

Internship Experience in Database Management, System Analysis & Web Development at Labaid Cancer Hospital and Super Speciality Center

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

Internship Title	Internship Experience in Database Management, System Analysis & Web Development at Labaid Cancer Hospital and Super Speciality Center.
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I declare that this internship report entitled *Internship Experience in Database Management, System Analysis & Web Development at Labaid Cancer Hospital and Super Speciality Center* 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 Experience in Database Management, System Analysis & Web Development at Labaid Cancer Hospital and Super Speciality Center**, submitted by **Nazia Afrin Titly (203014012)** 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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I am greatly indebted to our honorable supervisor Muhammad Golam Kibriya, PhD, SMIEEE and the teachers of the Department of Computer Science and Engineering at the University of Liberal Arts Bangladesh who taught me during the course of our study. Without any doubt, their teaching and guidance have completely transformed us to the persons that we are today.

I am extremely thankful to my family for their unconditional love, endless prayers and caring, and immense sacrifices for educating and preparing me for the future. Finally, I would like to thank all the people who have supported me to complete the Internship directly or indirectly.

Nazia Afrin Titly

University of Liberal Arts Bangladesh

Date: August 21, 2025

Dedicated to my beloved
family for being my
strength.

– *Nazia Afrin Titly*

EXECUTIVE SUMMARY

I have the opportunity to complete my three months internship from 'Labaid Cancer Hospital and Super Speciality Center' at a 'IT Intern- Database & Web Development' position in the Information Technology department. This is the only comprehensive specialized healthcare institutions in Bangladesh, aiming to provide excellence in healthcare through innovation and care for the society we serve [Hospital & Center \(n.d.\)](#). The internship has been fulfilled as part of the Computer Science and Engineering Program. The main objective of this internship program is to develop skills such as- database management, system analysis and web development, bridge the gap between personal and professional development and to understand the value of engineering principles and responsibilities. In addition, I not only developed my working skills but also learned the importance of communication, teamwork, and observing problems in detail before jumping into a solution. I also developed the adaptability and self-learning technique skill. Challenges faced in hardware setup and work part, AKHIL HIS system working procedure and PHP programming that I have overcome through the guidance of my senior colleagues, manual, online learning materials. My contribution during this internship simplified organization's workflows, reducing manual workloads a bit and supported efficient and reliable healthcare services. This program positively impacted my personal and professional growth which will help in improving career aspects further.

Keywords: Akhil HIS, Super Speciality.

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Chapter 1

Introduction

1.1 Introduction

To gain experience in real world problem solving while developing personal and professional skills , an internship can be an excellent opportunity. Internship is a crucial part of improving career prospects. As part of this program , I have the opportunity to fulfill my internship at the department of Information Technology (IT) at a 'IT Intern- Database & Web Development' position in 'Labaid Cancer Hospital and Super Speciality Center' . This is the only comprehensive specialized healthcare institutions in Bangladesh, aiming to provide excellence in healthcare through innovation and care for the society we serve. This hospital is leading the treatment against cancer through advanced medical services and research opportunities. Hospitals play a significant role in society by providing essential services in healthcare that save and improve overall public health and maintain well-being. Engineering plays an important part in hospital management . The integration of engineering in hospital management systems has revolutionized the way healthcare is delivered, managed and improved communication . It helps to stabilize communication between hospital departments and patients contributes for better outcomes. The effectiveness of this hospital is heavily dependent on engineering. The Information Technology (IT) department includes- software and hardware engineers, system and database analysts, web developers, and IT executives, who are in control of managing , storing and analyzing hospital data, maintaining the hospital information system, and supervising the official website. Their efforts integrate the organization's working procedures, enhance efficiency and reduce manual

workload. As an 'System Analyst and Developer', I contributed to various tasks related to optimizing Microsoft SQL Server database querying and reporting, actively working on Akhil HIS Software, website development and system design. This work supported hospital's efforts to efficient management outcomes. The intention of this internship is to apply academic learning and knowledge to industry practice, enable to work on real world challenges and develop skilled solutions. This internship will help to develop personal growth and professional skills while improving career prospects. This report has a certain purpose to focus on learning outcomes and the significance of engineering in hospital management.

1.2 Aims

The aim of this internship focuses on developing personal and professional growth while developing practical skills of working, real world problem solving capabilities, communication, collaboration, adaptability and engineering principles. This will help to improve further career prospects.

1.3 Objective

The internship focuses on personal and professional growth while developing practical skills of working, real world problem solving capabilities, communication, collaboration, adaptability and engineering principles to improve career prospects. The main objective of this internship are:

- To gain practical experiences on real world problem solving.
- To improve engineering principles and ethics.
- To understand the role of an engineer in the hospital management system.
- To develop and explore and exploreskills in database query and reporting, website development .
- To explore system design projects.
- To develop communication skills.

- To bridge the gap between academic learning and professional development.
- To improve career prospects.
- To understand and value the responsibilities as a professional.

1.4 Motivation

An internship program can be an excellent opportunity for gaining professional experience. It helps to gather knowledge in real world problem solving while developing personal and professional skills that helps to improve career prospects. As part of this program, I have the opportunity to fulfill my internship at the department of Information Technology (IT) at a 'IT Intern- Database & Web Development' position in 'Labaid Cancer Hospital and Super Speciality Center'. This internship will help to develop personal growth and professional skills while improving career prospects.

Chapter 2

Background

2.1 Background

'Labaid Cancer Hospital and Super Specialty Center' are the only comprehensive specialized healthcare institutions in Bangladesh, which aim to provide excellence in healthcare and treatment through innovation and care for the society we serve. This hospital is integrated with advanced medical services and cutting-edge research opportunities, leading cancer treatment while staying at the front of medical technology, doctors and expertise. In the belief that curing is the forefront of an accurate treatment with the best possible care, the hospital was established. Diverse learning and working scope of healthcare, pharmaceuticals, financial, education, engineering etc are available. The core of this LABAID Cancer Hospital and Super Specialty Center lies in healthcare services that offer comprehensive cancer treatment including chemotherapy, immunotherapy, targeted therapy as well as hormone, gene and radiotherapy with a highly experienced oncology team setting a developed cancer care for the country [Hospital & Center \(n.d.\)](#). Engineering plays a significance role in hospital management. The integration of engineering in hospital management systems has revolutionized the way healthcare is delivered and managed. The improved communication because of engineering managing procedures between hospital departments and patients contributes to efficient outcomes. The effectiveness of this hospital is heavily dependent on engineering. At 'Labaid Cancer Hospital and Super Speciality Center' the 'Information Technology Department' is responsible for creating, managing, and maintaining the data, computer and network systems. The department includes- software and hardware engineers, system and database analysts, web developers, and IT executives, who

are in control of managing , storing and analyzing hospital data, maintaining the hospital information system, and supervising the official website [IT Department & Ltd. \(2024\)](#). Their efforts enhance efficiency in working procedures and reduce manual workload. As an 'IT Intern- Database & Web Development', I contributed to various tasks related to expanding Microsoft SQL Server database querying and reporting, actively working on Akhil HIS Software,website development and system design.This work supported hospital's efforts to efficient management outcomes.The purpose of this internship in this Information Technology Department is to apply academic learning and knowledge to industry practice, enable to work on real world challenges and develop skilled solutions.

2.2 Vision and Mission

- The vision of 'Labaid Cancer Hospital and Super Speciality Center' is to provide comprehensive treatment to cure cancer and the mission is to fight against cancer with advanced medical services, cutting-edge researches and authenticized personalized care [Hospital & Center \(n.d.\)](#).
- The vision of the Information Technology Department is to expand the reliable,efficient and advanced software and hardware solutions enabling enhanced management outcomes. The mission of this department is to provide efficient software and hardware services that support smooth working procedures,reduce manual labor, ensure data security , system reliability and implement innovative solutions that enhance efficient management [Hospital & Center \(n.d.\)](#).

2.3 Values

This healthcare institution supports key values that focus on patient care, ethical principles, being respectful and empathic, valuing responsibilities and discipline, learning and encouraging professionalism which helps to stay revolutionized, stabilized, and transparent to everyone in this society.

