table 4.1: SoftwindTech Service Category wise Comprehensive Tabular Summary

In terms of leadership and strategic management, the company is guided by experienced founders and senior management who define the overall vision and business direction.

Structure and Agile Framework in the Organization SoftwindTech follows a project-based organizational structure with a strong focus on flexibility, collaboration, and agile development practices. The company uses Agile methodology, where tasks are divided into smaller parts and completed in iterative cycles (sprints), allowing continuous improvement and faster delivery.

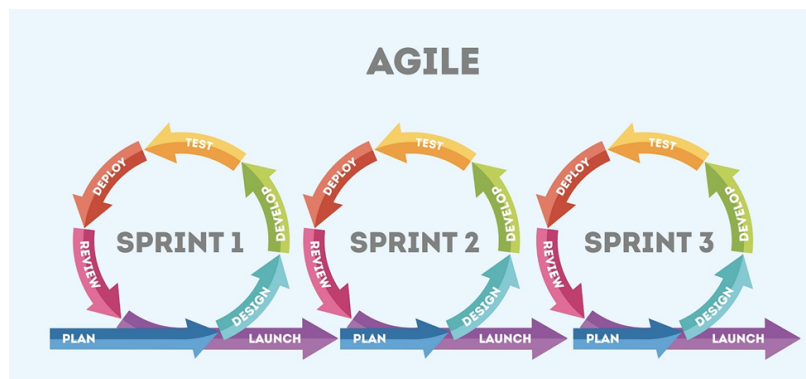


Figure 4.1: Agile Sprint Framework in the Organization

Team Structure Each project team typically includes:

- **Project Manager:** Manages overall project planning, deadlines and communication with clients.
- **Team Lead:** Guides the development team, reviews code, assigns tasks and ensures technical quality.
- **Frontend Developers:** Design and develop user interfaces and ensure responsiveness.
- **Backend Developers:** Handle server-side logic, database management and APIs.
- **UI/UX Designers:** Create user-friendly designs and improve user experience.
- **QA/Testers:** Ensure software quality through testing and bug identification.

This structured and collaborative team environment ensures smooth communication, efficient workflow, and successful project delivery.

All things considered, SoftwindTech offers a polished and encouraging workplace where collaboration, creativity and ongoing education are strongly valued. This organizational structure is crucial to producing effective software solutions and fostering team members' professional development.

4.2 Work Accomplishment

This section provides a timeline of the assignments, possibilities for learning and hands-on work I completed during my internship at SoftwindTech. It shows how my abilities evolved over time and how academic information was used in practical projects.

- **Week 1–2: Introduction and Basic Frontend Learning** During the first two weeks, I was introduced to the company environment, team structure and development workflow. I focused on mastering the fundamental building blocks of the web: HTML and CSS. I practiced creating structured web page layouts and gained a solid understanding of how websites adjust to different screen sizes through responsive design principles. Alongside these technical studies, I observed ongoing professional projects and became familiar with website monitoring and UI inspection processes.

Static HTML (The Skeleton): To understand modern web development, I first worked with Static HTML fig: 4.2 which serves as the **Template or Skeleton** of any interface.

- **Role:** It defines the layout using hard-coded HTML tags (such as `<div>`, `<buttons>`, and `<img>`). It sets up the static containers where information is intended to reside.
- **Limitations:** This approach requires every piece of content to be manually typed into the source code. This is highly time-consuming for large projects and makes frequent updates difficult to manage as each change requires a manual code edit.

```

spotlight_new.css U JS spotlight.js U JS dynamic_latest.js < latestNews.html U X
C: > Users > SWT > Desktop > persia Frontend Intern > Internship Project_GC > manual parts > < latestNews.html > ...
2 <html lang="en">
3 <head>
9 <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
10 <link
11 href="https://fonts.googleapis.com/css2?family=Archivo&family=Encode+Sans+Condensed:wght@100;200;300;
12 rel="stylesheet"
13 />
14 </head>
15 <body>
16 <section class="news">
17 <div class="main_news">
18 <h4>Latest News</h4>
19 <div class="news_box">
20 <div class="news_row row1">
21 <div class="card1 card">
22 <div class="bg_news1 bg">
23 <div class="btns">
24 <button class="btn btn-review">Review</button>
25 <button class="btn btn-pc">
26 
27 </button>
28 <button class="btn btn-switch">
29 
33 </button>
34 <button class="btn btn-xbox">
35 
36 </button>
37 <button class="btn btn-playstation">
38 
39 </button>
40 </div>
41 </div>
42 <div class="content">
43 <div class="rating">
44 <p>
45 4.5

```

Figure 4.2: Implementation of Static or Hard-Coded HTML Structure

- **Week 3–4: Responsive Design and Website Monitoring** In these weeks, I improved my skills in CSS and responsive design. I worked on making web pages mobile-friendly using proper layout techniques. During the initial weeks, alongside learning, I was introduced to professional website Let's Vibe fig: 4.3 monitoring. This involved checking UI consistency and reporting bugs to ensure a smooth user experience, aout problems and responsiveness across devices. This helped me understand how real-world websites are maintained and improved based on user experience.

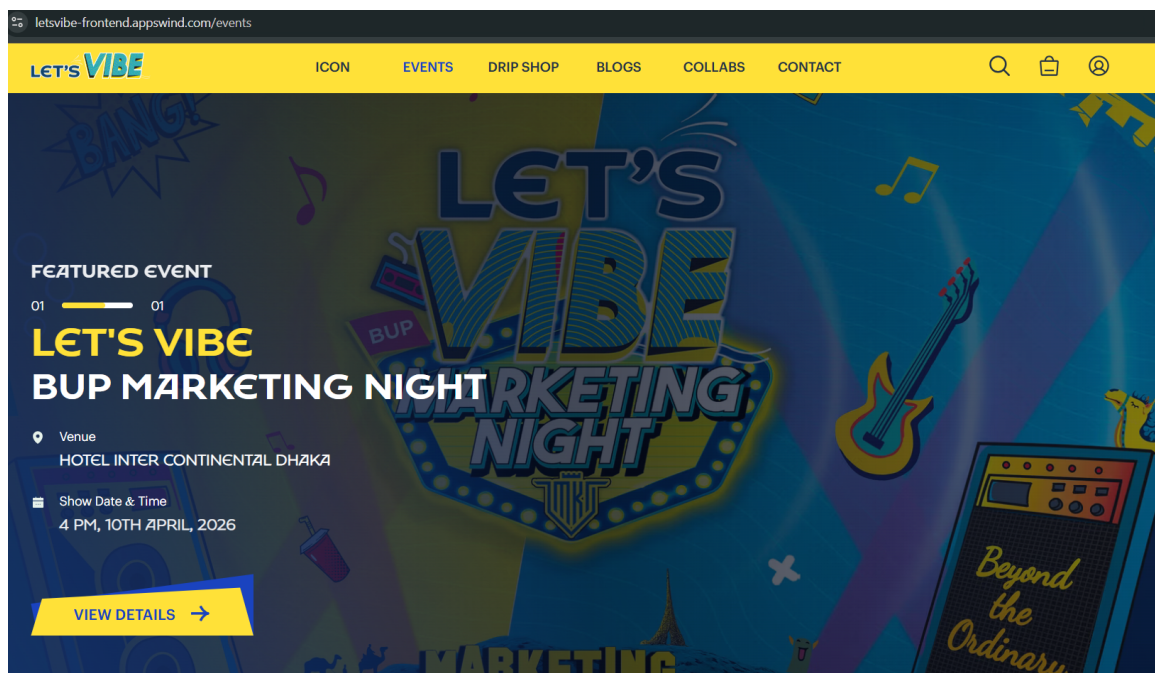


Figure 4.3: Website monitoring and identifying UI inconsistencies in Let's Vibe project.

- **Week 5–6: Introduction to Bootstrap and UI Development** During this period, I started working with the Bootstrap framework. I learned how to use its grid system, components and utilities to build responsive layouts more efficiently. I practiced developing structured and consistent UI designs. This phase helped me speed up my development process and improve design consistency.
- **Week 7–8: Tailwind CSS and CMS-Based Work** In these weeks, I shifted from Bootstrap to Tailwind CSS and learned utility-first styling. I used Tailwind to build modern and flexible UI components. A significant part of my internship involved working with CMS-based systems. I managed content updates for live projects and ensured that data from the backend reflected correctly on the frontend. Specifically, I worked on the bKash Try-on shown in fig: 4.4 CMS modules.

