

## SYNOPSIS

### Title of the Project

Hostel Management System

### Introduction

This system is designed in favor of the hostel management which helps them to save the records of the students about their rooms and other things. It helps them from the manual work from which it is very difficult to find the record of the students and the mess bills of the students, and the information of about the those ones who had left the hostel three years before.

We design this system on the request of the hostel management, through this they cannot require so efficient person to handle and calculate the things. This system automatically calculates all the bills and issued the notifications for those students who are against some rules.

### Content of the Project

- **Project statement**

The hostel management needs to create the hostel management system (HMS) to organize the rooms, mess, students record and the other information about the students. how many students can live in a room, and the students of the hostel can be recognized from their ID number.

- **Descriptions**

This software product the hostel management to improve their services for all the students of the hostel. This also reduce the manual work of the persons in admin panel and the bundle of registers that were search when to find the information of a previous student, because through this system you can store the data of those students who had leaved the hostel three years ago.

Through this you can check the personal profile of all the current students within few minutes the data base of the system will help you to check a particular one.

The system will help you to check the mess bills of every student and the student's hostel dues. The students of the hostel will be recognized from the ID number allocated at the room rental time. In the last this system will improve the management work in the hostel.

- Objectives

Stake Holder	Objective
Student	The student can store his or her information
Administrative	The warden can see the data of students

- Process flow

There are four types of flow

Registration flow :

To take the membership of the hostel the students should tell the department's name to the hostel management system. He/she should fill his/her personal profile on the profile page. After this the warden issued ID # to him/her. So that the student can accessed by his/her ID # in case of any problem or other thing.

Mess Flow :

When a student will use the mess using his/her ID card at mess. A student can take only 2 messes at a time.

At the end of the month the hard copy of mess details issued to the student's room, which shows the detailed of his/her messes and all the dues of the mess .

The student should pay the dues within 10 days after the issued of mess bill. In case of not paying dues the warning letter is issued against the student.

Room process flow :

A room will be allocated when a student is registered in the hostel. The allocation will be on the basis of the department, semester and the session of the student. A room is only for the two students.

The dues of the hostel is only for 1 semester and after the end of the semester the student should pay the next semester's dues. The student will pay the dues within 10 days after next semester.

In case of not paying the dues of the hostel at the announced date a warning is send to the student.

In case of the unavailability of a room the students will be entered in a waiting list when the room will be free the student will be told by the management of the hostel.

Database flow :

When the new student is arrived then the administrator easily enter a new entry in the database of the system. All the information about mess and other facilities is updated easily. This database should save the record of all the current users and the 3 years old students.

## **Project Category**

RDBMS

## **Tools, platforms / Hardware and Software Requirements**

Language to be used

VB.NET

Specific Requirements

External Interface Requirements

User Interface

VB.Net is the successor of the Visual Basic 6 programming language. VB.Net has brought about a great number of architectural changes in the Visual Basic language that are not backward compatible. A number of core elements and concepts in VB6 have been modified or removed. A great many new features have been added to the VB.Net language. It

will be right to say that VB.Net will change the way Visual Basic programmers perceive their development. VB.Net has gained some credibility among serious programmers. Visual Basic has gained much favor amongst many developers. Currently, there are more VB programmers in the world than there are for any other programming language and there is more application development done in VB than in any other programming language.

### Hardware Interface

- 1)40 GB hard disk
- 2)256 MB RAM
- 3 Peripheral devices

### Software Interface

The software is developed with all the basic controls and class provided in VB.net .Windows XP or above installed on the system. Application Package must be installed.

### Communication Interface

Windows Forms

### Security

This system is provided with authentication without which no user can pass. So only the legitimate users are allowed to use the application. If the legitimate users share the authentication information then the system is open to outsiders.

### Maintainability

There will be no maintenance required for the software. The database is provided by the end-user and therefore is maintained by this user.

### Portability

The system is not portable as it is a standalone application running on single system with no shared database.

## **ER Diagram**

An Entity Relation(ER) Diagram is a specialized graphics that illustrates the interrelationship between entities in a database. ER diagrams often use symbols to represent 3 different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes.

