

A
PROJECT REPORT
On
COLLEGE WEBSITE



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.



Project Report

on

College website

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Acknowledgement

A project A Project like this taken quite a lot of time to do property. As is other case, this project owes its existence a certainly its quality to a number of people, whose name does not appearance the cover.

We extend our sincere and heartfelt thanks to our Guide and Head Department of Computer Science Mr. Inamdar Ibrahim Sir deserves credit for helping me does the project and taking care of the details that most programmers really don't think about errors and confusions are my responsibility but the quality of the project is to their credit and we can only thank him.

We would like to thanks the other faculty members also, at this occasion. Last but not least, we would like thanks to classmates for their support and encouragement they have given us during the course of our work.

Thank You.

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INTRODUCTION

The growing significance of websites for various organizations is well known. In recognizing that we decided to develop a website for the college which compromises of all the required information about the college.

Purpose of the project:

The purpose of our project is to design, publish and maintain a website for our college which consists of all the information regarding the college like infra structure, faculty, transport facilities, etc.,

Current and Proposed System:

Current System:

As the existing website is not maintained and the domain has been blocked there is a need for new one.

Proposal System:

Initially the college authorities had the feeling of maintaining a comprehensive website for information exchange apart from existing one(static). We used all the possible ways to monitor the data and maintain and format the data requested by the authority. Also to formulated the text to embed into World Wide Web. The data is about to change all the time so we will update it all the time possible.

Scope of the project:

This SRS applies to all the official web applications that are developed to maintain the information online. This is extended to all the domains of the applications.

Glossary:

TERM	DEFINITION
HTML	Hyper Text Markup Language
JSC	JavaScript Certificate
CSS	Cascading Style Sheets

The above technologies are required to implement the requirements due to following advantages.

Advantages:

- Easy to navigate
- Provides all the comprehensive information about the college
- Flash items are provided where ever necessary
- All the nostalgic images are provided in the gallery

REQUIREMENTS

Software Requirements:

- Browser: Internet Explorer or Mozilla Firefox or Opera
- Flash player plug-in
- Database: MYSQL 5.5.13
- Operating system: Any Windows version/ MAC

Hardware Requirements:

- Processor: Intel Pentium IV or above
- Ram: 512 MB or more
- Hard Disk: 40 GB or more

Functional Requirements:

- The system provides all the information about the college in detail
- The system gives in detail description of our college infrastructure
- All the information about the faculty and labs are provided in department wise
- All the necessary information is rendered with proper images and flash slides for better navigation
- Proper information regarding the mode of transport and available means is also included

Non-Functional Requirements:

- Runs on low performance systems and on any environment
- Cost effective deployment(When buying out storage space)
- All the languages used to develop the system are Client-side scripting languages which provide dynamic system

SYSTEM ANALYSIS

INTRODUCTION

System analysis is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements on the system. System analysis is a problem solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The system is studied to the minutest detail and analyzed. The system analyst plays the role of an interrogator and dwells deep into the working of the present system. The system is viewed as a whole and the inputs to the system are identified. The outputs from the organization are traced through the various processing that the inputs phase through in the organization. A detailed study of these processes must be made by various techniques like Interviews, Questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now, the existing system is subjected to close study and the problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as a proposal. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This loop ends as soon as the user is satisfied with the proposal.

EXISTING SYSTEM

The existing college website is static which makes it less interactive. It doesn't have a database connectivity. Moreover students didn't have an access to the details of the college through the site, hence they were not updated about the latest events and placement drives.

PROPOSED SYSTEM

In order to make the site dynamic and more interactive we have tried to include a database link to our college website. Hence the recruiters have been provided with the facility to post their eligibility criteria, vacancies and salary packages. In response to which a student can submit his willingness to appear for the drive along with his personal details. Provision has also been made to display the latest events and announcements associated with the college online. We have developed our project using the three tier architecture which uses the following languages.

SOFTWARE REQUIREMENTS

OPERATING SYSTEM	: WINDOWS XP ,7,8,10
BROWSER	: INTERNET EXPLORER OR ANY HTTP BROWSER
WEB SERVER	: IIS
CLIENT SIDE SCRIPTING	: JAVA SCRIPT
CONNECTION	: TCP / IP
PROTOCOL	: HTTP, SMTP, POP3, WAP

HARDWARE REQUIREMENTS

PROCESSOR	: PENTIUM IV
CLOCK SPEED	: 2 GHZ
SYSTEM BUS	: 32 BIT
RAM	: 128 MB
HDD	: 40GB
MONITOR	: SVGA COLOR
KEY BOARD	: 108 KEYS
MODEM	: 56 KBPS
MOUSE	: PS/2
FDD	: 1.44 MB

SYSTEM DESIGN

System design is the solution to the creation of a new system. This phase is composed of several systems. This phase focuses on the detailed implementation of the feasible system. It emphasizes on translating design specifications to performance specification. System design has two phases of development logical and physical design. During logical design phase the analyst describes inputs (sources), outputs (destinations), databases (data stores) and procedures (data flows) all in a format that meets the user requirements. The analyst also specifies the user needs and at a level that virtually determines the information flow into and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design. The physical design is followed by physical design or coding. Physical design produces the working system by defining the design specifications, which tell the programmers exactly what the candidate system must do. The programmers write the necessary programs that accept input from the user, perform necessary processing on accepted data through call and produce the required report on a hard copy or display it on the screen.