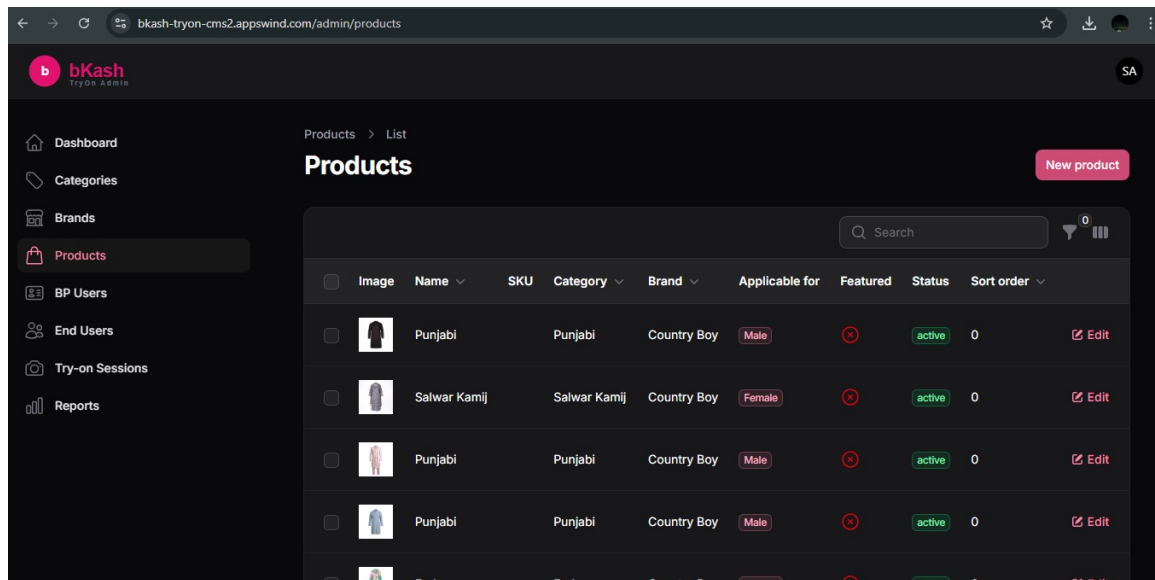


Figure 4.4: Content management and UI verification for bKash Try-on project.

- **Week 9–10: API Testing and Basic JavaScript** During this phase, I gained basic knowledge of JavaScript and its role in frontend development. I also worked on API-related tasks on GamesCreed where I created and uploaded test cases and tested API responses through data fetching. This helped me understand how the frontend interacts with backend services and how data is handled dynamically.

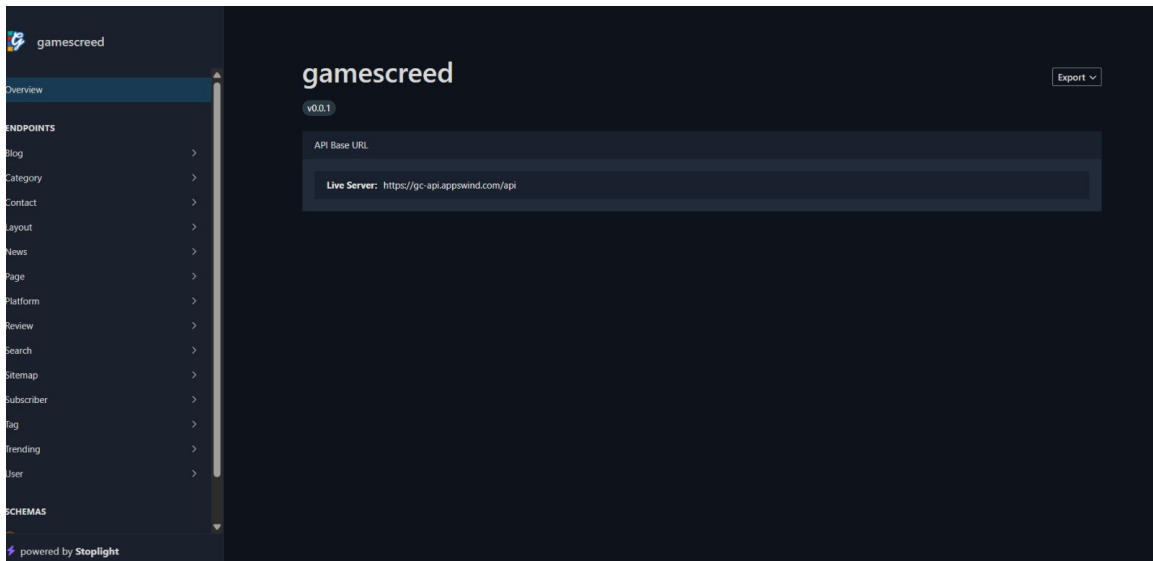


Figure 4.5: GamsCreed CMS Appswind API Dashboard

Fig: 4.5 Shows the API documentation interface with base URL configuration. It lists available endpoints like Blog, Category, Contact, etc., used to interact with the CMS backend.

Fig: 4.6 displays the request structure for submitting a contact form. It defines required fields like name, email, and message, along with validation limits and a sample JSON payload for API usage.

ContactRequest

name string	required
<= 255 characters	
email string<email>	required
<= 255 characters	
message string	required

Example

```
1 {  
2   "name": "string",  
3   "email": "user@example.com",  
4   "message": "string"  
5 }
```

Figure 4.6: Contact Request API from Frontend Part Subscriber

This fig: 4.7 shows the API documentation for the `blogs.show` endpoint. It allows developers or systems to retrieve the details of a specific blog post. It uses a *GET* request to the URL: `https://gc-api.appswind.com/api/v1/blogs/{slug}`. It must be provided a specific *slug* (the URL-friendly identifier for a blog post) as a path parameter to successfully fetch the data.

blogs.show

GET `https://gc-api.appswind.com/api/v1/blogs/{slug}`

Request

Path Parameters

`slug` string required

Responses 200 404

Body application/json

Parameters

`slug*` : string

Send API Request

Request Sample: Shell / cURL

```
curl --request GET \
  --url https://gc-api.appswind.com/api/v1/blogs/{slug} \
  --header 'Accept: application/json'
```

Response Example

```
1 {}
```

Figure 4.7: GamesCreed Blogs API

- **Week 11–12: JavaScript and DOM Manipulation** The core of a modern web application is its data. Instead of hard-coding text and images directly into the HTML file, I utilized JavaScript Objects and Arrays as the “Source of Truth.” shown in fig: 4.8 This data-driven approach stores all variable content—such as news titles, dates, image paths and ratings within structured objects. This

```
// script.js
import { generateHeader } from "../common/headerComponent.js";
import { renderSpotlight } from "../sections/spotlight.js";
import { generateReview } from "../sections/review.js";
import { renderLatestNews } from "../sections/dynamic_latest.js";
import { renderRead, renderTrend } from "../sections/read.js";
import { CommonFooter } from "../common/footer_cmh.js";

//highlight section
const spotlightData = {
  title: "Spotlight",
  leftCard: {
    bg: "../GC_images/img/spotlight.png",
    buttons: [
      { type: "review", text: "Review" },
      { type: "pc", icon: "../GC_images/logos/pc.png" },
      { type: "xbox", icon: "../GC_images/logos/ri_xbox-fill.png" },
    ],
    rating: "4.5",
    text: "Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.",
    writer: "Writer Name",
    date: "OCT 06, 2025",
  },
  rightCards: [
    {
      bg: "../GC_images/img/review3.png",
      buttons: [{ type: "review", text: "Review" }],
      text: "Mus luctus tincidunt sit proinurpis gravida tempor leo",
      writer: "Writer Name",
      date: "OCT 06, 2025",
    },
    {
      bg: "../GC_images/img/review4.png",
      buttons: [
        { type: "review", text: "Review" },
        { type: "pc", icon: "../GC_images/logos/pc.png" },
      ],
      text: "Mus luctus tincidunt sit proinurpis.",
      writer: "Writer Name",
    }
  ]
}
```

Figure 4.8: Object Data

makes the website highly scalable. For instance, to add a new section or a news update, I simply append a new object to the data array rather than modifying the core HTML structure.

As shown in Fig: 4.9, DOM manipulation acts as the “Engine” that bridges the gap between raw data (JavaScript Objects) and the visual structure (HTML). I implemented specialized functions, such as *renderLatestNews()* and *createStars()*, to automate the creation of HTML elements.

```
import {createCard} from "../common/card.js";
export function renderLatestNews(rootId, data) {
  const root = document.getElementById(rootId);
  if (!root || !data) return;
  root.innerHTML = "";
  data.forEach((item) => {
    root.appendChild(createCard(item));
  });
}

function createStars(rating) {
  const starBox = document.createElement("div");
  starBox.classList.add("star-box", "stars");

  for (let i = 1; i <= 5; i++) {
    const star = document.createElement("span");
    star.classList.add("star");

    if (rating >= i) {
      star.innerHTML = '<i class="fa-solid fa-star"></i>';
    } else if (rating >= i - 0.5) {
      star.innerHTML = '<i class="fa-solid fa-star-half-stroke"></i>';
    } else {
      star.innerHTML = '<i class="fa-regular fa-star" style="color:gold"></i>';
    }
    starBox.appendChild(star);
  }
  return starBox;
}
```

Figure 4.9: Dynamic HTML

Process: The JavaScript code iterates through the object-type data, creates new DOM elements (like *div*, *img*, or *h3*), injects the data into these elements and finally appends them to the document.

Outcome: This methodology ensures that the web page is functional and dynamic, allowing for seamless updates and a more responsive user experience. By

handling events and updating content programmatically, I successfully transformed static designs into a data-driven web application.

- **Week 13: Web Monitarization, Content Upload and backend Testing** I worked on CMS-related tasks involving content upload, updates and Ambor an e-commerce website fig:4.10 monitoring activities.