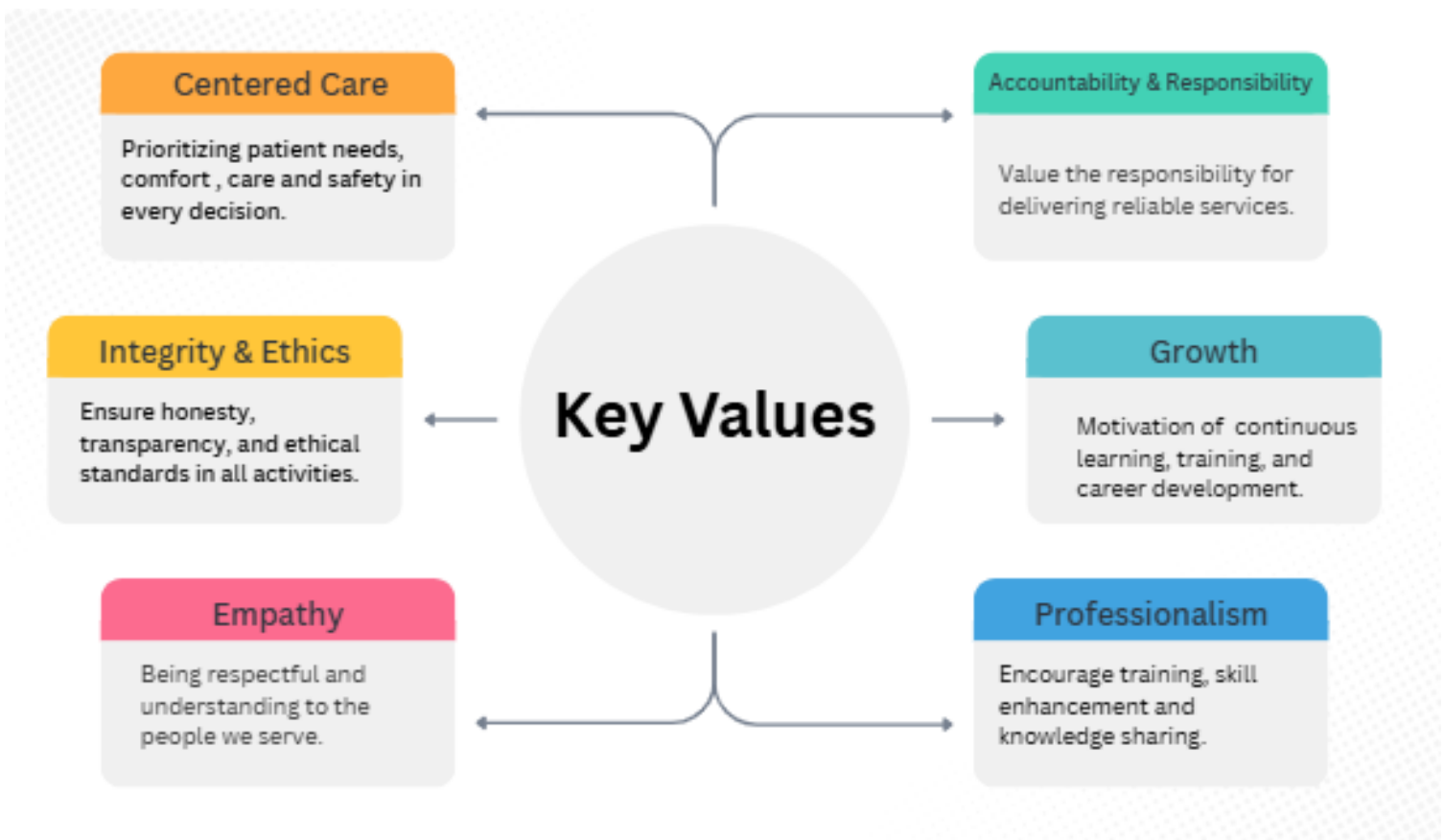


Figure 2.1: Key Values

2.4 Key Personnel

Table 2.1: Key Personnel of the Organization

Name	Designation	Department
Md. Alamgir Hossain	Head Co-ordinator	Hospital co-ordination
Md. Asaduzzaman Arif	Deputy General Manager and Head of IT	IT
SK Rabiul Alam	Deputy Manager	IT
Tasnim Muntasir Sami	Deputy Manager	IT
Shadul Islam Tipu	Executive	IT
Vittut Kumar Roy	Executive	IT
Tarikul Islam Hira	Executive	IT
Mohammad Ali	Admin	HR

Chapter 3

Scope of Work

- **Database Querying and Reporting**

- **Attendance:** Query and reporting on late arrival summaries for day shift and evening shift, early leave in day and evening shift ,absent counts and attendance counts on a daily and monthly basis as per requirements in a purpose of keeping discipline in the hospital.
- **Patient:** Analyze patient appointment data per day to find out which departments had higher daily patient loads for staffing management and to ensure efficient scheduling by monitoring doctor workloads daily and monthly basis as per requirements.

- **AKHIL HIS System**

Received training and responsibilities in AKHIL HIS System in:

- Patient registration and documentation.
- Appointment scheduling.
- Doctor schedule management.
- Appointment creation, modification, cancellation.
- Single billing, refunds, IP Billing and patient billing creation and retrieval.
- Master setup for employee records.
- EMR for utilizing consultation summaries.

- **System Design**

- Following 'Akhil HIS System' framework , a hospital information system architecture is designed using use case and er diagram. This is to understand operational procedures and integration of data in an intention to make its own hospital information system.

- **Website Development**

- For the official hospital website a career page has been developed using PHP, SQL, HTML, and CSS where functionality for both user and admin sides, allowing job postings, applications and others administrative management such as- confirm or delete applicants, delete or edit jobs for admin part as well as view job openings, apply for the job by filling an application form with resume/CV for applicants as an initial functionality development for inclusion in the main website. Microsoft SQL Server and Xampp has been used during this functionality development. localhost has been used currently for browsing.

Chapter 4

Internship Activities

4.1 Introduction of the Organization/Institution

Labaid Cancer Hospital Super Speciality Centre is only comprehensive specialized healthcare institutions in Bangladesh, established on March 1, 2020 and officially opened from March 2021. This hospital is integrated with advanced medical services and research, leading the treatment of cancer. This hospital is at the lead of medical technologies and expertise. In the belief that curing is the forefront of any proper and accurate treatment with the best possible care, the hospital was established. 'Labaid Cancer Hospital and Super Specialty Center' upholds reliability in healthcare services, offering comprehensive cancer treatment, including chemotherapy, immunotherapy, as well as hormone, gene therapy and radiotherapy with highly experienced doctors and oncology team. The core excellent treatments are- blood, eye, kidney, thyroid, lung, prostate, bone, breast, oral cancer. There are highly experienced doctors and surgeons in medical oncology, medicine and cardiology, ortho oncology, trauma center, trauma and spine surgery, pediatric and hematology oncology, pain medicine speciality, head and neck oncology, chemotherapy, cancer specialists, clinical oncology, gynecology, plastic surgery, thyroid, nuclear medicine, diabetics, gynecological oncology and many more treatment setting a milestone in cancer care for the country. The aim of this healthcare organization is to serve the society through innovation and being greatly committed to the people. As engineering is a crucial part for hospital management systems. At Labaid Cancer Hospital and Super Speciality Center the Information Technology Department is responsible for creating, managing, and maintaining the computer and network systems that store and process the hospital's information, website and HIS. The

department includes- software and hardware engineers, system and database analysts, web developers, and IT executives, who are in control of managing , storing and analyzing hospital data, maintaining the hospital information system, and supervising the official website. Their efforts integrate the organization's working procedures, enhance efficiency and reduce manual workload. The department supports smooth decision-making by doctors, administrators, and management through maintaining and handling up to date data ,speed up hospital working procedures and reduce manual workloads. I contributed to optimizing Microsoft SQL Server database querying and reporting, actively working and get training on Akhil HIS Software, website development and system design. The purpose of this internship in this Information Technology Department is to apply academic learning and knowledge to industry practice, enable us to work on practical challenges and develop skilled solutions. Additionally, this internship help me to learn the significance of communication , team work and observing any problems in detail before jumping into a solution. I also developed the skill of adaptability and self learning techniques. This work supported hospital's efforts to efficient management out comes ,reduce manual workloads and efficinent workflows.

4.2 Work Accomplishment

The Work Breakdown Structure (WBS) has divided the entire work accomplishment timeline with a schedule to keep track of the internship work with a timeline. To ensure a clear progress of work according to time -introduction of organization and systems, training and working scheduling for database management, system analysis and web development has been showed using ganntt chart. Canva has been used to get proper insights into the organized tasks and timeline. The work accomplishment timeline with specific tasks and accomplish time is shown in Figure 4.1.

Internship Timeline

PROCESS	JUNE				JULY				AUGUST			
	Week1	Week2	Week3	Week4	Week1	Week2	Week3	Week4	Week1	Week2	Week3	Week4
Introduction to organization and departmental structure												
Microsoft SQL Server Database and Akhil HIS System Introduction												
Training												
Microsoft SQL Server - Data query and reporting												
Operational Activities within the Akhil HIS System												
System Analysis and Design Practices												
Website Development and Implementation												

Figure 4.1: Internship Timeline

4.3 Challenges Faced

During this internship tenure, I have faced challenges, such as :

- Setting up and working with hardware.
- Required time to learn working procedure, modules and operational logic of AKHIL HIS system.
- Run across difficulties in coding on PHP for website design and development.

I overcame the challenges in learning AKHIL HIS System and coding through strong and proper guidance from my senior colleagues and had hands-on training on it. I also followed online tutorials ,applied trial-and-error debugging and took help from other online materials.Collaboration with team members helped me overcome those challenges effectively.

Chapter 5

Methodology

5.1 Methodology

For database query and reporting , I have used Microsoft SQL server . From the monthly attendance database I have analyzed late arrival summaries for day shift and evening shift, early leave records,absent counts, and attendance counts on a daily and monthly basis as per requirements to track discipline of the hospital. From daily appointments records I have generated and analyzed patient appointment data per day to find out which departments had higher daily patient loads for staffing management and to ensure efficient scheduling by monitoring doctor workloads.In the Microsoft SQL Server i have run SQL query as per requirements and export the result to Microsoft Excel where i have done reporting on the records for smooth and efficient visibility discipline and staff management. For managing responsibilities of AKHIL HIS system , I get hands-on training on this.From the Registration module for managing patient details and documentation ,view list and modify patient details of the registered patient. By using the Appointment module , I have created , modified and canceled appointments as per requirements. I have input data on refunds named a sub module of the billing module.From the master setup module I have updated and maintained employee information in the system.Working in Akhil HIS System is a part of understanding the working procedure of the hospital information system and provide support to other departments .Official instructions were mandatory for managing AKHIL HIS System based task. Following the AKHIL HIS System framework , I have designed the system's overall functionality and presented in use case and ER diagrams. This is to understand operational procedures and integration of data in an intention to make its own

hospital information system. For the official hospital website a career page has been developed. For the official hospital website a career page has been developed using PHP, SQL, HTML, and CSS where functionality for both user and admin sides, allowing job postings, applications and others administrative management such as confirm or delete applicants, delete or edit jobs for admin part as well as view job openings, apply for the job by filling an application form with resume/CV for applicants as an initial proposal for inclusion in the main website. Microsoft SQL Server and MySQL has been used to handle the database management part of career section. PHP, SQL, HTML, MySQL and CSS are used to design frontend and backend that has been build. Currently, localhost has been used for browsing purpose of admin and user panel.