An Entity Relationship Model (ERM), in software engineering is an abstract and conceptual representation of data. Entity Relationship modeling is a relational schema database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relation database, and its requirements in a top-down fashion

**Entity:**

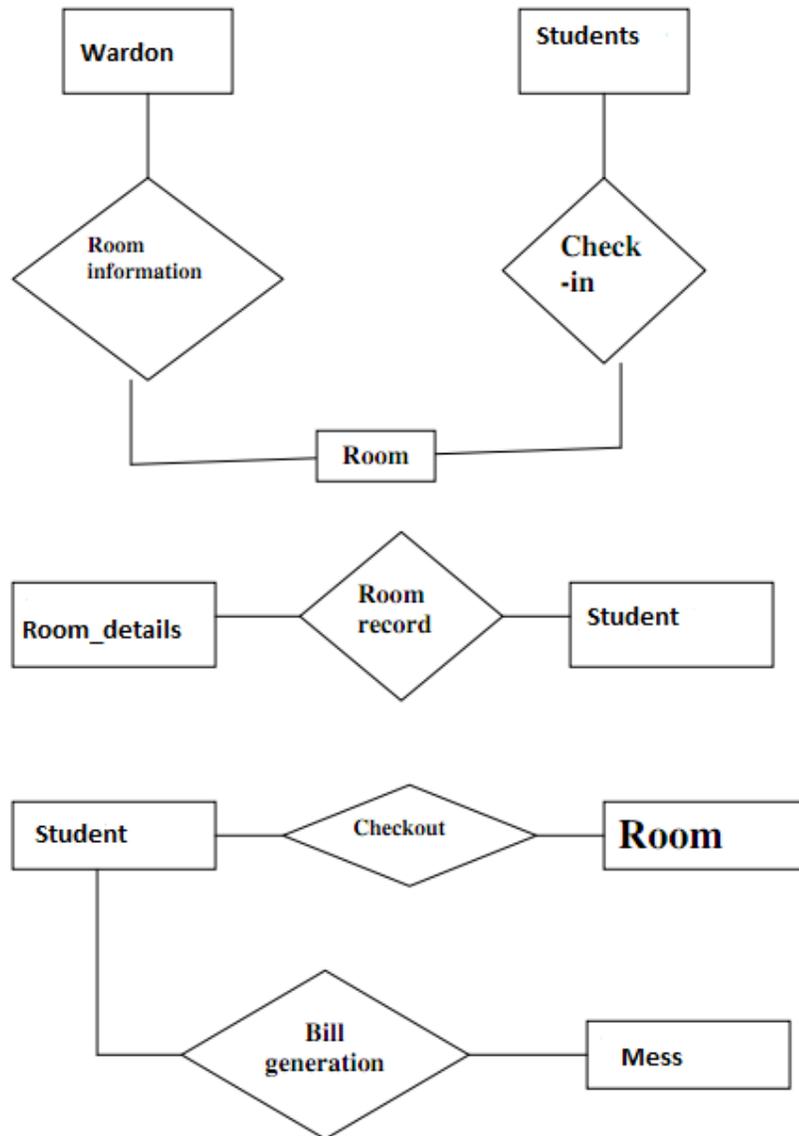
Entity is the thing which we want to store information. It is an elementary basic building block of storing information about business process. An entity represents an object defined within the information system about which you want to store information. Entities are distinct things in the enterprise.

**Relationships:**

A relationship is a named collection or association between entities or used to relate two or more entities with some common attributes or meaningful interaction between the objects.

**Attributes:**

Attributes are the properties of the entities and relationship, Descriptor of the entity. Attributes are elementary pieces of information attached to an entity.



## Data Flow Diagram

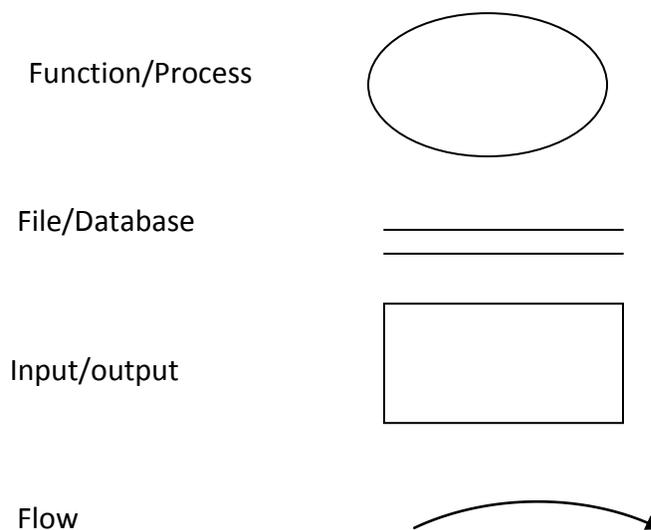
A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an Information System. A data flow diagram can also be used for the visualization of Data Processing. It is common practice for a designer to draw a context-level DFD first which shows the interaction

between the system and outside entities. This context-level DFD is then "exploded" to show more detail of the system being modeled.