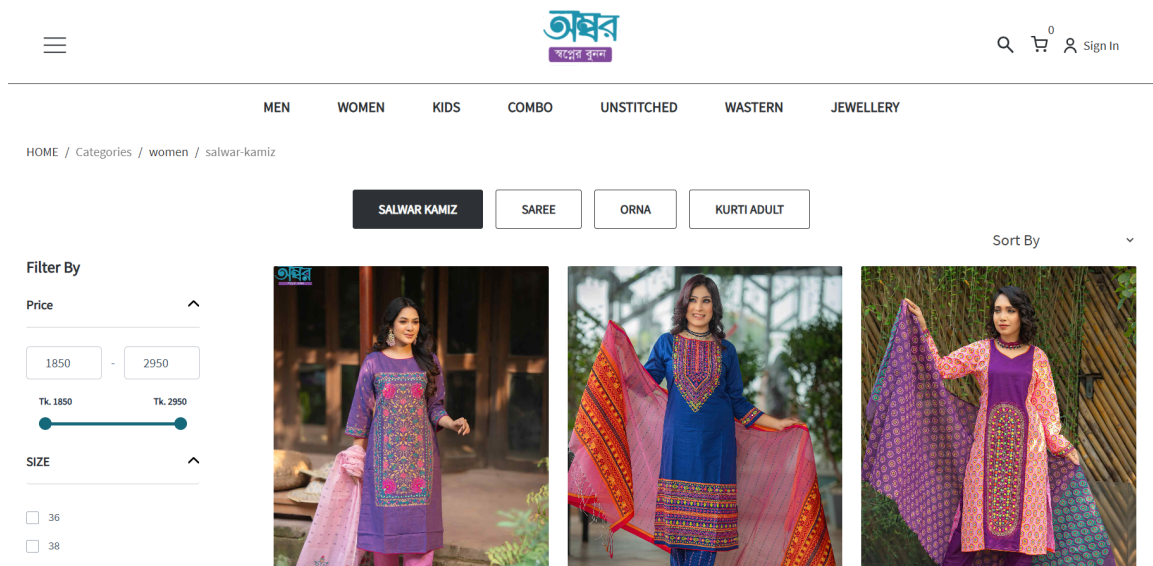


Figure 4.10: Ambor - Website Monitarization

- Handled content addition and modification within the CMS system.
- Ensured that newly uploaded content was correctly displayed on the frontend interface.
- Checked layout consistency after updates to avoid UI disruption.
- Performed CMS-based testing activities to validate system functionality.
 - * Verified whether backend changes were properly reflected on the frontend.
 - * Checked data accuracy and proper rendering of dynamic content.
 - * Reported inconsistencies found during content update cycles.

Fig: 4.11 User authentication screen where admins enter email and password to access the CMS dashboard securely. I got the access as admin for testing frontened features.



Sign in to your account

Email

Password

☐ Remember me

SIGN IN

Figure 4.11: GamesCreed Appswind Log-in Page

Main dashboard displaying key statistics such as total news, blogs, reviews and subscribers. Includes visual summaries content status, platform distribution and ratings. Moreover, it shows deeper analytics like monthly reviews (bar chart), latest content updates, advertisement status and recent contacts. Helps monitor activity and performance.

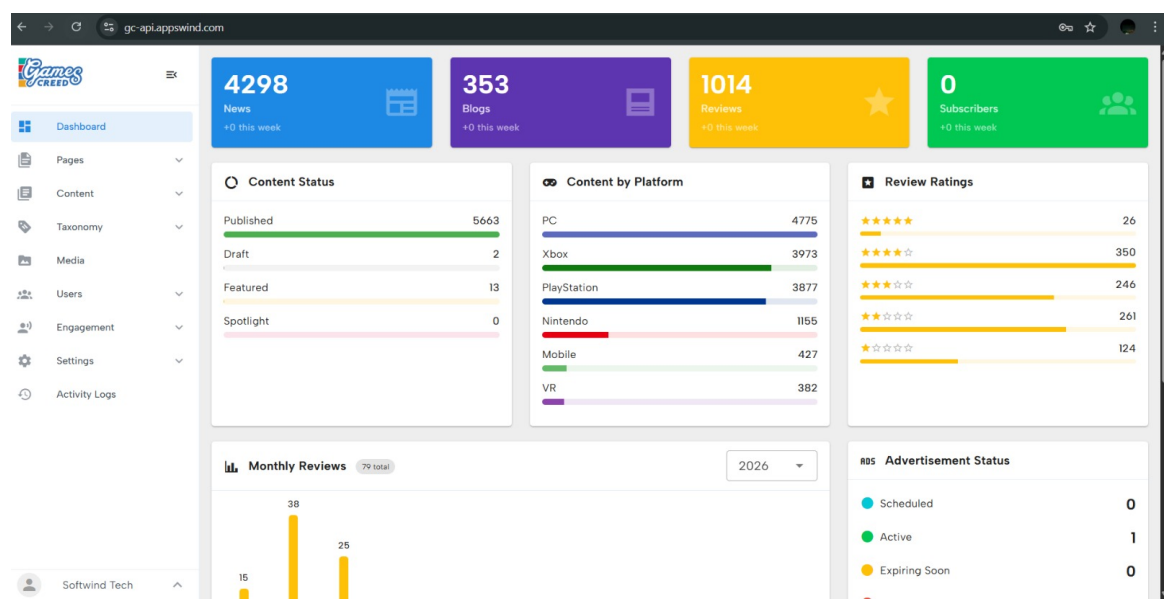


Figure 4.12: GamesCreed CMS Appswind Dashboard Part-1

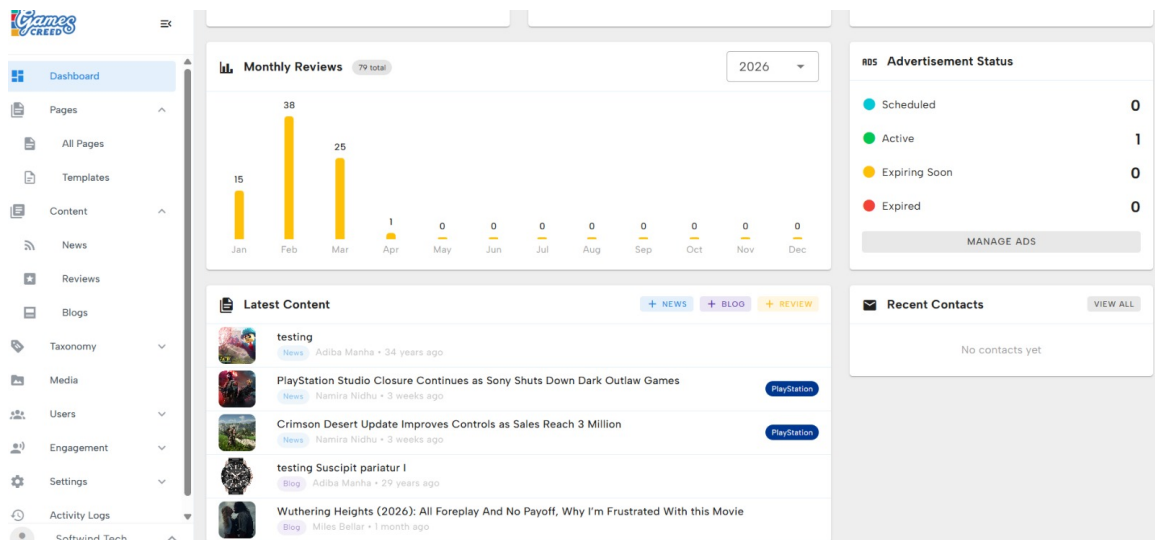


Figure 4.13: GamesCreed CMS Appswind Dashboard Part-2

Interface for managing user roles (admin, editor, contributor) and assigning permissions, enabling access control within the CMS shows in fig: 4.14.

ROLES

+ ADD NEW

Name	Permissions	Actions	
admin	69 permissions		SHOW PERMISSIONS ▾
contributor	0 permissions	 	SHOW PERMISSIONS ▾
editor	28 permissions	 	SHOW PERMISSIONS ▾

Items per page: 10 ▾ 1-3 of 3 |< < > >|

Figure 4.14: GamesCreed Backend Role

This fig: 4.15 displays the Media Library interface. This acts as a centralized storage repository for all images and files uploaded to the platform. It shows a grid view of uploaded files including game-related imagery. Each item shows the file name, size, upload date and provides a "COPY URL" button which allows you to easily grab the direct link to use that image in your content. There is an UPLOAD button at the top right to add new assets to the library.