5.2 Use Case Diagram

The following use case diagram shows the functional requirements of a system where- admin, doctor, nurses/medical staffs, pathalogists, phrmasists, accounts, patients, ward staff , lab staff , OT coordinator works as actors. se cases or actions of these diagrams are- signUp/login, patient registration, doctor scheduling, blood donor registration, inventory and ward management, Ot booking, appointment and billing visualized in details. Lines that connect actors with the use cases known as association , shows connectivity.

5.3 ER Diagram

The following ER diagram visually representing connections of: entities-attributes. Relationships of the system to understand the models structure. In the ER diagram ID of the employees and UHID of the patients work as a primary key.

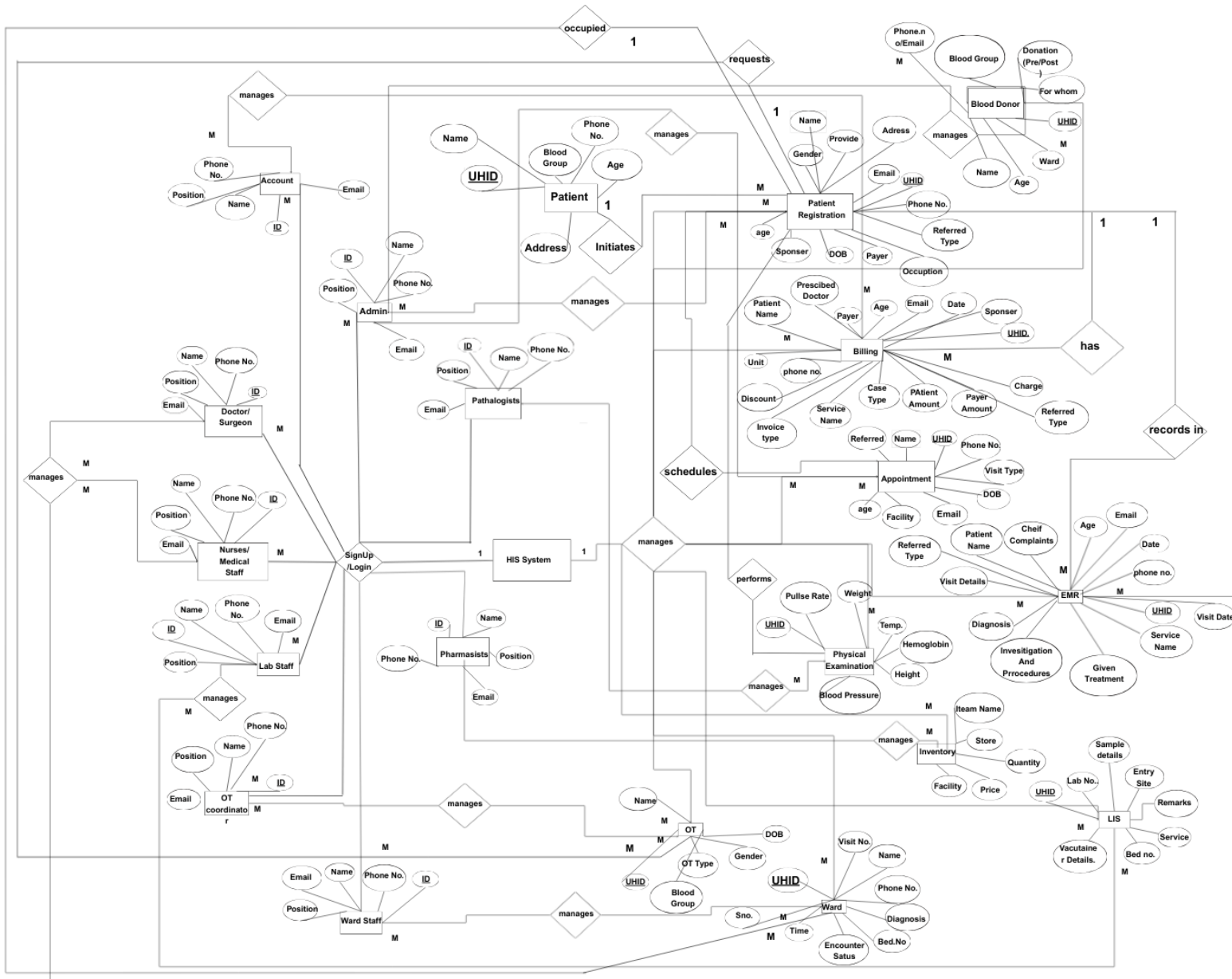


Figure 5.2: ER Diagram

Chapter 6

Analysis and Findings

6.1 Results/Findings

6.1.1 Database Querying and Reporting

- Absent Record:

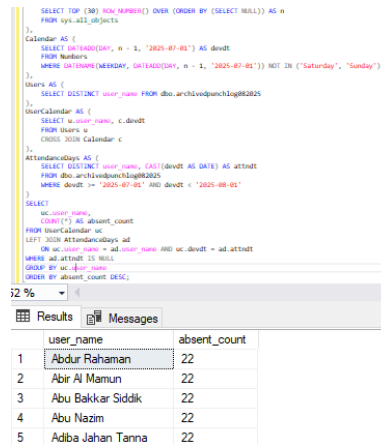


Figure 6.1: Absent

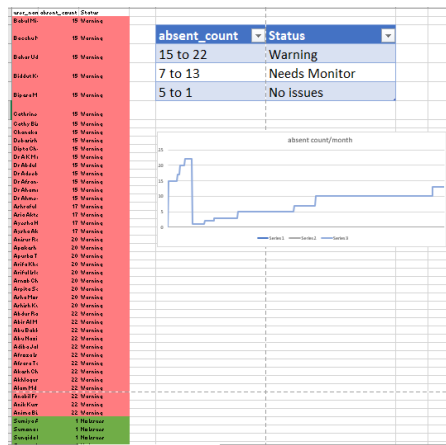


Figure 6.2: Absent Count Report

- Late arrival summary[Day shift]:

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
CREATE OR REPLACE VIEW late_day_shift_employee AS SELECT DISTINCT user_id, user_name, device_timestamp AS IN_Time FROM august08 WHERE STR_TO_DATE(device_timestamp, '%l:%i %p') > TIME('11:00:00') AND STR_TO_DATE(device_timestamp, '%l:%i %p') < TIME('17:00:00');
```

[Edit inline] [Edit] [Create PHP code]

Figure 6.3: Late Day Shift Employee_August

SELECT * FROM late_day_shift_employee;

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create]

> ☐ Show all | Number of rows: 100 ▾

Extra options

user_id	user_name	IN_Time
LCH11024	Md Nahid Hosan	11:01 AM
LC 804	Md Zobber Ali	12:01 PM
LCH11038	Mohammad Alamin	1:01 PM
LC 957	Mohammad Mubarak	2:01 PM
LC 957	Mohammad Mubarak	3:01 PM
LC 359	Ratan Sarkar	4:01 PM
LC 333	Jamal	11:01 AM
LC 618	Md Rayhan	12:01 PM
LC 818	Mst Lata Akther	1:01 PM
LC 782	Mst Leza Akhter	2:01 PM
LC 414	Emrran Miah	3:01 PM
LC 473	Md Shahajan Miah	4:01 PM

Figure 6.4: In Time August