NORMALIZATION

Normalization is a technique of separating redundant fields and breaking up a large table into a smaller one. It is also used to avoid insertion, deletion and updating anomalies. All the tables have been normalized up to the third normal form. In short the rules for each of the three normal forms are as below.

- **First normal form**

A relation is said to be in 1NF if all the underlying domain of attributes contain simple individual values.

- **Second normal form**

The 2NF is based on the concept of full functional dependency. A relation is said to be in 2NF if and only if it is in 1NF and every non-key attribute is fully functionally dependent on candidate key of the table.

- **Third normal form**

The 3NF is based on the concept of transitive dependency. A relation in 2NF is said to be in 3NF if every non-key attribute is non-transitively.

WEB FORM DESIGN

Web Forms are based on ASP.NET. Working with Web Forms is similar to working with Windows Forms. But the difference is that we will create Web pages with Web forms that will be accessible by a Web browser. Web Forms are Web pages that serve as the user interface for a Web application. A Web Forms page presents information to the user in any browser or client device and implements application logic using server-side code. Web Forms are based on the System.Web.UI.Page class. The class hierarchy for the page class is shown below.

- Object
- Control
- TemplateControl
- Page

COMPONENTS OF WEB FORMS

In Web Forms pages, the user interface programming is divided into two parts: the visual component (design page) and the logic (code behind page). The visual element is the Web Forms page. The page consists of a file with static HTML, or ASP.NET server controls, or both simultaneously.

The Web Forms page works as a container for the static text and the controls we want to display. Using the Visual Studio Web Forms Designer and ASP.NET server controls, we can design the form just like in any Visual Studio application. The logic for the Web Forms page consists of code that we create to interact with the form. The programming logic is in a separate file from the user interface file. This file is the "code-behind" file and has an ".aspx.vb" (VB) or ".aspx.cs" (C-Sharp) extension. The logic we write in the code-behind file can be written in Visual Basic or Visual .

The code-behind class files for all Web Forms pages in a project are compiled into the project dynamic-link library (.dll) file. The .aspx page file is also compiled, but differently. The first time a user loads the aspx page, ASP.NET automatically generates a .NET class file that represents the page, and compiles it to a second .dll file. The generated class for the aspx page inherits from the code-behind class that was compiled into the project .dll file. When the user requests the Web page URL, the .dll files run on the server and dynamically produces the HTML output for your page.

HOME PAGE

The home page of a website is the first page that a user perceives upon entering the website url at the browser address area. The entire website depends on how the home page is designed which forms the platform for viewing other web forms. In short, a home page forms the abstract of the entire website.

The SNGCE website begins with an interactive home page in which a recruiter username and password can be entered. A validation is performed at the database to verify whether the recruiter is an already authorized user, if not a recruiter is allowed to sign in by filling up the necessary details on a form.

LINKS AND WEBPAGES

Through the home page a number of other web pages can be linked. Each link gives an elaborated detail about itself with adequate lists and photos.

TESTING

SYSTEM TESTING

Testing is a set activity that can be planned and conducted systematically. Testing begins at the module level and work towards the integration of entire computers based system. Nothing is complete without testing, as it is vital success of the system.

• Testing Objectives:

There are several rules that can serve as testing objectives, they are

1. Testing is a process of executing a program with the intent of finding an error
2. A good test case is one that has high probability of finding an undiscovered error.
3. A successful test is one that uncovers an undiscovered error.

If testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Also testing demonstrates that software functions appear to the working according to the specification, that performance requirements appear to have been met.

There are three ways to test a program

1. For Correctness
2. For Implementation efficiency
3. For Computational Complexity.

Tests for correctness are supposed to verify that a program does exactly what it was designed to do. This is much more difficult than it may at first appear, especially for large programs. Tests for implementation efficiency attempt to find ways to make a correct program faster or use less storage. It is a code-refining process, which reexamines the implementation phase of algorithm development.

Tests for computational complexity amount to an experimental analysis of the complexity of an algorithm or an experimental comparison of two or more algorithms, which solve the same problem.