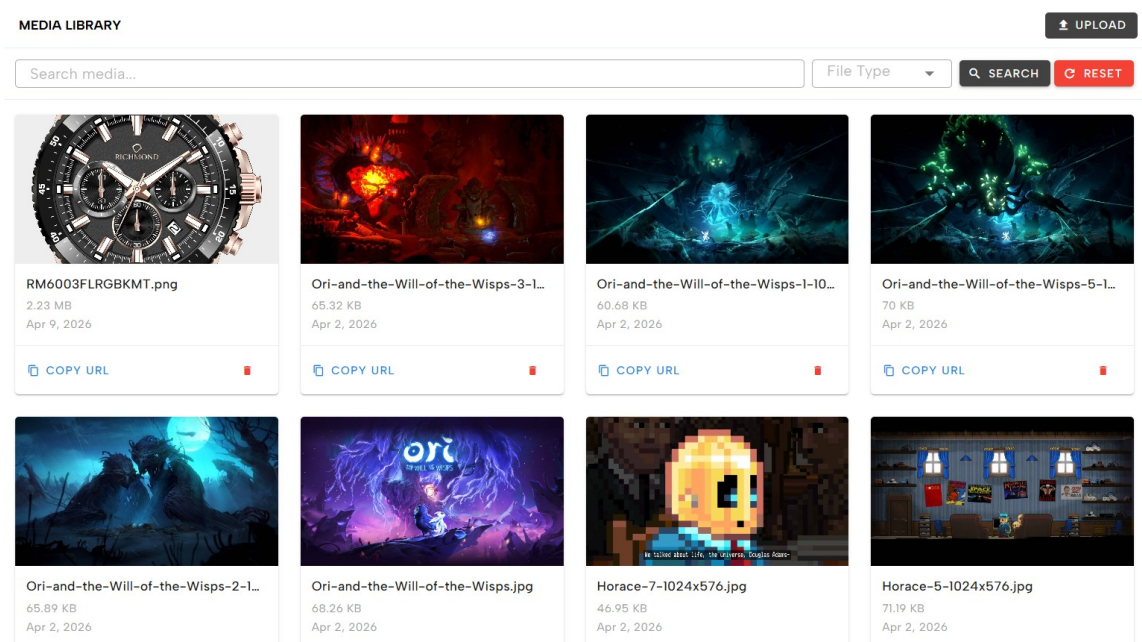


Figure 4.15: GamesCreed Media Library Interface

This fig: 4.16 shows the Reviews Management dashboard. This is the administrative control panel for managing game reviews on the Games Creed website. It displays a table of reviews with columns for Title, Author, Rating, Word count, Published date, and various status indicators (Published/Draft, Featured, Spotlight, Visible). The rightmost column under "Actions" provides icons for each review:

- * **Blue Square (Icon)** likely leads to a preview of the review.
- * **Blue Pencil** used to edit the existing review.
- * **Red Trash** an used to delete the review.
- * **Filtering/Search** includes a search bar and filter options to help administrators quickly locate specific reviews.

Title	Author	Rating	Words	Published	Status	Featured	Spotlight	Visible	Actions
testing Nisi ut amet do eni	Adiba Manha	3.0/5	1	Oct 24, 2011	Draft	No	No	No	[Icons]
Ariana and the Elder Codex Review	Wasbir Sadat	3.2/5	1503	Mar 27, 2026	Published	No	No	Yes	[Icons]
Pokémon XD: Gale of Darkness Review	Wasbir Sadat	4.5/5	1993	Mar 20, 2026	Published	No	No	Yes	[Icons]
GreedFall II: The Dying World Review	Adiba Manha	2.9/5	2025	Mar 17, 2026	Published	Yes	No	Yes	[Icons]
The Seven Deadly Sins: Origin Review	Asura Kagawa	3.2/5	1815	Mar 17, 2026	Published	No	No	Yes	[Icons]
NINJA GAIDEN 4: The Two Masters Review	Adiba Manha	2.5/5	2011	Mar 16, 2026	Published	Yes	No	Yes	[Icons]
Fatal Frame II: Crimson Butterfly REMAKE Review	Omera Ayesha	4.2/5	1777	Mar 16, 2026	Published	Yes	No	Yes	[Icons]
Marathon Review	Mahi Araf	3.7/5	1993	Mar 16, 2026	Published	No	No	Yes	[Icons]

Figure 4.16: GamesCreed Review Dashboard

- Worked on a Robi- Sports quiz CMS for content handling in fig: 4.17, 4.18

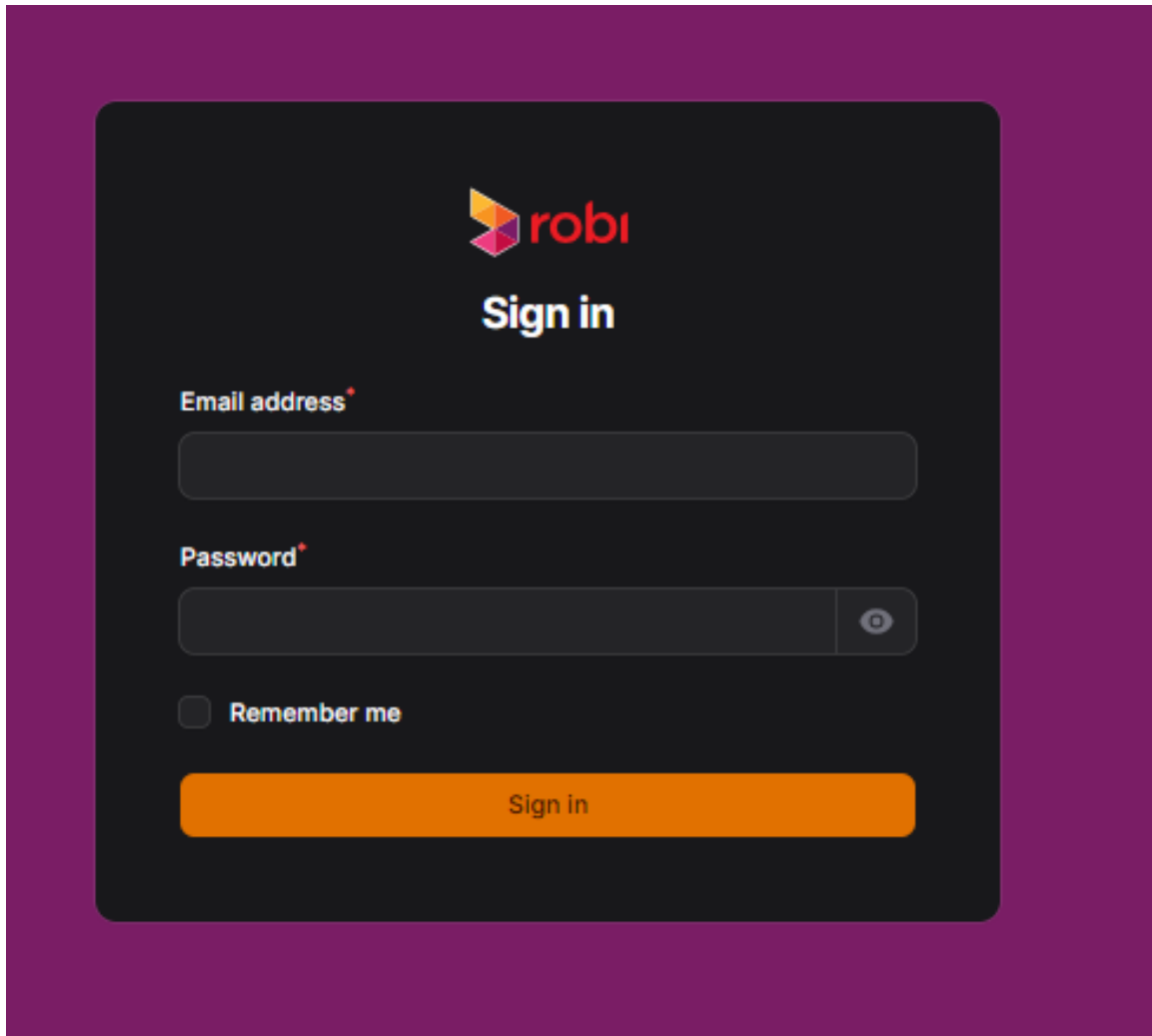
The image shows a dark-themed login form for the Robi Sports Quiz CMS. The form is centered on a purple background. At the top, there is a logo consisting of a stylized 'r' made of colorful triangles followed by the word 'robi' in red. Below the logo, the text 'Sign in' is displayed in white. The form contains two input fields: 'Email address*' and 'Password*'. The 'Email address*' field is a simple dark rectangle. The 'Password*' field is a dark rectangle with a toggle icon (an eye) on the right side. Below the password field, there is a checkbox labeled 'Remember me'. At the bottom of the form, there is a large orange button with the text 'Sign in' in white.

Figure 4.17: Admin Log in Page of Robi Sports Quiz CMS.

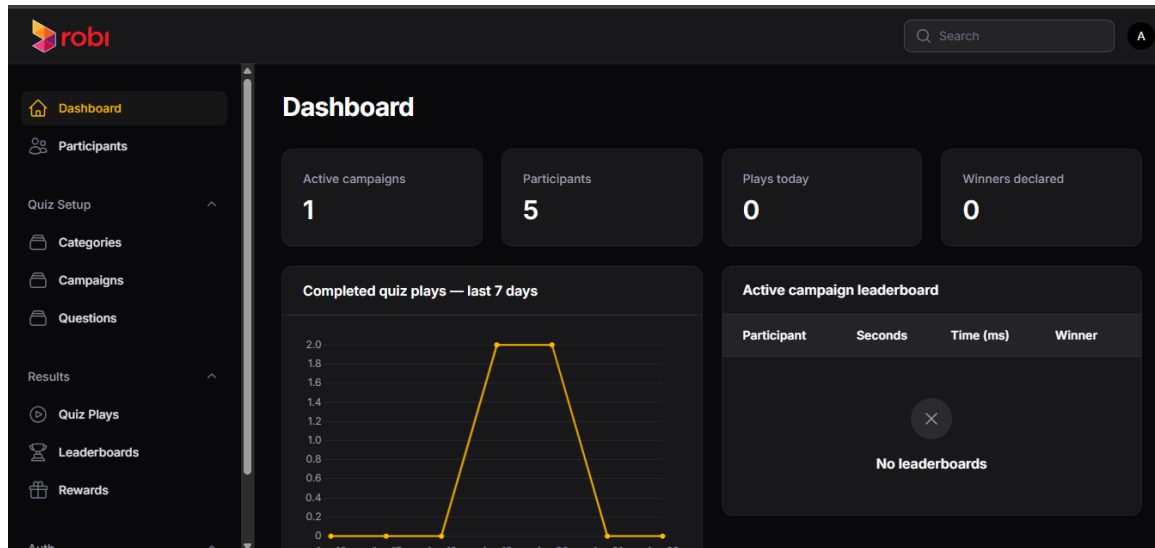


Figure 4.18: Managing categories and campaigns in Robi Sports Quiz CMS.