A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as a function that transforms the input into desired output. A DFD shows movement of data through the different transformations or processes in the system.

Dataflow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to restock how any system is developed can be determined through a dataflow diagram. The appropriate register saved in database and maintained by appropriate authorities.

### **Data Flow Diagram Notation**



# **Testing**

## **INTRODUCTION**

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

### **OBJECTIVES OF TESTING:**

The objectives of testing are:

Testing is a process of executing a program with the intent of finding errors. A Successful test case is one that uncovers an as-yet-undiscovered error.

System testing is a stage of implementation, which is aimed at ensuring that the system works accurately and efficiently as per the user need, before the live operation commences. As stated before, testing is vital to the success of a system. System testing makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. A series of tests are performed before the system is ready for the user acceptance test.

### **TESTING METHODS**

System testing is the stage of implementation. This is to check whether the system works accurately and efficiently before live operation commences. Testing is vital to the success of the system. The candidate system is subject to a variety of tests: on line response, volume, stress, recovery, security and

usability tests. A series of tests are performed for the proposed system is ready for user acceptance testing.

The Testing Steps are:

### Unit Testing

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module.

### Integration Testing

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

### Validation

At the culmination of the integration testing, Software is completely assembled as a package. Interfacing errors have been uncovered and corrected and a final series of software test begin in validation testing. Validation testing can be defined in many ways, but a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After validation test has been conducted, one of the three possible conditions exists.

The function or performance characteristics confirm to specification and are accepted.

A deviation from specification is uncovered and a deficiency lists is created. Proposed system under consideration has been tested by using validation test and found to be working satisfactory.

### Output Testing

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the

required output in a specific format. The output format on the screen is found to be correct, The format was designed in the system design time according to the user needs. For the hard copy also; the output comes as per the specified requirements by the user. Hence output testing did not result in any correction for the system.

### User Acceptance Testing

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes whenever required.

This is done in regard to the following point:

Input Screen Design

Output Screen Design

Online message to guide the user

Format of reports and other outputs.

### **Benefits and and the scope of the Project**

The proposed system for “HOSTEL MANAGEMENT SYSTEM” is computerized. Today is the era of computers. This software project solves all the problems discussed above in the present system. The main objective of developing this project is to save time and money. The proposed system provides the following features on different tasks.

- All the details related to a hosteller could be find in one place like the admission details, fees details, room details , attendance ,mess details, stipend details etc.
- Will make the monitoring of student moment and stock details easy.
- The same application could be used by both the account section and the hostel management for their specific needs and purposes.

## **Limitation**

Hostel Management System is very user friendly application but its not portable Application.

## **Future Scope and Future Enhancement of the Project**

It is easy to extend the system that we have proposed. A person could see any of the issued, unissued or all the rooms according to his/her will. In future we can implement some features for “HOSTEL MANAGEMENT SYSTEM” project. In this system its possible to categorize room rent for middle class students and poor students. Some poor students are given a particular concession for the entire year.

## **Conclusion**

Hostel Management System is a Customize and user-friendly software for Hostel. It has been designed to automate, manage and look after the over-all processing of even very large hostel. It is capable of managing Enquiry details, Student Details, Payment Details etc. Hostel Management System is a Customize and user-friendly software for Hostel which provide hostel information, hostel room information, hostel accounts information.

Hostel Management Software System is offering a maximum of stability, cost-effectiveness and usability. It provides the most flexible and adaptable standards management system software solutions for hostel.

## **Bibliography**

1. Pro VB 2008 and the .NET 3.5 Platform by Andrew Troelsen (Author)
2. Beginning SQL Server 2008 for Developers: From Novice to Professional by Robin Dewson (Author)