```
WITH FirstPunch AS (
  SELECT
    user_id, user_name,
    CAST(devdt AS DATE) AS punch_date,
    MIN(CAST(devdt AS TIME)) AS devdt
  FROM dbo.archivedpunchlog072025
  WHERE CAST(devdt AS TIME) > '11:00:00' AND CAST(devdt AS TIME) < '17:00:00'
  GROUP BY user_id, user_name, CAST(devdt AS DATE)
)
SELECT
  user_id, user_name,
  COUNT(*) AS late_count
FROM FirstPunch
WHERE devdt > '11:00:00'
GROUP BY user_id, user_name
ORDER BY late_count DESC;
```

2% ▾

Results Messages

	user_id	user_name	late_count
1	LCH11060	Dr Mehnaz Nigar Afrose	28
2	LCH10397	Dr Momotaz Rahman	27
3	LCH11020	Dr S M Milan	27
4	LCH10470	Dr Abdul Aleem	27
5	LCH11074	Dr Faria Anjuman Opi	27
6	LCH10108	Md Al Imran	27

Figure 6.5: Late Count per Month.July

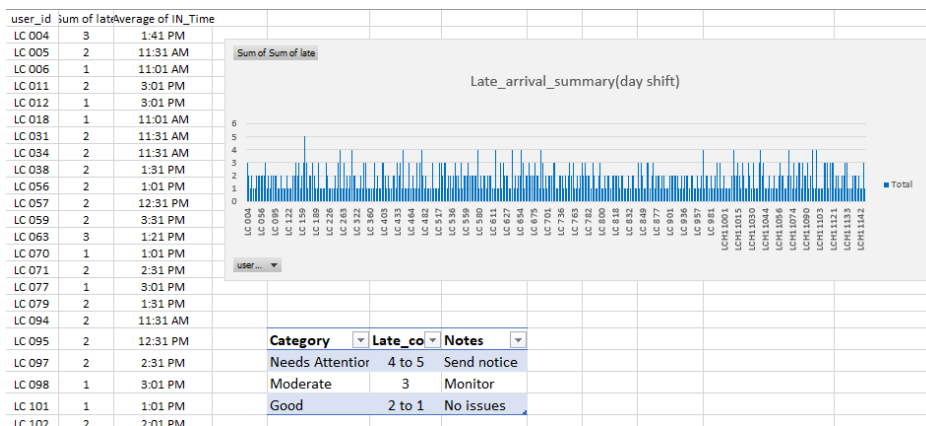


Figure 6.6: Day Shift Late Arrival Report(August)

- Late arrival summary[Evening Shift]:

SELECT * FROM late_evening_shift_employee;

Profiling [Edit inline] [Edit] [Explain SQL] [C]

Show all Number of rows: 25

Extra options

user_id	user_name	IN_Time
LC 945	Sejuti Das	6:01 PM
LCH11104	Babul Miah	7:01 PM
LC 561	Md Mahinur Islam	8:01 PM
LC 162	Sheuly Akter	9:01 PM
LC 763	Jhorna Ferdusy	10:01 PM
LC 773	Salomi Lamin	11:01 PM
LC 962	Dr Saurav Das Tonmoy	6:01 PM
LC 878	Md Shahin Khan	7:01 PM
LC 433	Md Mainur Islam Bhuiyan	8:01 PM
LC 604	Anima Biswas	9:01 PM
LC 981	Md Foysal	10:01 PM
LC 936	Ebi Akter	11:01 PM
LC 152	Sagor Halder Halder	6:01 PM
LCH11028	Moset Akhi Mony	7:01 PM
LCH11073	Md Yeaqub Fakir	8:01 PM
LC 606	Priy Islam	9:01 PM
LC 071	Dr Adeeba Khanduker	10:01 PM

WITH FirstPunch AS (

SELECT

user_id, user_name,

CAST(devdt AS DATE) AS punch_date,

MIN(CAST(devdt AS TIME)) AS devdt

FROM dbo.archivedpunchlog872825

WHERE CAST(devdt AS TIME) > '17:00:00' AND CAST(devdt AS TIME) < '23:00:00'

GROUP BY user_id, user_name, CAST(devdt AS DATE)

)

SELECT

user_id, user_name,

COUNT(*) AS late_evening_day_shift

FROM FirstPunch

WHERE devdt > '17:00:00'

GROUP BY user_id, user_name

ORDER BY late_evening_day_shift DESC;

Results Messages

user_id	user_name	late_evening_day_shift
LCH10862	Dr Md Aahique Ul Islam	25
LCH10850	Dr Md Kramuzzaman	25
LCH10612	Tushar Kumar Bhowmik	25
LCH10258	Md Al Amin Dhali	24
LCH10790	Abu Bakkar Siddik	23
LCH10097	M M Khane-Jahan Khan	22
LCH10508	Dr Md Ataus Samad	21
LCH10768	Md Raful Islam Khan	19
LCH10291	Md Hashem Sheikh	17
LCH11065	Fahim Uddin	17

Figure 6.7: In Time August Figure 6.8: Late Count Evening Shift July

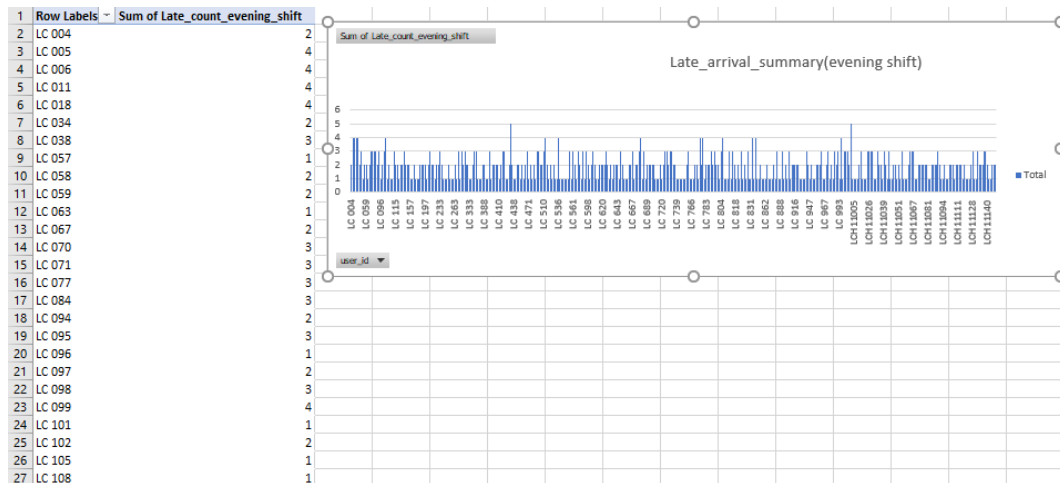


Figure 6.9: Evening Late Arrival Report August

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
CREATE OR REPLACE VIEW late_evening_shift_employee AS SELECT DISTINCT user_id, user_name, device_timestamp AS IN_Time FROM august08 WHERE STR_TO_DATE(device_timestamp, '%1:%i %p') > TIME('17:30:00') AND STR_TO_DATE(device_timestamp, '%1:%i %p') < TIME('23:59:59');
```

Edit inline Edit Create PHP code

Figure 6.10: Late Evening Shift Employee(August)

• Attendance Per Month:

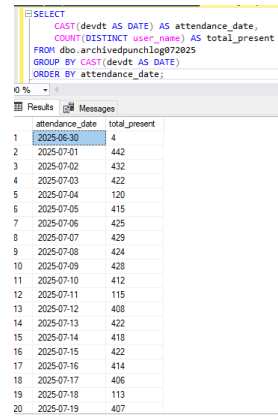


Figure 6.11: Attendance Count

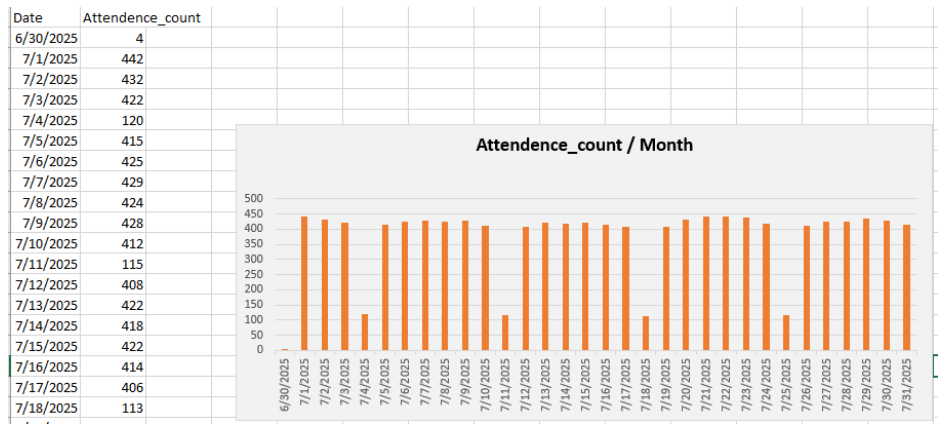


Figure 6.12: Attendance Summary Report

• In time Per day:

```
--SELECT user_id, user_name, devdt AS In_time
FROM archivedpunchlog0802025
WHERE CAST(devdt AS DATE) = '2025-08-10'
ORDER BY user_id, user_name, devdt;
```

90%

Results

Messages

user_id	user_name	In_time
1	LCH10004	Md Nizam Miah 2025-09-10 02:17.0000000
2	LCH10005	Md Al-amin Sikdar 2025-09-10 02:54.3500000
3	LCH10006	Md Abul Abul Kashem 2025-09-10 02:06.1100000
4	LCH10011	Md Sohag Hawladar 2025-09-10 02:27.0000000
5	LCH10012	Md Hanif Gazi 2025-09-10 03:41.5600000
6	LCH10018	Shahadat Hossain 2025-09-10 03:24.1200000
7	LCH10031	Poli Akter 2025-09-10 02:10.0000000
8	LCH10034	Bahar Uddin 2025-09-10 04:26.4500000
9	LCH10038	Akhlaqur Rahman 2025-09-10 03:43.3400000
10	LCH10058	Dr Md Mahfuz Hasan Khan 2025-09-10 03:26.3900000
11	LCH10063	Obaidur Rahman 2025-09-10 03:15.0400000
12	LCH10067	Rabeya Akter Ripa 2025-09-10 02:13:12.0000000
13	LCH10068	Jam Haldar 2025-09-10 03:09.1300000
14	LCH10070	Iin Alam Joyti 2025-09-10 05:39.2900000
15	LCH10075	Probr Kumar Biswas 2025-09-10 04:25.3600000
16	LCH10077	Muddassar Alam 2025-09-10 03:15.5000000
17	LCH10084	Pinky Rani 2025-09-10 02:01.56.0000000
18	LCH10095	Md Sohag 2025-09-10 01:10:32.0000000
19	LCH10095	Md Sohag 2025-09-10 01:10:36.0000000
20	LCH10098	Md Abdullah Al Rafi 2025-09-10 05:14.413.0000000
21	LCH10099	Dr Kasfia Akter Hossain 2025-09-10 04:48.5200000
22	LCH10101	Mohammad Mohibur Rah... 2025-09-10 03:19.2920000