- Uploaded and managed different types of content within the system.
 - Tested how CMS modules display and handle content in real scenarios.
 - Performed basic functional testing of CMS components.
 - Gained understanding of dynamic content flow between backend and frontend systems.
- Gained practical experience in CMS-based workflow and website monitoring.
 - Observed how content changes impact live website behavior.
 - Learned how testing ensures stability in dynamic web applications.

I continued working on the ongoing project and focused on improving and refining different parts of the front-end implementation. Various components were updated, and additional features were integrated to enhance functionality and user experience.

- **Week 14: Gamescreed Project and Final Work** In the final week, I focused on completing the remaining tasks and finalizing the project deliverables. I worked on recreating the frontend of a gaming blog website called Gamescreed where I transformed static designs into fully responsive and dynamic web pages in fig:4.19 using HTML, CSS and JavaScript.

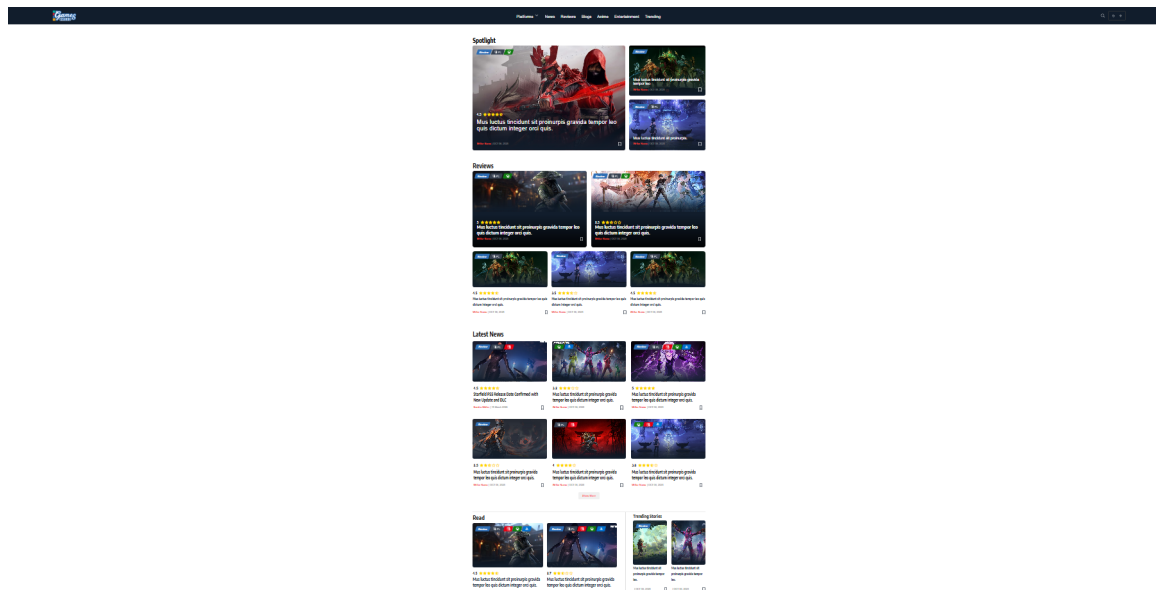


Figure 4.19: GamesCreed Home Page

I ensured that all components will be properly integrated and optimized for different devices and screen sizes. Additionally, I carried out final testing, debugging and performance improvements to enhance overall user experience.

Alongside development, I continued website monitoring and reporting tasks to ensure smooth functionality and stability. By the end of this week, the project was successfully completed and prepared for final submission.

- **Version Control Throughout Internship** Throughout the internship period, I used Git and GitHub for version control. I managed code changes, pushed updates and collaborated with team members. This helped me understand professional development workflows and improved my coding practices.

Overall, this weekly progression helped me build strong frontend development skills step by step, from basic concepts to real-world project implementation.

4.3 Challenges Faced

During my internship at SoftwindTech, I faced several challenges that helped me grow both technically and professionally.

One of the main challenges was understanding real-world project requirements within a limited time. Initially, it was difficult to convert design ideas into actual frontend code but with practice and guidance I improved gradually.

Another challenge was adapting to new technologies such as Bootstrap, Tailwind CSS and JavaScript. Learning how to use these tools effectively in real projects required continuous practice.

Working with dynamic content in CMS-based systems was also challenging, as I had to ensure that frontend changes correctly reflected backend data. I overcame this by closely collaborating with backend developers and testing changes carefully.

A significant challenge came while working on the Gamescreed gaming blog website project where I had to recreate a large-scale frontend structure. During this task, I faced difficulties in merging multiple sections and subsections properly. The project contained a large number of files and combining and organizing them in a structured way was complex. Managing file structure, resolving merge conflicts and maintaining consistency across pages required careful attention and multiple

revisions. This experience helped me understand how large frontend projects are structured and maintained in real-world development environments.

I also faced challenges in debugging UI issues and ensuring that the website remained responsive across different devices. This improved my problem-solving skills and attention to detail. Overall, these challenges helped me become more

confident, adaptable, and capable of working in a professional development environment.

4.3.1 How I overcomed:

To overcome these issues in the Gamescreed project, I first spent time carefully analyzing the existing file structure and identifying how different sections were connected. I broke the work into smaller parts instead of handling everything at once which made it easier to manage. I also followed a step-by-step approach to merge sections gradually and tested each change after updating the code.

When file merging and conflicts became difficult to handle, I referred back to earlier working versions using Git which helped me restore stable states and avoid losing progress. I also discussed the structure with team members and took guidance from senior developers to better understand the correct organization of files and components. Through continuous debugging, restructuring and repeated testing, I

was able to gradually resolve the issues and complete the project successfully. This process improved my problem-solving ability and gave me practical experience in handling large frontend projects.

Chapter 5

Methodology

This section describes how I learned frontend web development in a real-world industry setting during my internship at SoftwindTech in an organized and useful manner. The methodology concentrated on creating user interfaces, managing websites, utilizing CMS-based systems, and comprehending how frontend development fits into actual project processes through the application of Agile techniques. The learning process was primarily hands-on, with tasks being accomplished step-by-step through real-world projects, code implementation, UI behavior testing and ongoing improvement based on feedback.

5.1 Frontend Development Approach (SDLC Perspective)

Although my role was frontend-focused, the Software Development Life Cycle (SDLC) was followed in a practical way to understand how web projects are built and maintained.

- **Requirement Understanding:** Studying UI requirements, design references and expected website behavior before development.
- **UI Design Implementation:** Converting designs into real web pages using HTML, CSS, Bootstrap and Tailwind CSS.
- **Frontend Development:** Building responsive and interactive pages using HTML structure, CSS styling, and JavaScript for dynamic behavior.

- **CMS-Based Updates:** Updating and maintaining content-driven pages where backend data was reflected on the frontend.
- **Testing & Review:** Checking layout, responsiveness and user experience across devices and fixing UI issues.

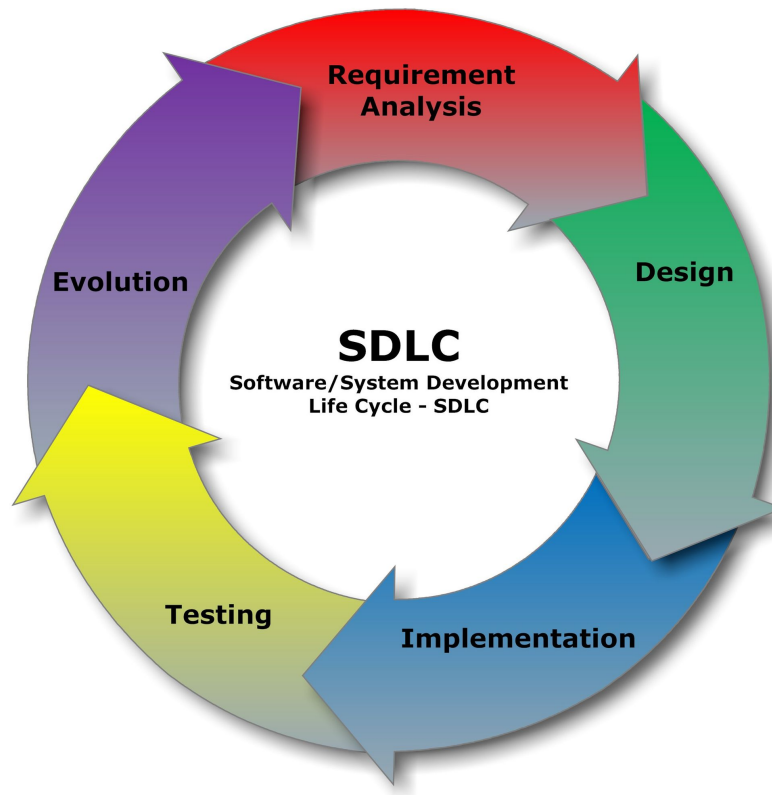


Figure 5.1: Software Development Life Cycle (SDLC)

5.2 Frontend Testing and Validation Approach

Testing in frontend development was mainly manual and user-focused

- Checking layout consistency across different screen sizes.
- Testing responsiveness for mobile, tablet and desktop.
- Validating CMS content display on UI.