• **Testing Correctness**

The following ideas should be a part of any testing plan:

1. Preventive Measures
2. Spot checks
3. Testing all parts of the program
4. Test Data
5. Looking for trouble
6. Time for testing
7. Re Testing

The data is entered in all forms separately and whenever an error occurred, it is corrected immediately. A quality team deputed by the management verified all the necessary documents and tested the Software while entering the data at all levels. The entire testing process can be divided into 3 phases

1. Unit Testing
2. Integrated Testing
3. Final/ System testing

UNIT TESTING

As this system was partially GUI based WINDOWS application, the following were tested in this phase

1. Tab Order
2. Reverse Tab Order
3. Field length
4. Front end validations

In our system, Unit testing has been successfully handled. The test data was given to each and every module in all respects and got the desired output. Each module has been tested found working properly.

INTEGRATION TESTING

Test data should be prepared carefully since the data only determines the efficiency and accuracy of the system. Artificial data are prepared solely for testing. Every program validates the input data.

VALIDATION TESTING

In this, all the Code Modules were tested individually one after the other. The following

were tested in all the modules

1. Loop testing
2. Boundary Value analysis
3. Equivalence Partitioning Testing

In our case all the modules were combined and given the test data. The combined module works successfully with out any side effect on other programs. Everything was found fine working.

OUTPUT TESTING

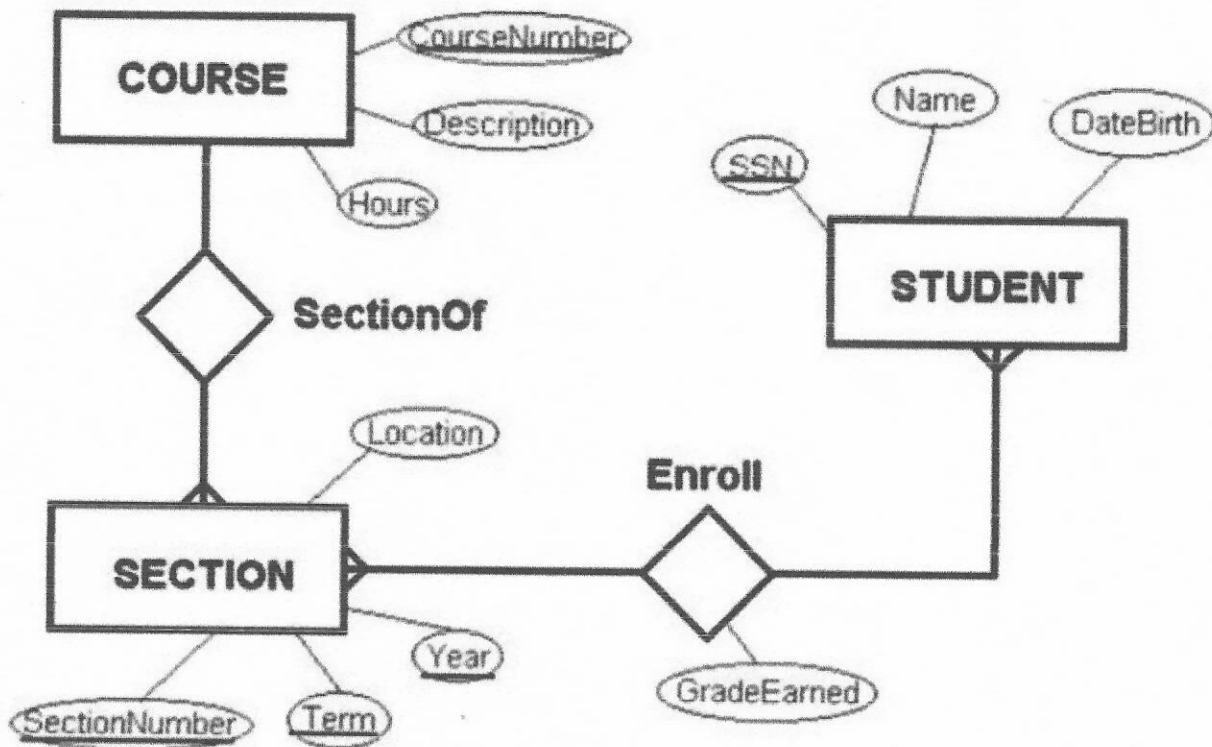
This is the final step in testing. In this the entire system was tested as a whole with all forms, code, modules and class modules. This form of testing is popularly known as Black Box testing or system testing.

Black Box testing methods focus on the functional requirement of the software. That is, Black Box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program. Black Box testing attempts to find errors in the following categories; incorrect or missing functions, interface errors, errors in data structures or external database access, performance errors and initialization errors and termination errors.

ER DIAGRAM

Entity relationship diagrams are used in software engineering during the planning stages of the software project. They help to identify different system elements and their relationships with each other. It is often used as the basis for data flow diagrams or DFD's as they are commonly known.

