Northern University Bangladesh

Department: Computer Science & Engineering

Subject: Software Development-

Course Code: CSE-1290

Lab Project Report

Project Title

Hospital Management System

Submission Date: 13/ 09/2025

Submitted By	Submitted To
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Northern University Bangladesh	

Software Development Lab Project Report

Institute Name: **Northern University Bangladesh**
Course: **Software Development 1**
Project Title: **Hospital Management System**

Date of Submission: **13 sup 2025**

Group Members:

Name	Student ID
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Submitted To:

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Introduction

A Hospital Management System is a software solution designed to efficiently manage hospital operations. It helps streamline different tasks including:

- ➢ Patient Registration
- ➢ Doctor Assignment
- ➢ Report Generation

This system ensures smooth operations, reduces manual workload, and increases accuracy in hospital management.

Objectives

- ➢ To store and manage patient data securely.
- ➢ To assign doctors to patients efficiently.

- To generate medical and financial reports easily.
- To ensure accuracy and reduce manual errors.

Input Fields

Patient Name   :

- Patient ID   :
- Patient Age   :
- Patient Gender   :
- Patient Address :
- Mobile Number :
- Doctor Name   :
- Reference   :
- Total Amount   :
- Discount   :
- Due Amount   :
- Submit   :

C Program Code:

#include <stdio.h>

#include <string.h>

struct Patient {

```c
    char name[100];
    int id;
    int age;
    char gender[10];
    char address[200];
    char mobile[20];
    char doctor[100];
    char reference[200];
    float totalAmount;
    float discount;
    float dueAmount;
};

int main() {
    struct Patient p;
```

```c
    printf("------ Hospital Management System ------\n");

    printf("Enter Patient Name: ");
    fgets(p.name, sizeof(p.name), stdin);

    printf("Enter Patient ID: ");
    scanf("%d", &p.id);
    getchar();

    printf("Enter Patient Age: ");
    scanf("%d", &p.age);
    getchar();

    printf("Enter Patient Gender: ");
    fgets(p.gender, sizeof(p.gender), stdin);
```

```c
    printf("Enter Patient Address: ");
    fgets(p.address, sizeof(p.address), stdin);

    printf("Enter Patient Mobile Number: ");
    fgets(p.mobile, sizeof(p.mobile), stdin);

    printf("Enter Doctor Name: ");
    fgets(p.doctor, sizeof(p.doctor), stdin);

    printf("Enter Reference Analysis: ");
    fgets(p.reference, sizeof(p.reference), stdin);

    printf("Enter Total Amount: ");
    scanf("%f", &p.totalAmount);

    printf("Enter Discount Amount: ");
```

```c
    scanf("%f", &p.discount);

    p.dueAmount = p.totalAmount - p.discount;

    printf("\n--- Submitted Successfully! ---\n");

    printf("\n------ Patient Details ------\n");
    printf("Name           : %s", p.name);
    printf("ID             : %d\n", p.id);
    printf("Age            : %d\n", p.age);
    printf("Gender         : %s", p.gender);
    printf("Address        : %s", p.address);
    printf("Mobile No.     : %s", p.mobile);
    printf("Doctor Name    : %s", p.doctor);
```

```c
    printf("Reference        : %s", p.reference);
    printf("Total Amount     : %.2f\n", p.totalAmount);
    printf("Discount         : %.2f\n", p.discount);
    printf("Due Amount       : %.2f\n", p.dueAmount);

    return 0;
}
```

Sample Output

```
        ----Pariente Report----
    Name        : Ashik
    ID          : 2231
    Age         : 25y
```

Gender   : Mail

Address   : Dhaka

Mobile   :01740319423

Doctor   : Dr. Almas

Reference   :Sadek

Total Amount:2500

Due Amount:500%

Final Output


```
------ Hospital Management System ------
Enter Patient Name:
```

Coding C++
Nothing changed

```c
1 #include <stdio.h>
2 #include <string.h>
3
4 struct Patient {
5     char name[100];
6     int id;
7     int age;
8     char gender[10];
9     char address[200];
10    char mobile[20];
11    char doctor[100];
12    char reference[200];
13    float totalAmount;
14    float discount;
15    float dueAmount;
16 };
17
18 int main() {
19     struct Patient p;
20
21     printf("------ Hospital Management System ------\n");
22
23     printf("Enter Patient Name: ");
24     fgets(p.name, sizeof(p.name), stdin);
25
26     printf("Enter Patient ID: ");
27     scanf("%d", &p.id);
28     getchar();
29
30     printf("Enter Patient Age: ");
31     scanf("%d", &p.age);
32     getchar();
33
34     printf("Enter Patient Gender: ");
35     fgets(p.gender, sizeof(p.gender), stdin);
36
37     printf("Enter Patient Address: ");
38     fgets(p.address, sizeof(p.address), stdin);
39
40     printf("Enter Patient Mobile Number: ");
41     fgets(p.mobile, sizeof(p.mobile), stdin);
42
```

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Coding C++
Nothing changed   RUN   MENU

```
42
43      printf("Enter Doctor Name: ");
44      fgets(p.doctor, sizeof(p.doctor), stdin);
45
46      printf("Enter Reference Analysis: ");
47      fgets(p.reference, sizeof(p.reference), stdin);
48
49      printf("Enter Total Amount: ");
50      scanf("%f", &p.totalAmount);
51
52      printf("Enter Discount Amount: ");
53      scanf("%f", &p.discount);
54
55
56      p.dueAmount = p.totalAmount - p.discount;
57
58      printf("\n--- Submitted Successfully! ---\n");
59
60      printf("\n------ Patient Details ------\n");
61      printf("Name            : %s", p.name);
62      printf("ID              : %d\n", p.id);
63      printf("Age             : %d\n", p.age);
64      printf("Gender          : %s", p.gender);
65      printf("Address         : %s", p.address);
66      printf("Mobile No.      : %s", p.mobile);
67      printf("Doctor Name     : %s", p.doctor);
68      printf("Reference       : %s", p.reference);
69      printf("Total Amount    : %.2f\n", p.totalAmount);
70      printf("Discount        : %.2f\n", p.discount);
71      printf("Due Amount      : %.2f\n", p.dueAmount);
72
73      return 0;
74 }
```

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Future Scope

- Add multiple patient support
- Save to file/database
- GUI interface
- Asmin login system

Conclusion

- Easy hospital data management
- Real-time reporting
- Good for beginners in C

References

- Code::Blocks
- WWW.Google.com
- ChatGPT
- WWW.YouTube.com

GitHub Repository

- ❖ https://github.com/ashik26518/Hospital-Management-System.git