- Checking navigation flow and user interaction.
- Debugging UI issues using browser developer tools.
- Ensuring dynamic content loads correctly in the interface.

This helped ensure that the websites were visually correct, functional and user-friendly.

5.3 Agile Workflow and Project Execution

The internship followed an Agile-based workflow where tasks were divided into small parts and completed step by step. I worked in a collaborative environment where frontend tasks were assigned, reviewed, and improved continuously. Activities included:

- Working in sprint-based task cycles.
- Receiving feedback from team leads and developers.
- Updating UI components based on requirements.
- Participating in project discussions and progress tracking.

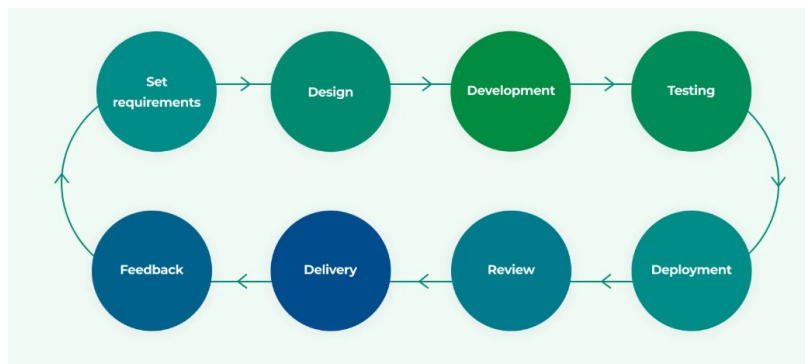


Figure 5.2: Agile Workflow

This approach helped improve communication, time management and teamwork.

5.4 CMS-Based Development and Maintenance

A major part of my work involved CMS-based website maintenance. In these tasks, I worked on frontend sections where content was dynamically managed from the backend. My responsibilities included:

- Updating UI sections based on CMS content changes.
- Ensuring proper alignment and formatting of dynamic content.
- Testing whether backend updates were correctly reflected on the frontend.
- Fixing layout issues caused by content variations

This helped me understand how real-world websites manage dynamic content.

5.5 Tools, Frameworks and Version Control

During the internship, I used several modern frontend tools:

- HTML, CSS, JavaScript for core frontend development.
- Bootstrap for responsive grid-based design.
- Tailwind CSS for utility-first modern UI .
- Git & GitHub for version control and project tracking.
- VS Code as the primary development environment.

5.6 Project-Based Learning (Gamescreed Project)

A key part of my internship was working on the **Gamescreed gaming blog website** where I was responsible for rebuilding and improving the frontend.

In this project, I:

- Converted static layouts into responsive web pages.
- Managed multiple sections and UI components.
- Handled file structuring and merging challenges.

- Improved page consistency and design responsiveness

This project gave real experience in handling a large frontend codebase.

5.7 Methodology Analysis

The combination of HTML, CSS, JavaScript, frameworks, CMS tasks, Agile workflow and Git-based collaboration helped me understand how modern frontend development works in a real software company environment. The workflow typi-

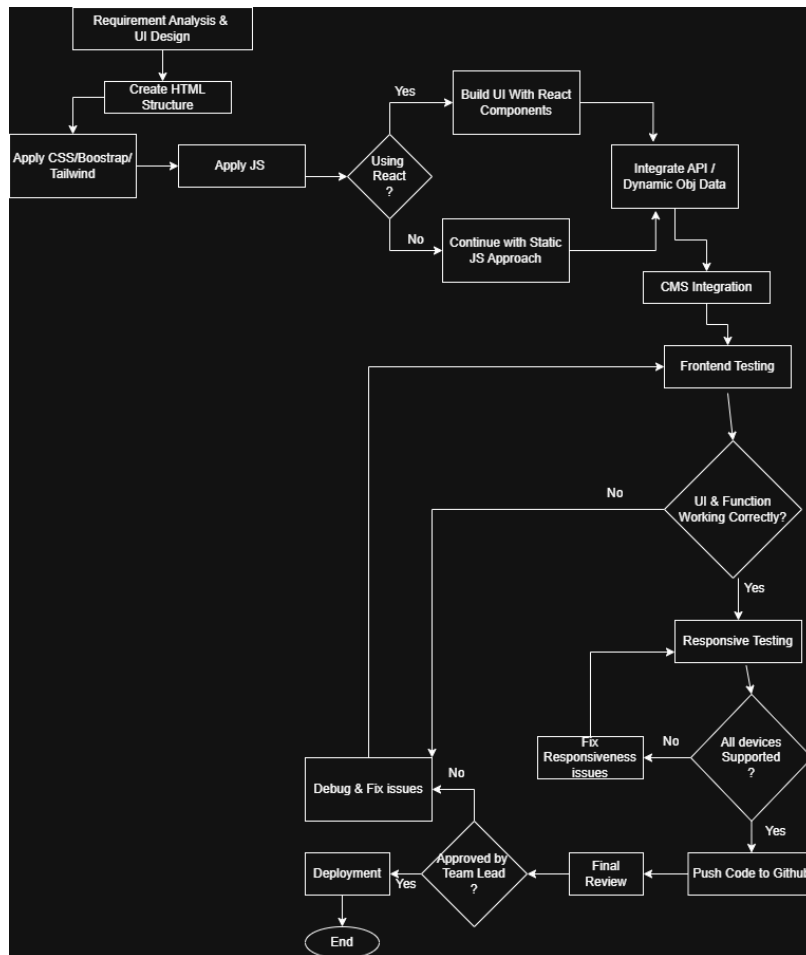


Figure 5.3: Methodology Analysis Workflow

cally followed this structure:

- UI/UX design reference is analyzed.

- Static structure is created using HTML and CSS.
- Responsive design is implemented using Bootstrap or Tailwind CSS.
- Interactivity is added using JavaScript and DOM manipulation.
- In advanced cases, UI is structured using React components for better reusability.
- CMS integration is applied for dynamic content handling.
- Version control is maintained using Git and.
- Testing and debugging is done in browser tools.
- Final UI is reviewed and optimized for responsiveness.

Chapter 6

Analysis and Findings

Instead of being restricted to the last phase of development, the most successful testing activities were carried out over the whole process. This section emphasizes the contributions made in frontend web activities and displays the outcomes of the assignments completed throughout the internship.

6.1 Results and Findings

I've split down the roles below to explain how the standard web development pattern separating the structure, the data and the logic used in its construction—works to create a modern web interface.

- **Dynamic Theme Switching:** The implementation of Dark in fig 6.1 and Light modes fig: 6.2 significantly improves user accessibility, allowing readers to customize their browsing environment based on time of day or personal preference.