Simple ER Model



Example: The diagram shown below represents the academic functioning of a college. There are five entities viz. Department, Faculty, Student, Course, and Hostel. All the five entities have their own attributes. DNumber, FacultyID, StudentID, CourseID, and HostelID are the key attributes of Department, Faculty, Student, Course and Hostel respectively. The entities are related to each other and the respective relationships are explained below:

A college has many departments. A department would have students as well as faculty. The one to many relationship between department and students, and, department and faculty states that a department belongs to many students and it employs many faculty members. Looking at these relationships in a reverse direction conveys that a student as well as a faculty belongs to a single department and thus establishes one to one relationship.

A student can register himself into various courses; similarly a course can be studied by many students. A student lives in a single hostel but a hostel accommodates many students. A department offers many courses but a

particular course belongs to a particular department. A faculty teaches many courses but a particular course is taught by a single faculty only.

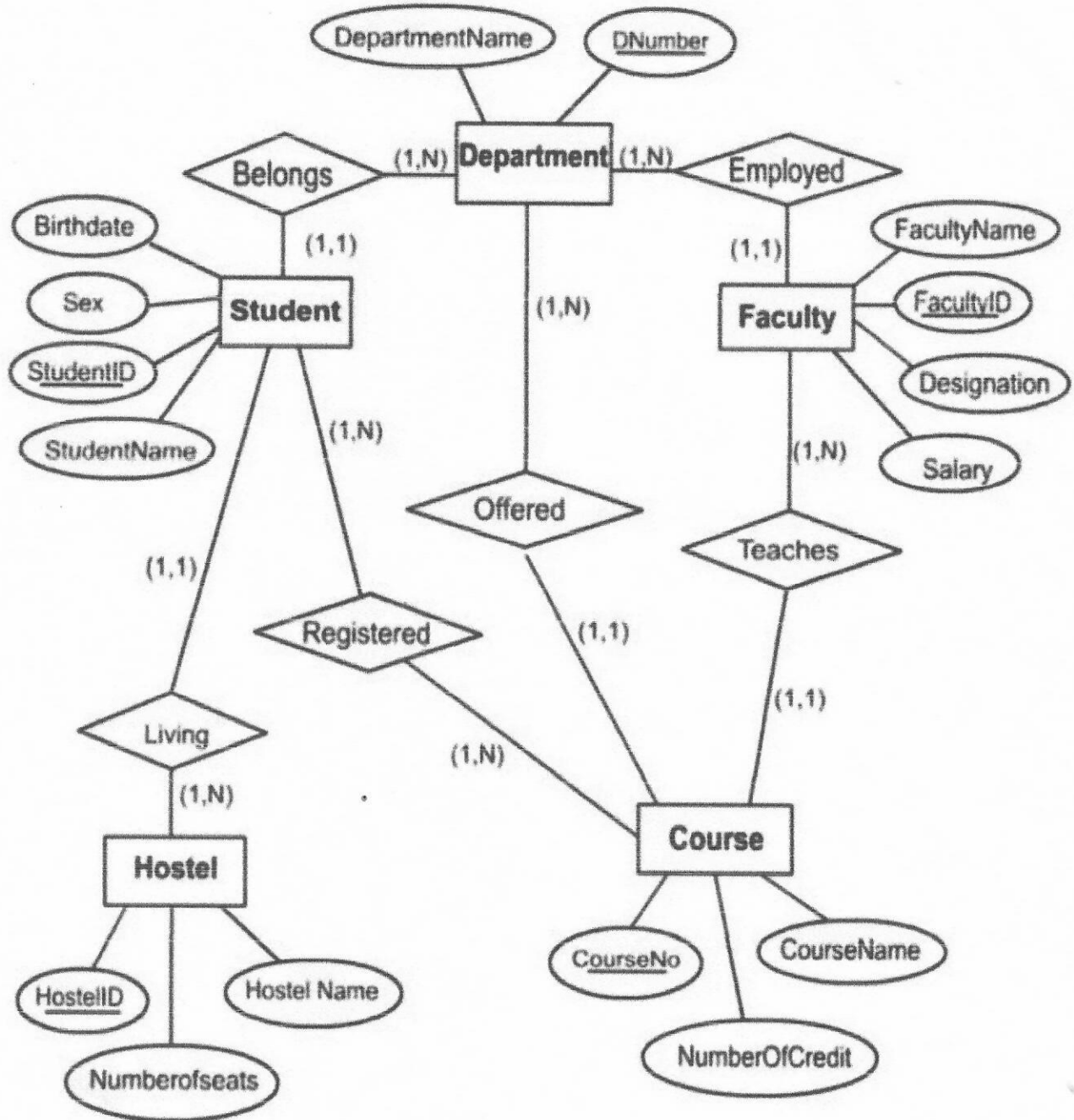


Figure : ER-Diagram showing academic functioning of a college

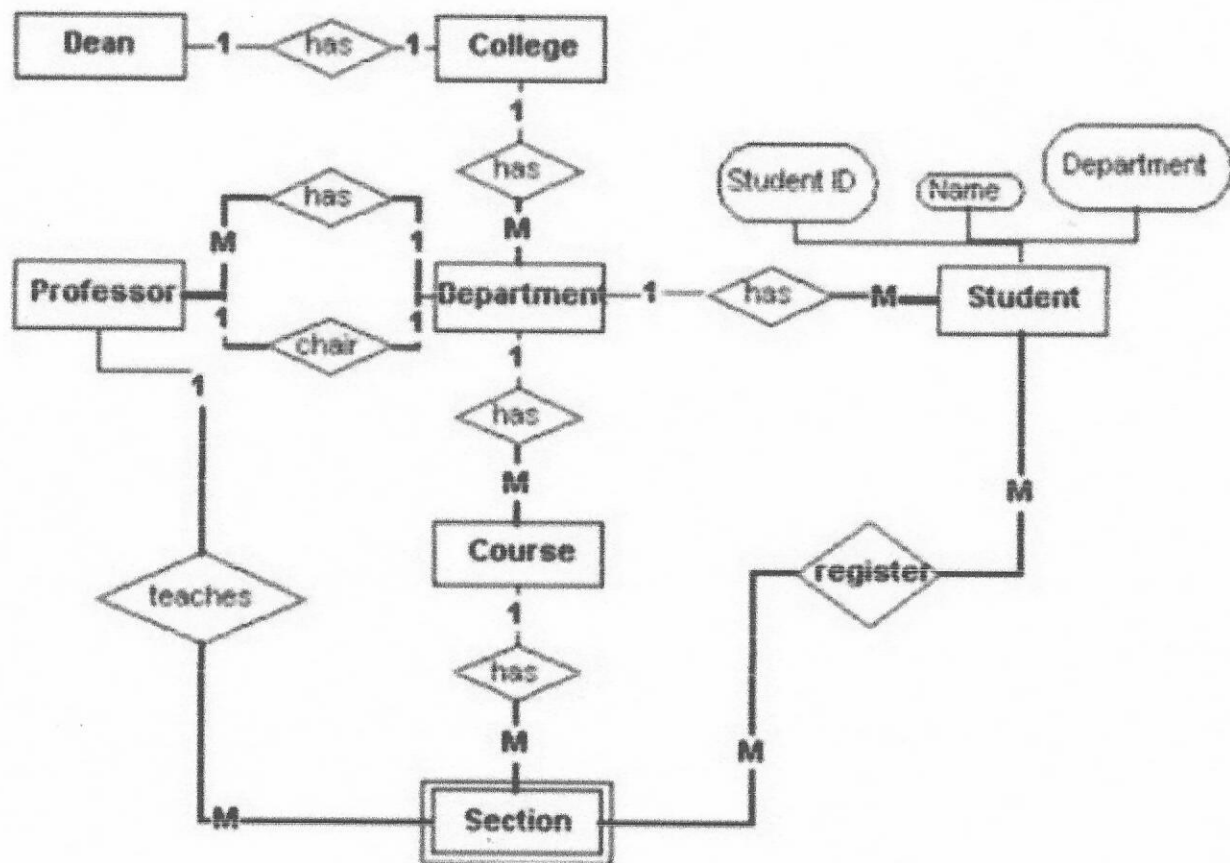
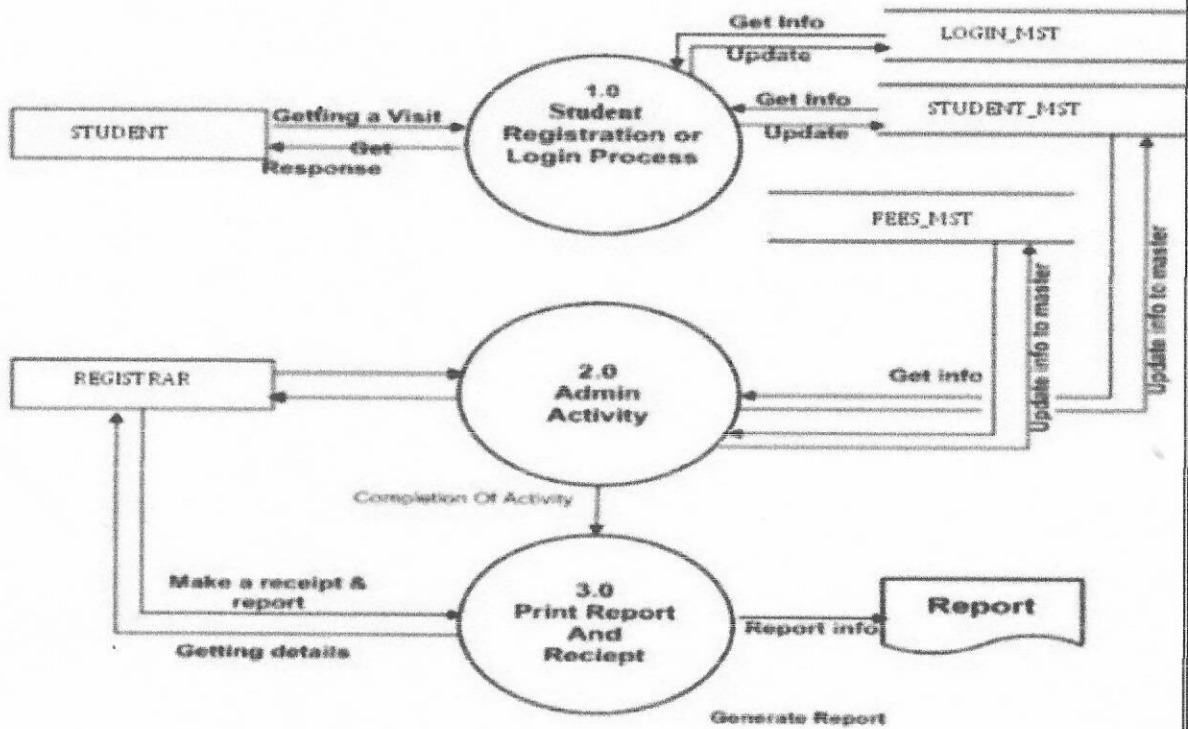
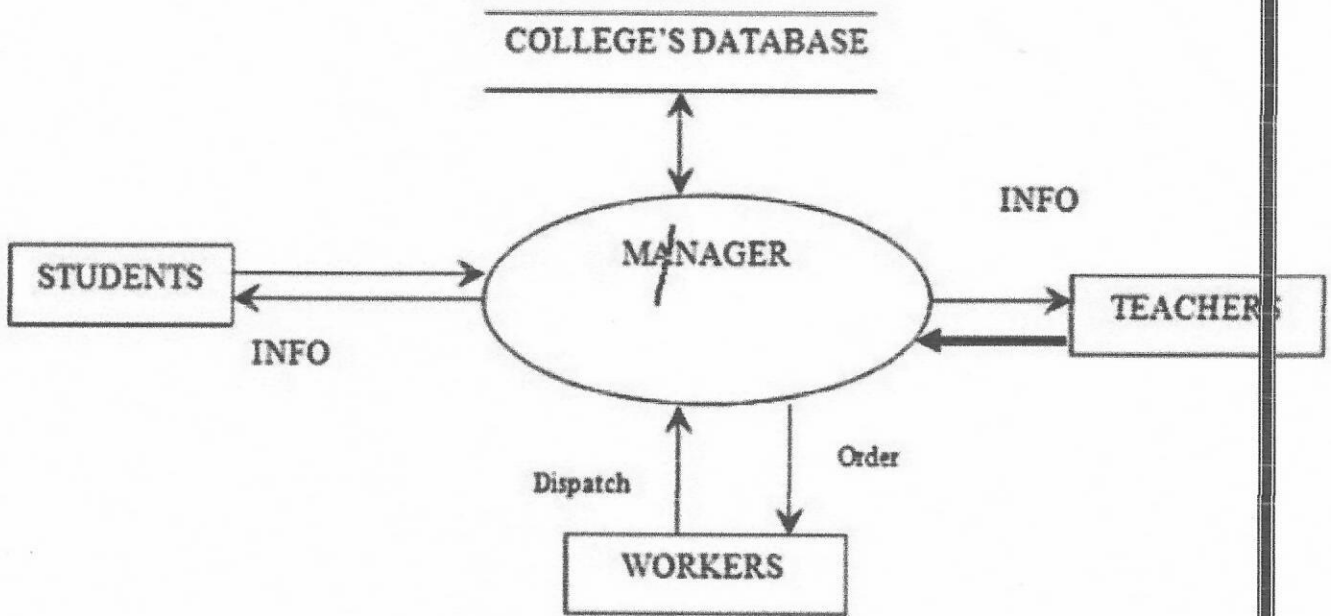