Figure 6.13: Per Day In-Time

user_id	user_name	In_time	Status	Category	Values
LCH10004	Md Nizam Miah	2:07 PM	Late	Total Employees(day shift	250
LCH10005	Md Al-amin Sikdar	12:54 AM	Late	Present	99
LCH10006	Md Abul Abul Kashem	1:54 AM	Late	On Time	14
LCH10011	Md Sohag Hawladar	2:54 AM	Late	Late	85
LCH10012	Md Hanif Gazi	3:54 AM	Late	Attendance (day shift)%	40%
LCH10018	Shahadat Hossain	4:54 AM	Late		
LCH10031	Poli Akter	5:54 AM	Late		
LCH10034	Bahar Uddin	6:54 AM	Late		
LCH10038	Akhlaqur Rahman	7:54 AM	Late		
LCH10058	Dr Md Mahfuz Hasan Khan	8:54 AM	Late		
LCH10063	Obaidur Rahman	9:54 AM	Late		
LCH10067	Rabeya Akter Ripa	10:54 AM	Late		
LCH10068	Jam Haldar	11:54 AM	Late		

Figure 6.14: Per Day In-Time Report

- Early Leave:

```

--SELECT
    user_id,
    user_name,
    CAST(bsevtot AS TIME) AS leave_time,
    CAST(bsevtot AS DATE) AS leave_date
FROM dbo.archivedpunchlog882025
WHERE CAST(bsevtot AS TIME) >= '11:00:00'
AND CAST(bsevtot AS TIME) < '17:00:00'
ORDER BY user_id, user_name, leave_date, leave_time;

```

Results	Messages	user_id	user_name	leave_time	leave_date
1		LCH10005	Mr Alamin Sikdar	16:38:45.0000000	2025-08-03
2		LCH10031	Poli Akter	13:34:42.0000000	2025-08-02
3		LCH10031	Poli Akter	15:04:24.0000000	2025-08-03
4		LCH10031	Poli Akter	12:55:54.0000000	2025-08-04
5		LCH10031	Poli Akter	15:11:57.0000000	2025-08-05
6		LCH10031	Poli Akter	14:52:37.0000000	2025-08-06
7		LCH10031	Poli Akter	13:52:08.0000000	2025-08-09
8		LCH10034	Bahar Uddin	11:36:43.0000000	2025-08-05
9		LCH10034	Bahar Uddin	11:06:42.0000000	2025-08-06
10		LCH10034	Bahar Uddin	11:12:17.0000000	2025-08-09
11		LCH10038	Akhlaque Rahman	16:13:24.0000000	2025-08-05
12		LCH10056	Dr Md Rezaul Haque	14:47:39.0000000	2025-08-04
13		LCH10056	Dr Md Rezaul Haque	14:04:12.0000000	2025-08-05
14		LCH10056	Dr Md Rezaul Haque	13:49:55.0000000	2025-08-07
15		LCH10056	Dr Md Rezaul Haque	14:30:38.0000000	2025-08-09
16		LCH10057	Mizanur Rahman	15:44:45.0000000	2025-08-02
17		LCH10057	Mizanur Rahman	15:31:00.0000000	2025-08-03
18		LCH10057	Mizanur Rahman	15:45:12.0000000	2025-08-05

Report of Early Leave

user_id	Count of leave_time	status
LCH10005	1	No Issues
LCH10031	6	Jeed Notice
LCH10034	3	Monitor
LCH10038	1	No Issues
LCH10056	4	Jeed Notice
LCH10057	4	Jeed Notice
LCH10063	1	No Issues
LCH10067	6	Jeed Notice
LCH10068	2	No Issues
LCH10070	6	Jeed Notice
LCH10071	3	Monitor
LCH10075	2	No Issues
LCH10079	6	Jeed Notice
LCH10084	5	Jeed Notice
LCH10094	5	Jeed Notice
LCH10095	7	Jeed Notice
LCH10096	4	Jeed Notice
LCH10097	8	Jeed Notice
LCH10098	4	Jeed Notice
LCH10099	5	Jeed Notice
LCH10102	6	Jeed Notice
LCH10108	4	Jeed Notice

Figure 6.15: Early Leave Per Day Figure 6.16: Early Leave Report

- Appointment:

Doctor Name	Count of Patient Name
Dr. A.F.M. Kamal Uddin	46
Dr. Md. Moniruzzaman	37
Dr. Nasrin Akhter	40
Dr. Parvin Akhter Banu	32
Dr. Tamanna Afroze	30
Prof. Dr. Aliya Shahnaz	40
Prof. Dr. Anisur Rahman	29
Prof. Dr. Faridul Alam	41
Prof. Dr. Md. Ehteshamul	42
Prof. Dr. Md. Rafiqul Islam	46
Grand Total	383

Department	Count of Patient Name
8/2/2025	1
8/3/2025	3
8/5/2025	1
8/6/2025	2
8/7/2025	2
8/10/2025	2
8/11/2025	2
8/12/2025	1
8/13/2025	1
8/14/2025	1
8/15/2025	1
8/16/2025	4
8/20/2025	1
8/21/2025	3
8/22/2025	1
8/23/2025	3
8/24/2025	1
8/25/2025	1
8/26/2025	1
8/27/2025	1
8/28/2025	1
8/29/2025	2
8/30/2025	1
Grand Total	37

Figure 6.17: Patient Per DoctorFigure 6.18: Patient Per Department

6.1.2 Website Development

- Admin Panel:

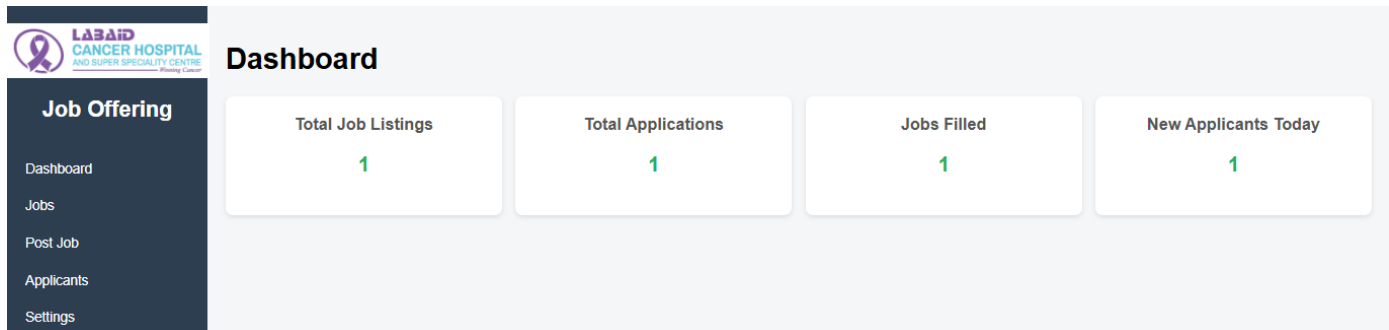


Figure 6.19: Dashboard (Admin Panel)

The screenshot shows the "Post a New Job" form in the Admin Panel. The sidebar menu is identical to the dashboard view. The form fields are as follows:

- Job Title:** Intern- Software Development
- Experience Required:** 0 – 1 Year (or "Freshers welcome")
- Description:**
 - > Assist in the development and maintenance of web applications.
 - > Work with the software team to test, debug, and deploy applications.
 - > Learn about database management, front-end, and back-end development.

A green "Add Job" button is located at the bottom of the form.

Figure 6.20: Job Post



LABAID

CANCER HOSPITAL

AND SUPER SPECIALITY CENTRE

Winning Cancer

Job Offering

Dashboard

Jobs

Post Job

Applicants

Settings

Applicants

Name	Email	Phone	Applied For	Resume	Status	Delete
Afrin Titly	titly@gmail.com	01621398890	N/A	View	Confirm	Delete
Nazia Afrin Titly	nazia.afrin.cse@ulab.edu.bd	01742441164	Intern- Software Development	View	Confirm	Delete

Figure 6.21: Applicants List



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Dashboard

Jobs

Post Job

Applicants

Settings

Jobs

Job Title	Experience	Posted	Description	Actions
Consultant- Medical Oncology	5 years	2025-08-20 22:20:01.997	-> Working with patients to explain a diagnosis and stage of cancer, discuss treatment options, and assist in managing the side effects and symptoms of cancer and its treatment. -> Coordinating treatment plans and prescribing various types of treatment, including chemotherapy and immunotherapy. -> Treating patients with Chemo therapy. -> Assisting patients with pain management. -> Performing basic administrative and clerical tasks, such as keeping records of test results, writing prescriptions, providing cancer information to patients, and monitoring treatment	Edit Delete
Intern- Software Development	0 – 1 Year (or "Freshers welcome")	2025-08-20 22:12:25.227	-> Assist in the development and maintenance of web application. -> Work with software team to test, debug and deploy application. -> Learn about data management , front-end and back-end development. -> Collaborate with daily stand ups and team meetings. -> Duration: 3-6 months. -> Stipend: Negotiable/ Company Policy.	Edit Delete

Figure 6.22: Jobs List



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Beating Cancer

Settings

☒

Email notifications

Theme:

Dark

Auto-delete jobs after (days):

1

Save Settings

Job Offering

- Dashboard
- Jobs
- Post Job
- Applicants
- Settings

Export Applicants CSV

Figure 6.23: Settings

```
SELECT * FROM dbo.jobs;
```

id	title	experience	description	posted_at
1005	Intern- Software Development	0 to 1 Year (or "Freshers welcome")	-> Assist in the development and maintenance of ...	2025-08-20 22:12:25.227
1007	Consultant- Medical Oncology	5 years	-> Working with patients to explain a diagnosis an...	2025-08-20 22:22:14.073

Figure 6.24: Database Jobs Table

- User Panel:

Career Opportunities

Consultant- Medical Oncology

Experience: 5 years

- > Working with patients to explain a diagnosis and stage of cancer, discuss treatment options, and assist in managing the side effects and symptoms of cancer and its treatment.
- > Coordinating treatment plans and prescribing various types of treatment, including chemotherapy and immunotherapy.
- > Treating patients with Chemo therapy.
- > Assisting patients with pain management.
- > Performing basic administrative and clerical tasks, such as keeping records of test results, writing prescriptions, providing cancer information to patients, and monitoring treatment

► [Apply for this job](#)

Intern- Software Development

Experience: 0 – 1 Year (or "Freshers welcome")

- > Assist in the development and maintenance of web application.
- > Work with software team to test, debug and deploy application.
- > Learn about data management , front-end and back-end development.
- > Collaborate with daily stand ups and team meetings.
- > Duration: 3-6 months.
- > Stipend: Negotiable/ Company Policy.