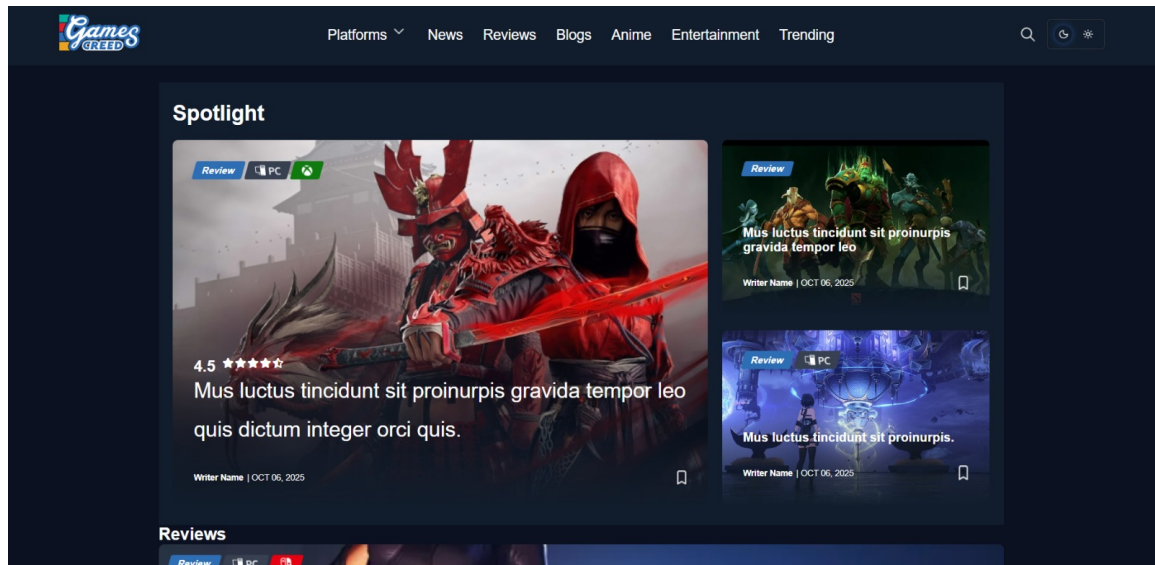


Figure 6.1: Dark Theme Changed by Clicking Moon

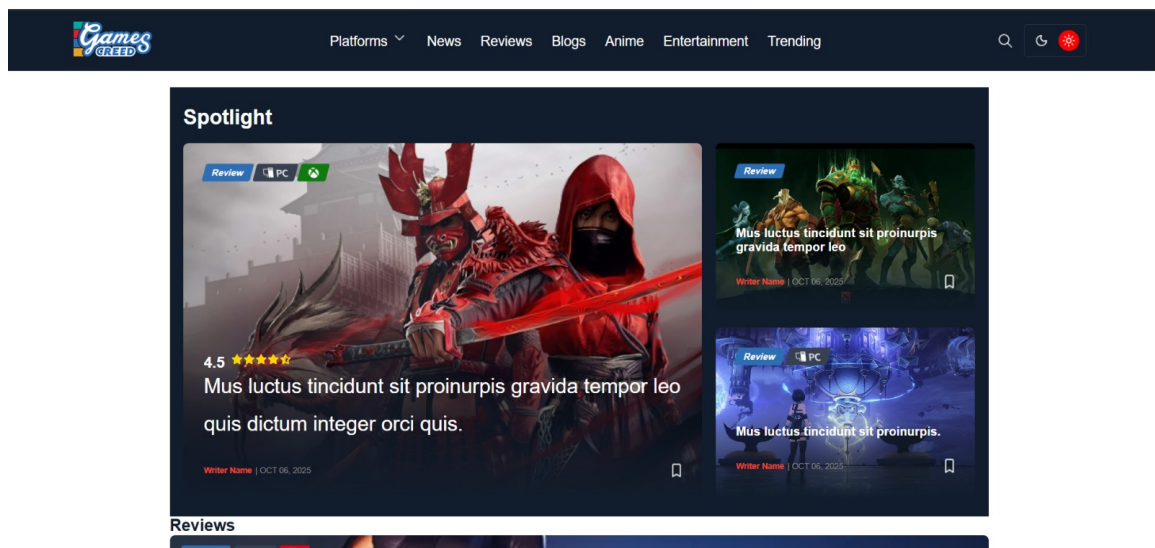


Figure 6.2: Light Theme Changed by Clicking Sun

- **Adaptive Responsive Design:** By ensuring the site looks and functions perfectly responsive in fig: 6.3 on both mobile and desktop screens, maximized reach and ensured a seamless experience for users regardless of the device they use.

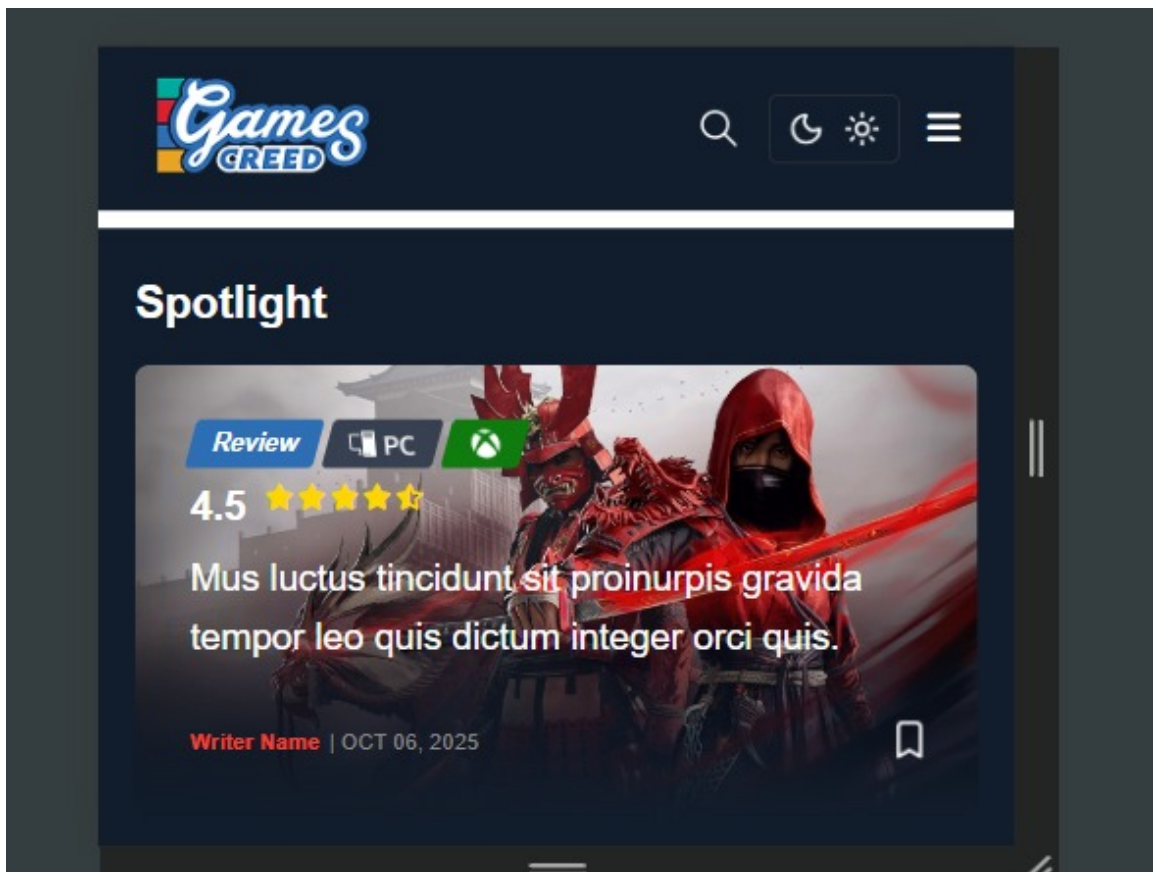


Figure 6.3: Responsive Design

- **Modular Architecture:** Moving away from hard-coded HTML to a data-driven approach (using JavaScript objects and dynamic rendering) makes the site highly scalable. So, now can add or update content without restructuring the entire codebase.
- **Streamlined Data Flow:** The separation of concerns structure (HTML), content (Data Objects) and logic (JavaScript) creates a professional-grade development workflow that is easy to debug and maintain.

- **Simplified Content Updates:** With the centralized Media Library and API-ready structure, managing new reviews and news posts is highly efficient. Administrators can update content via a dashboard which the front-end then automatically displays.
- **Organized Sections:** Multiple sections like header, spotlight, reviews, latest news, read more and footer are perfectly aligned and organized.

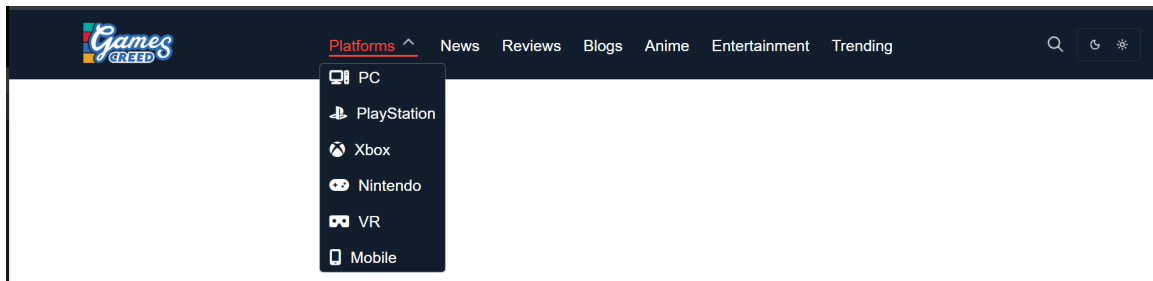


Figure 6.4: GamesCreed Navigation Section

Spotlight



Figure 6.5: GamesCreed Spotlight Section

Reviews

Review

PC



5 ★★★★★
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC

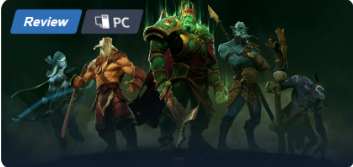


2.5 ★★☆☆☆
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC



4.5 ★★★★★
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

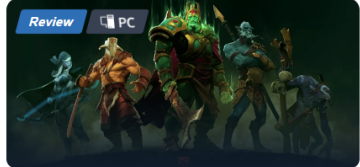


3.5 ★★★☆☆
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC



4.5 ★★★★★
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Figure 6.6: GamesCreed Reviews Section

Latest News

Review

PC

Starfield



4.5 ★★★★★

Starfield PS5 Release Date Confirmed with New Update and DLC

Namira Nidhu | 19 March 2026

Review

PC

Freeride



3.2 ★★★★★

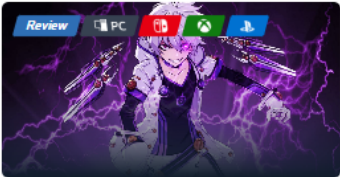
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC

Starfield



5 ★★★★★

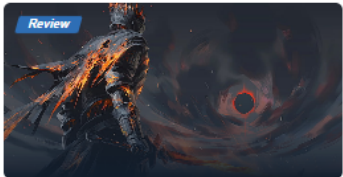
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC

Starfield



2.5 ★★★★★

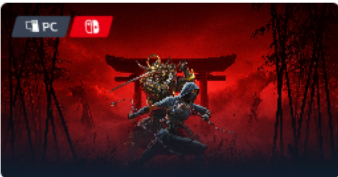
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC

Starfield



4 ★★★★★

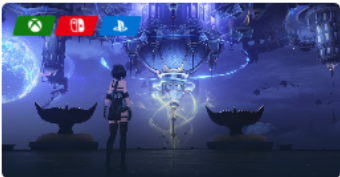
Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Review

PC

Starfield



3.8 ★★★★★

Mus luctus tincidunt sit proinurpis gravida tempor leo quis dictum integer orci quis.