Figure : ER-Diagram showing Admission process of a college

DFD(Data Flow Diagrams)

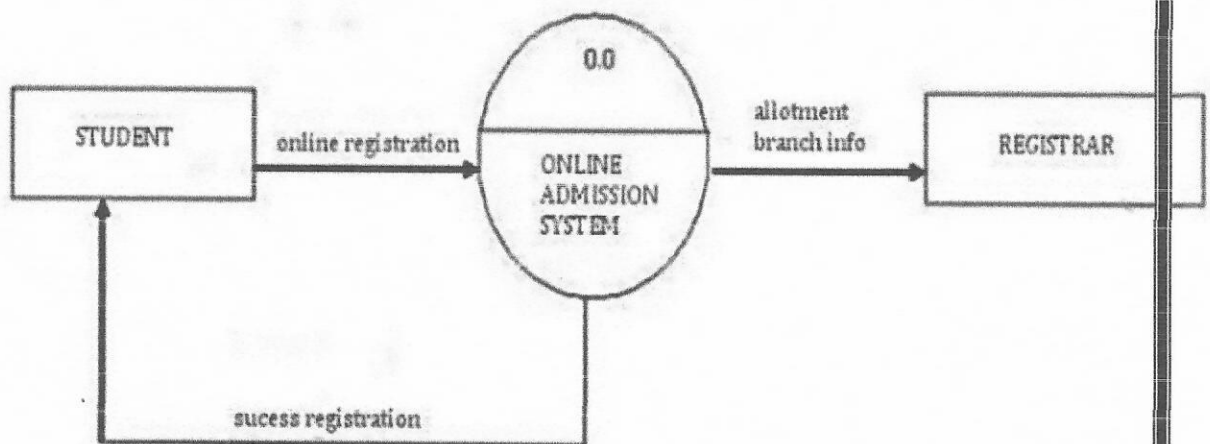
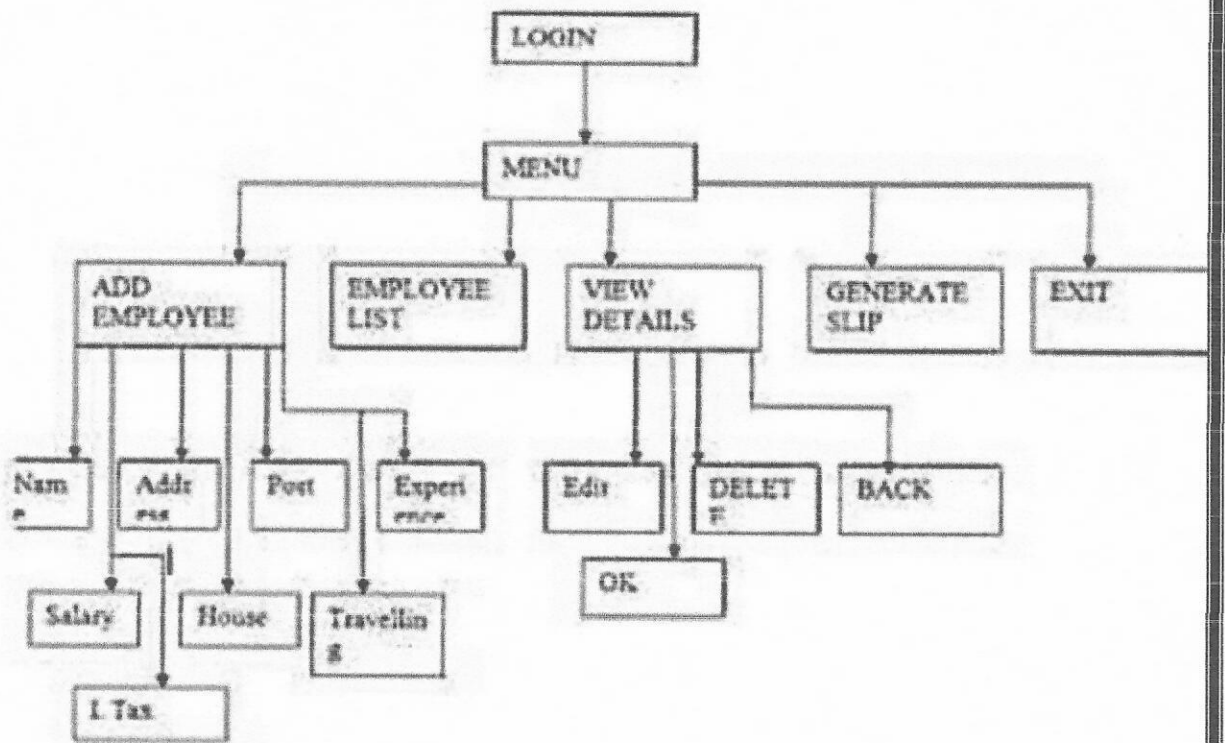
A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi-level DFDs that dig progressively deeper into how the data is handled. They can be used to analyze an existing system or model a new one. Like all the best diagrams and charts, a DFD can often visually "say" things that would be hard to explain in words, and they work for both technical and nontechnical audiences, from developer to CEO. That's why DFDs remain so popular after all these years. While they work well for data flow software and systems, they are less applicable nowadays to visualizing interactive, real-time or database-oriented software or systems.