► [Apply for this job](#)

Figure 6.25: Posted Jobs

Career Opportunities

Intern- Software Development

Experience: 0 – 1 Year (or "Freshers welcome")

-> Assist in the development and maintenance of web applications.

-> Work with the software team to test, debug, and deploy applications.

-> Learn about database management, front-end, and back-end development.

-> Collaborate in daily stand-ups and team meetings.

-> Duration: 3–6 months.

-> Stipend: Negotiable / As per company policy.

▼ Apply for this job

Name:

Email:

Phone:

Resume (PDF, DOC, DOCX):

Figure 6.26: Application Form

```
SELECT * FROM dbo.career;
```

id	job_id	name	email	phone	resume	applied_at	status
1010	1005	Nazia Afrin Titly	nazia.afrin.cse@ulab.edu.bd	01742441164	68a5f5d898d8d.pdf	2025-08-20 22:20:40.630	Pending
1011	1006	Afrin Titly	titly@gmail.com	01621398890	68a5f62a59deb.pdf	2025-08-20 22:22:02.370	Pending

Figure 6.27: Database Career Table

6.1.3 AKHIL HIS System

Registration Info Demographics Attach Document

Registration Type: New Registration

UHID: [Field]

Buttons: New, Save, Print, Print Card, PatientRegDetails, Check D

Mr. [Dropdown]

Personal Information

First Name * [Field]
 Middle Name [Field]
 Last Name [Field]
 Gender * [Male] [Dropdown]
 Marital Status * [Select] [Dropdown]
 DOB * [Field]
 Age(Y-M-D) [Field]
 Guardian Name * [Field]
 Mother Name [Field]
 Father Name [Field]

Contact Details

Mobile # * [Field]
 Address * [Field]
 Country * [BANGLADESH] [Dropdown]
 State/Division * [DHAKA] [Dropdown]
 District/City * [DHAKA] [Dropdown]
 Area/P.S. * [Field]
 Pin Code [Field]
 Alt. Phone# [Field]
 Email [Field]

Emergency Contact

Name [Field]
 Relationship [Select] [Dropdown]
 Contact No. * [Field]

Patient Identity Details

Nationality * [BANGLADESH] [Dropdown]
 Identity Type [Select] [Dropdown]
 Identity # [Field]
 National ID [Field]

Reg. Date: 04/09/2025
 Update By [Field]
 Update Date [Field]

Other Info: Permanent Address, Custom Fields

Payer

Payer Type * [Direct Patient] [Radio] [Company] [Radio] [Insurance] [Radio]
 Payer * [CASH PATIENT] [Dropdown]
 Sponsor [CASH PATIENT] [Dropdown]

Referral Info

Provider [Select] [Dropdown]
 Lead Source [Select] [Dropdown]
 Referred Type * [SELF / WALK-IN] [Dropdown]
 Referred By [Select] [Dropdown]
 HCF [Select] [Dropdown]
 Status [Active] [Dropdown]
 Remarks [Field]

Other

Blood Group [Select] [Dropdown]
 Religion [Select] [Dropdown]
 Occupation [Select] [Dropdown]
 Monthly Income [Field]
 VIP [Field]
 Narration [Field]
 Name Masking [Field]
 Send Promotional [Field]
 Handle With Care [Field]
 Fall Risk [Field]
 Mng/Alert [Field]
 E-mail [Field]

Figure 6.28: Patient Registration

Registration Info Demographics Attach Document

Patient Documents

UHID: [Field]

Name: [Field]

Age/Gender: [Field]

Documents [All] [Dropdown]

File Upload * [Choose File] [No file chosen] [Field]
 File Name * [Field]
 Date: 08/04/2025 [Field]
 Visit No [Field]
 Category * [Field]
 Remarks [Field]

Figure 6.29: Patient Documents

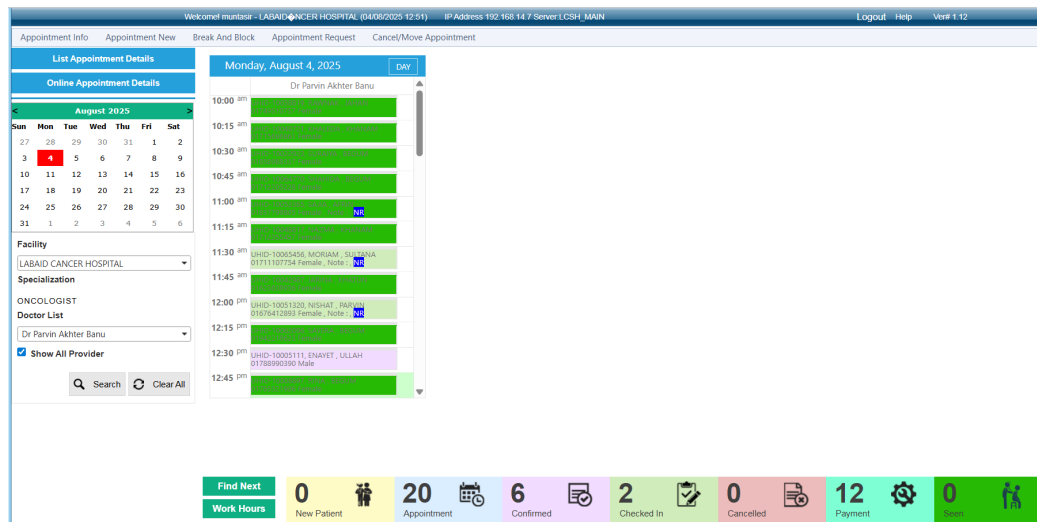


Figure 6.30: Appointment

Figure 6.31: Break/Block Schedule

Figure 6.32: Appointment Request

Appointment Info Appointment New Break And Block Appointment Request Cancel/Move Appointment

Cancel/Move Appointment Refresh Update Patient Info Cancel/Move Appointment Print

LABAID CANCER HOSPITAL Options Select Appointment Doctor

Remarks From Date 04/08/2025 To 04/08/2025

SNo	UHD	Patient Name	Age/Gender	Appt. Date	Start Time	End Time	Mobile No.	Email	Remarks
1									

Only UnConfirmed/Confirmed Appointment Can be Move or Cancel

Figure 6.33: Move/Cancel Appointment

Menu Billing Info Patient History Patient Lists Approval Logs Master Activity List Create OP Visit OP/IP Order OP Single Bill IP Billing Refund Advance Collection Change Entry Site Pricing Invoice Status Receipt

Type All Date Range Today From Date 04/08/2025 To Date 04/08/2025 Search

Figure 6.34: Billing

Billing Info Patient History Patient Lists Approval Logs Master Activity List Create OP Visit OP/IP Order OP Single Bill IP Billing Refund Advance Collection Change Entry Site Pricing Invoice Status Receipt Settlement Details

OP Invoice UHID 10059992 Note Visit No NA Bill No OPOC26/2430 New Print Save

Patient Details Invoice Details Payer Details Other Details

MANIK Male/35 Yr 7 Mth 3 Days CHANDPUR CHATTOGRAM

Year 25-26 Type Cash Invoice# OPOC26/2430 Date 07/07/2025 00:00

Type Company Payer DUTCH-BANGLA BANK LIMITED (CAR) Sponsor DUTCH-BANGLA BANK LIMITED (CAR) Network

Prescribing Doctor Prof Dr Brng Gen Md Yousuf Ali Referred Type EXTERNAL PROVIDER Referred by Name PROF. DR. BORHAN UDDIN KHAN Source OPD

Service	Payment	Adjustment	Outstanding	Checklist	Patient Diagnosis Entry	Unit	Charge	Discount	Patient Amt	Payer Amt	
1	CBC					1,000	400.00	0.00	400.00	0.00	
2	CREATININE-SERUM					1,000	610.00	91.50	518.50	0.00	
3	NEEDLE					1,000	30.00	0.00	30.00	0.00	
4	DISPOSABLE					1,000	30.00	0.00	30.00	0.00	
5	TOURNIQUET (ONE TIME)					1,000	50.00	0.00	50.00	0.00	
Totals							5,000.00	1120.00	91.50	1028.50	0.00

Treatment / Available Limit : 0.00 / 0.00 Advance / Outstanding : 0.00 / 0.00 External Referral: 0

Narration Last Visited: 07/07/2025 05:26PM (28 Days) (Prof Dr Brng Gen Md Yousuf Ali) Original

due

Approval Required Excluded Service Refunded Service Reporting DateTime 07/07/2025 00:00 E-mail Result

Currency Received Rate 1028.50 1.00 ConvAmt 1028.50 Charge 1120.00 Discount 91.50

Net Amt 1028.50 Deductable Amt 0.00 Received 1000.50 Advance 1000.00 Balance -972.00 Vat Amt 0.00

Figure 6.35: OP invoice

Welcomed master - LABAID CANCER HOSPITAL (04/08/2025 12:55) IP Address: 192.168.14.7 Server: LCSDH_MAIN Logout Help View: 1.12

Payer Info Master Setup Employee Profile Facility Tagging Color Legends Order Set Roles And Permissions Equipment And Service Tagging Cash Company Credit Limit Holidays Change Password Link Service Setup Visit Type
Lab Entry Site Master External Centre master Hospital Setup Surgery Component Master Combination Setup OP Bill Promotion Registration Duplication Check Currency Exchange Entry Site Department Tagging Additional fields Master