Writer Name | OCT 06, 2025

Show More

Figure 6.7: Latest News Section of GamesCreed Site

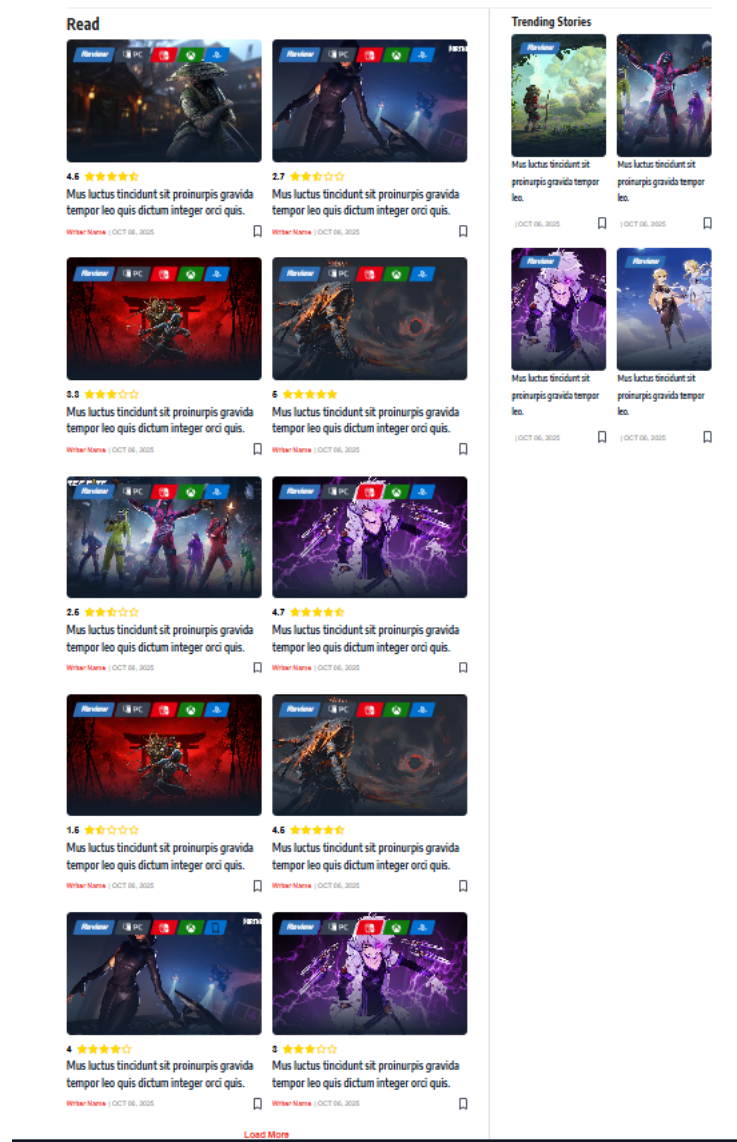


Figure 6.8: Read Section of GamesCreed Site

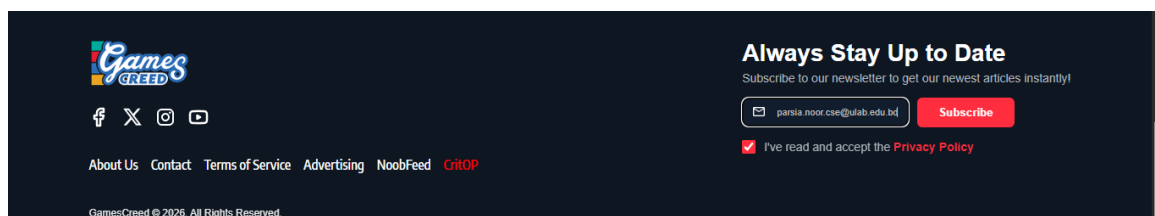


Figure 6.9: Footer Section of GamesCreed Site

6.2 Learning and Development

- Gained real-world experience in frontend web development within an Agile project environment.
- Learned how to analyze UI requirements and convert them into structured and responsive web pages using HTML, CSS, Bootstrap, and Tailwind CSS.
- Improved ability to convert static designs into dynamic interfaces using JavaScript and DOM manipulation.
- Developed skills in CMS-based website maintenance, including updating and validating dynamic content on the frontend.
- Learned proper use of Git and GitHub for version control, code tracking, and collaboration.
- Improved time management and task handling by working within sprint deadlines and assigned project modules.

6.3 Tools and Technology

- **HTML, CSS, JavaScript:** Core technologies used for frontend development.
- **Bootstrap:** Used for responsive grid systems and UI components.
- **Tailwind CSS:** Used for modern utility-first responsive design.
- **Git GitHub:** Used for version control, code management, and collaboration.
- **VS Code:** Primary code editor for development work.

6.4 User Guideline

- Improved overall frontend quality by identifying and fixing UI, layout, and responsiveness issues.
- Helped ensure better user experience through testing and improving interface consistency.

- Supported development team by delivering well-structured frontend components and updates.
- Improved bug detection and debugging efficiency in real project environments.
- Strengthened CMS-based website maintenance by ensuring proper dynamic content rendering.
- Helped maintain sprint deadlines through timely completion of assigned tasks.
- Improved system stability and usability through continuous testing and refinement.
- Increased understanding of real-world frontend development workflows and collaboration practices.

6.5 Impact of the Internship

- Improved overall frontend quality by identifying and fixing UI, layout, and responsiveness issues.
- Helped ensure better user experience through testing and improving interface consistency.
- Supported development team by delivering well-structured frontend components and updates.
- Improved bug detection and debugging efficiency in real project environments.
- Helped maintain sprint deadlines through timely completion of assigned tasks.
- Increased understanding of real-world frontend development workflows and collaboration practices.

Chapter 7

Conclusions and Recommendations

7.1 Conclusion

The internship at SoftwindTech was a valuable learning experience that helped me gain practical knowledge in frontend web development. It bridged the gap between academic concepts and real-world software development practices. Through hands-on work with HTML, CSS, JavaScript, Bootstrap, Tailwind CSS, CMS systems and Git/GitHub, I developed a strong understanding of modern frontend workflows. Working on real projects such as CMS-based websites and the Gamescreed gaming blog helped me understand how professional websites are built, maintained and improved.

The Agile-based environment improved my communication, teamwork, and time management skills. Overall, the internship strengthened my technical foundation and increased my confidence to work in real industry projects.

7.2 Limitations

- The internship duration was limited, so exposure to advanced frontend frameworks and large-scale architecture was restricted.
- Limited opportunity to work deeply on backend integration and advanced API development.
- Some parts of live projects were restricted due to company confidentiality.

7.3 Recommendations

- Provide more structured training sessions for interns at the beginning of the internship.
- Increase exposure to advanced frontend frameworks like React.js.
- Allow interns to participate more in early-stage UI/UX planning and requirement discussions.
- Introduce more complex real-time projects for better learning experience.
- Encourage more use of version control workflows in collaborative tasks.

Chapter 8

Acknowledgments

First of all, I would like to say that my gratitude to Almighty Allah had given me the strength, patience, and ability to complete my internship successfully. I would like to thank the SoftwindTech Ltd. that enabled me to work as an intern in their company and this gave me the great experience in the practical environment of a professional web development.

It is my pleasure to say that my industry supervisor, **Mahfuz Ur Rahman** has been a true right hand and worthy of the guidance, support and advice he has provided me during the internship period. His mentorship has assisted me to realize the standards of professional work and enhanced my technical and problem solving skills. I also would like to thank all members of my team at SoftwindTech as well as their cooperation, support and pleasant working conditions.

I am deeply grateful to my academic supervisor, **Md Kaviul Hossain** sir who guided, encouraged and supervised me in the course of my internship. Lastly, I would like to mention that my parents and friends have provided me with support and motivation all the time. I would like to thank all people who had a role in making my internship experience a valuable and fulfilling learning experience.

Appendix



Ref: HR-SWTL/2026

Date: January 1, 2026

Parsia Noor Ethila
Mobile: +8801791919240

We are pleased to offer you the position of Intern – Front End Web Developer at Softwind Tech Ltd. Your internship will commence on **1 February 2026** and will continue for a period of **three (3) months**, ending on **30 April 2026**. During this time, you will work closely with our development team and gain hands-on experience in front-end web development technologies and best practices.

Internship Details:

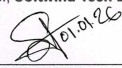
- **Position:** Front End Web Developer (Intern)
- **Duration:** 3 Months
- **Joining Date:** 1 February 2026
- **Company:** Softwind Tech Ltd.
- **Working Hours:** As per company policy

You are expected to follow company rules, maintain professional behavior, and complete assigned tasks with dedication and responsibility. This internship does not guarantee permanent employment; however, exceptional performance may be considered for future opportunities.

Please confirm your acceptance of this offer by replying to this email.

We look forward to welcoming you to **Softwind Tech Ltd.** and wish you a successful and enriching internship experience.

For, Softwind Tech Ltd.



Shamima Khatun
Head of HR
Softwind Tech Ltd.

Figure 8.1: Appointmant letter

Turnitin Originality Report

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