DATA FLOW DIAGRAM



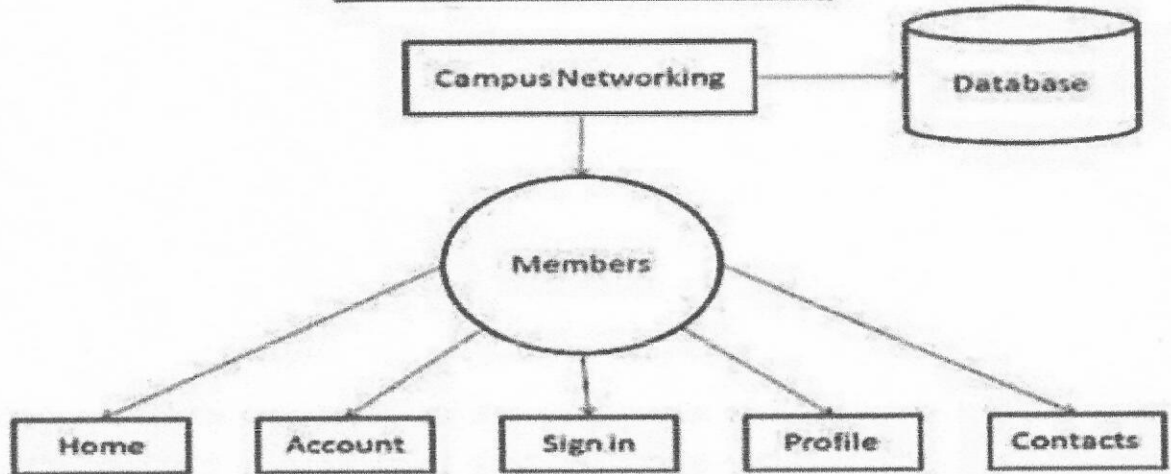
Level 1

SYSTEM DESIGN



Level 0

Top level DFD



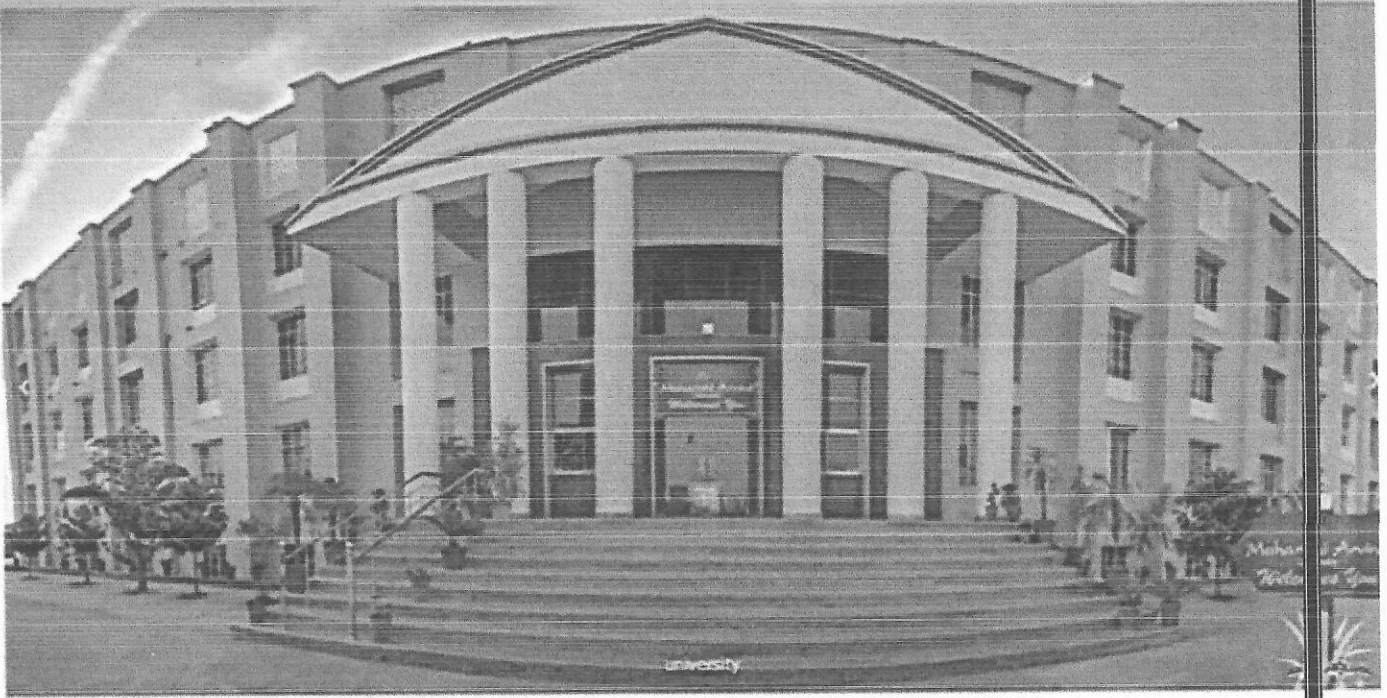
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