Employee Type Name, Employee Type, Mobile# or i Employee No. New Save

Title Select Employee Details Employee Look Up Employee Profile Employee Sequence

First Name * Last Name
Employment Status * Employee Type CONTRACT STAFF
Education Department ACCIDENT AND EMERGENCY
Interaction Plausibility Medication Severity
Designation Room No.
Date of Joining 08/04/2025 Date Of Leaving

Lab Station Lab Station
Discount % Authorised
Status Active
Default Store
Tag Marketing Employee

Mailing Address Visit Detail Other Permissions

Address First Visit
Country BANGLADESH Second Visit
State DHAKA Free Visit
City DHAKA IP First Visit
Zip IP Second Visit
Home Mobile ICU Visit
E-Mail ID IP 1st Emergency Visit
IP 2nd Emergency Visit

Other Permissions
☐ Resource
☐ Access All Resource
☐ Access Specialisation Resource
☐ Access All Encounter
☐ Copy Clinical Case Sheet
☐ Print Case Sheet
☐ Is EMR Super User
☐ Is Print Original OP/IP Receipt
☐ Appointment Schedule
☐ Providing OP Service
☐ Providing IP Service
☐ Download Patient Document
☐ Is Email Patient Lab Report
☐ Admission Authorised
☐ Refund Above Max Limit
☐ Include For Discharge Summary

Login Details Select User Group * Select Facility * Select Entry Site *

User Name * Password * Confirm Password * PR Tracking Password Hint Questions Or Create Other Hint Answer

☐ A ON CALL
☐ ACCOUNT
☐ ACCOUNT INCHARGE
☐ ACCOUNT SETTLEMENT
☒ ADMIN
☐ ADMIN INCHARGE
☐ ADMISSION
☐ ADMISSION INCHARGE

☐ LABAID CANCER HOSPITAL

☐ Labaid Hospital

Figure 6.36: Master Setup

Welcomed master - LABAID CANCER HOSPITAL (04/08/2025 12:56) IP Address: 192.168.14.7 Server: LCSDH_MAIN Logout Help View: 1.12

Payer Info Master Setup Employee Profile Facility Tagging Color Legends Order Set Roles And Permissions Equipment And Service Tagging Cash Company Credit Limit Holidays Change Password Link Service Setup Visit Type
Lab Entry Site Master External Centre master Hospital Setup Surgery Component Master Combination Setup OP Bill Promotion Registration Duplication Check Currency Exchange Entry Site Department Tagging Additional fields Master

Pricing Export Save

Facility LABAID CANCER HOSPITAL Payer CASH PATIENT Network Effective Date 01/02/2021
Department All Sub Department All Service Name Filter Show Emergency Charge

Ref Service Code	JCode	Service Name	Service Charges	Doctor Charges	Estimated Cost	OP Discount (%)	IP Discount (%)	Valid From	Active	Surgery Component
1	1	OPD CHARGE CATEGORY	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	
3	3	GENERAL WARD	3500.00	0.00	0.00	0.00	0.00	31/07/2022	✓	
5	6	DELUXE	10000.00	0.00	0.00	0.00	0.00	31/07/2022	✓	
7	7	SUITE	20000.00	0.00	0.00	0.00	0.00	31/07/2022	✓	
9	8	HIGH DEPENDENCY	8000.00	0.00	0.00	0.00	0.00	31/07/2022	✓	
10	10	EMERGENCY WARD	700.00	0.00	0.00	0.00	0.00	11/01/2023	✓	
11	11	DAY CARE	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	
20	20	AMBULANCE CHARGES (DHAKA CITY WITHIN 10 KM)	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	
20	20	AMBULANCE CHARGES (DHAKA CITY WITHIN 10 KM)	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	
20	20	AMBULANCE CHARGES (DHAKA CITY WITHIN 10 KM)	1500.00	0.00	0.00	0.00	0.00	01/03/2022	✓	
23	23	ALPHA BED CHARGES (PER DAY)	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	
23	23	ALPHA BED CHARGES (PER DAY)	0.00	0.00	0.00	0.00	0.00	01/02/2021	✓	

2 3 4 5 6 7 8 9 10 >>

Figure 6.37: Service Pricing

Welcome! Taimur Muntair Sam - LABAID NCER HOSPITAL (04/08/2025 13:02) IP Address: 192.168.14.7 Server:CSH MAIN Logout Help Ver: 1.12

LIS Info Sample Status Result Entry Result Attachment Result Finalization Sample Acknowledge Patient Lists Sample UnAcknowledge Cancel Finalization Result Printing Diagnostic History Turn Around Time Lab Devices Result

Result Finalization - LABORATORY

Source: ALL Result From: 04/08/2025 To: 04/08/2025 Status: Result Provisional Test Priority: [ALL]
 Search By: Lab No: Entry Site: -- ALL -- Lab Entry Site: LABORATORY Report Type: [Select Report Type]
 Ward: [Select] Sub Department: All items checked Service Name: [Select] Not finalized Assigned to me Outsource Test

Investigation	Field Name	Lab Doctor	Delay(H:Mm)	Result	Ref. Range	Details	Result History	Visit History	DX	Print	Notification
CBC	Hb (Haemoglobin)		00:00	10.9 gm/dl	12-16			Visit		Print	
	ESR			56 mm in 1st hour	Ref. Range					Print	
	RBC Count			4.63 X10 ¹² /L	3.8-4.8					Print	
	PCV			35.00 %	36-46					Print	
	MCV			75.60 fl	83-101					Print	
	MCH			23.50 pg	27-32					Print	
	MCHC			31.10 gm/dl	31.5-34.5					Print	
	RDW-CV			15.50 %	11.6-14					Print	
	RDW-SD			42.50 fl	39-46					Print	
	WBC Count			6.90 X10 ⁹ /L	4-10					Print	
	Differential Leucocyte Count				13-14					Print	
	Neutrophils			44.5 %	40-80					Print	

Release Stage: [Select] Assign To: [Select Employee]

Result Entered Result Provisional Result Provisional Stat Urgent Multi Stage Result (Final)

Figure 6.41: LIS

6.2 Learning and Development

During internship, I have developed my skill on writing SQL queries in Microsoft SQL Server and visualizing capabilities using excel through directly working on hospital databases and real world problems. This hands on experience helps me to understand the importance of how accurate data querying and reporting is important for database management and managing organization. This database related work help the organization to keep track of discipline and staff management. I have developed my skill in AKHIL HIS system and understand the importance of engineering in hospital management systems. In addition, working in the web development part provided me practical experience in PHP programming. I have learnt to write PHP coding efficiently and get a scope to apply it. Working with PHP, HTML, and CSS to build a functional career page improved my web development skills and understanding of server-client interactions in real world applications. This internship broadened my software working skills and importance of engineering in organization management. Additionally, I learned the significance of communication, team work and observing any problems in detail before jumping into a solution. I also developed the skill of adaptability and self learning techniques.

6.3 Tools and Technology

The specific software, hardware, equipment, and technologies that I have used during the internship:

- **Microsoft SQL server:** For data querying and reporting.
- **Microsoft Excel:** For visualizing report data.
- **Xampp:** As a web server for PHP and SQL.
- **AKHIL HIS system:** For hospital management purposes [Systems \(n.d.\)](#).
- **PHP:** For backend development of a career page [Tutorials Point \(I\) Pvt. Ltd. \(2016\)](#).
- **HTML and CSS :** For website structure and styling.
- **localhost:** For browsing.

6.4 User Guideline

6.4.1 Career Section

The functionality of Career Page has been designed to assist applicants in finding job opportunities and applying online. Administrators manage and control job postings, job modification as well as collect and review applications. Administrations, HR and applicants are the users of this section. A guideline to represent the functionality has been shown below:

1. Access

- **SignUp / Login** with proper username and password.
- **Role and position based SignUp/Login** is mandatory – doctors, nurses, accounts, IT and other employees.

2. Features for Applicants

- **Job Lists:** Applicants can view available job openings and opportunities with job title, job description, experience in details.

- **Apply for a Job:** By selecting 'Apply for the job' applicants can view a form including- Name, Phone No. Email and Upload option for CV. After fulfilling the form by clicking the submit button application will be submitted successfully.
- **Confirmation:** Once submitted, applicants will receive a confirmation message or email regarding their application.

3. Features for Administrators / HR

- **Job Dashboard:** Admin or HR can view and modify the job dashboard of- total posted jobs, applicant, job filled , new applicants today for an overall overview.
- **Post Jobs:** Admin or HR can create new job postings by entering job title, description and required experiences.
- **Modify Jobs:** Job postings can be modified or deleted as per requirements.
- **Applications:** Can access and review submitted applications, applicants information, view and download resumes, and shortlist applicants.
- **Application Status:** :Applicants can be shortlisted by confirmed or deleted by modifying status.
- **Settings:** Offers changing theme, notification settings , auto delete job posts option.

4. Navigation Instructions

- Use the navigation bar to move between Job and Applications lists.
- Google , Chrome, microsoft edge and Mozilla Firefox can be used for browsing.

5. Troubleshooting

- Uploaded documents must be in PDF or DOCX format.
- For further guidance, applicants can use *Contact Us* option available on the Career Page.
- Contact IT department for any technical issues.

6.4.2 Akhil HIS System

The Akhil HIS System assists hospital operations including- patient registration, appointment, billing, OT booking, inventory management, ward management, blood donor registration ,master setup EMR , LIS and many more. HR, administration, accounts, doctors, nurses, IT employees, executives, managing directors and mostly hospital employees can access this system. ct the IT department for any issues.

1. Access

- SignUp / Login with proper username and password.
- Role and position based SignUp/Login is mandatory for doctors, nurses, accounts, IT employees, etc.

2. Features

- **Patient Registration:** For registration enter patient details name, age, gender, contact, address and assign an UHID.
- **Appointments:**
 - Search registered patient by UHID.
 - For new patients register patients if required.
 - Select doctors, department, type, and schedule.
 - Break/Block , Move/ cancel appointments if needed.
- **Billing:**
 - Generate receipt for the taken services.
type based bills- credit, op, single, IP billing.
 - Print or email receipt for the patient.
- **Blood Donor Registration:**
 - For registration enter donor details name, age, gender, contact, address, ID, blood group, physical examination results, for whom, schedule.
 - Generate a receipt for confirmation.
- **EMR:**

- Doctors and pathologists provide clinical reports , diagnosis reports, and prescriptions.
- Can be updated as per requirements.
- Records are stored digitally and can generate a report for the patient.
- **LIS:** Create and record lab tests and generate reports in details.
- **Ward:**
 - Check available beds and assign patients.
 - keep track of patient admissions, transfers and discharges.
 - Manage and update occupancy.
- **Inventory:** Records stock of medicine and medical equipments.
- **OT:**
 - Check scheduled surgeries.
 - Schedule and assign doctors, nurses and anesthetists.
 - Maintain surgical equipment and records.

3. Navigation Instructions

- Use the left hand dashboard menu to find required modules and navigation bar to move between modules and input information.
- Mandatory information to fill is signed with(*).

4. Troubleshooting

- Contact IT department for any technical issues.

6.5 Impact of the Internship

Internship is important for gathering real world problem solving experiences and skills, bridging gaps between academic learning and professionalism and to improve career prospects. By analyzing and generating attendance and patient appointment load reports through SQL querying and data analysis, I helped the hospital better understand and keep track of the employee discipline, staffing management and to ensure efficient scheduling to take proper action as per need and requirements. My

involvement in AKHIL HIS in patient registration, appointment, billing, EMR part make administrative work efficiently and reduce the work loads. Additionally, my contribution in a team of initial proposal of developing the career page for the hospital official website help to contribute understanding and providing a structured platform for job postings and applications . This section will help to hire qualified candidates and improve its human resource reach. The system architecture for their own hospital management purpose following AKHIL HIS System will help the organization to understand the system flow process which will help in developing the system efficiently. Overall my contribution during this internship positively impacted the organization's workflows , reducing manual workloads a bit and supported the efficient and reliable healthcare services. This program also impacted my personal and professional life through developing working , communication, adaptability, self learning and collaboration skills which will help in improving career prospects further.

Chapter 7

Conclusions and Recommendations

7.1 Conclusion

As an intern of 'Labaid Cancer Hospital and Super Speciality Center', from the gaining knowledge point of view I have relished my internship. During this three month internship program support my skill to develop for my further career. This is the only comprehensive specialized healthcare institutions in Bangladesh. This hospital is integrated with advanced medical services and cutting edge opportunities of research, leading the treatment of cancer while staying at the front of medical technologies and expertise. I was assigned to the IT Department, where I contributed to various tasks related to database query and reporting, actively working on our Akhil HIS Software, website development and system design. As engineering is a crucial part for hospital management systems, Information Technology Department is responsible for creating, managing, and maintaining the computer and network systems that store and process the hospital's information, website and HIS. My contribution during this internship impact the operational workflows, reducing manual workloads a bit and supported the organization's mission to efficient and reliable healthcare services. Challenges faced in hardware setting up and working part, AKHIL HIS System working procedure and PHP programming which I have overcome through senior colleagues guidance, manual, online learning materials. During this internship, I have developed software working skills, learned the significance of communication, team work and observing any problems in detail before jumping into a solution as well as developed the skill of adaptability and self learning techniques. will help in improving career aspects further.

7.2 Limitations

Though 'Labaid Cancer Hospital Super Speciality Centre' is 'the top specialized healthcare institutions in our country', it has some limitations which need to be addressed for a better and reliable system workflow. The limitations that should be taken under considerations:

- Limited availability of working space for the Information Technology and Administrative Department.
- Specialization is mostly isolated in one sector.
- Integration with the local system is limited.
- Lack of familiarity with Indian English in user interfaces.
- Lack of a career section in their website that limits managing the job section.

7.3 Recommendations

'Labaid Cancer Hospital and Super Speciality Center' is the top specialized healthcare institutions in Bangladesh, aim to being greatly committed to the society we serve. Information Technology Department is responsible for maintaining the computer, database and network systems that store and process the hospital's information, website and HIS. Though the working flow is much stable and reliable, it has some limitations. Considering those limitations some recommendations are:

- Expand working space for the Information Technology and Administrative Department.
- Cross functional training for reducing the gap between software and hardware specialized teams.
- Developing its own HIS System will integrate with local system ex.-local hospitals and government databases.
- Adding a career section in the official website to facilitate job offerings and application management efficiently.

Appendix

Appendix A: Offer Letter



Figure 1: Internship Offer Letter

Appendix B: Correction & Verification Letter

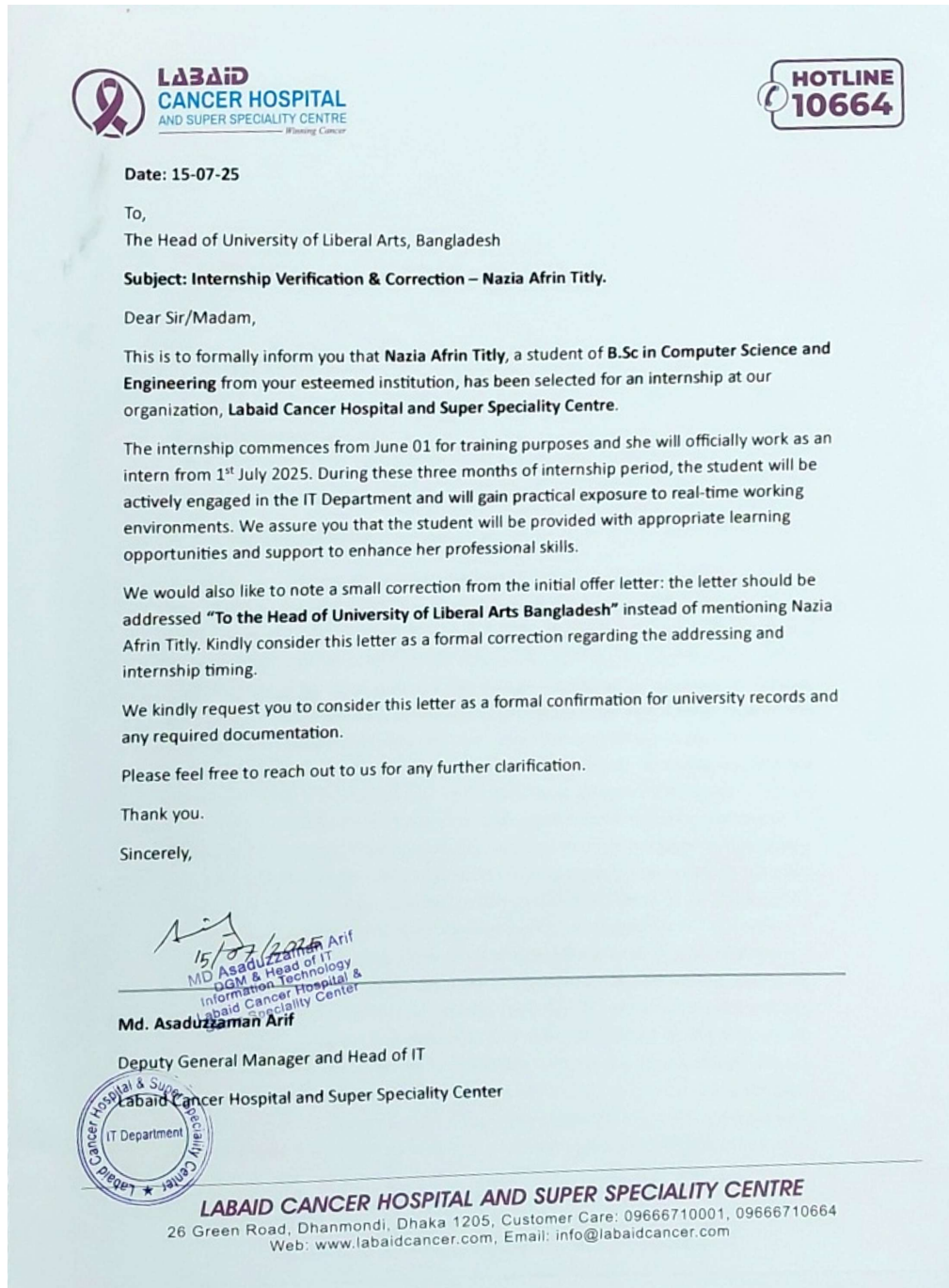


Figure 2: Correction Letter

References

Hospital, L. C., & Center, S. S. (n.d.). *Official website*. <https://labaidcancer.com/>. ([Accessed: Aug. 19, 2025])

IT Department, L. C. H., & Ltd., S. S. C. (2024). *Policy on information technology*. Document ID: LCH/MOI/001, Version 01, Internal Circulation Only. (Effective Date: 02.07.2024, Next Review: 01.07.2027)

Systems, A. (n.d.). *Official website*. <https://akhilsystems.com/>. ([Accessed: Aug. 19, 2025])

Tutorials Point (I) Pvt. Ltd. (2016). *Php tutorial*. Retrieved from https://www.tutorialspoint.com/php/php_tutorial.pdf (Accessed: August 2025)