UNIVERSITY MANAGEMENT SYSTEM USING MODEL-VIEW-CONTROLLER (MVC)

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ABSTRACT: UNIVERSITY MANAGEMENT SYSTEM deals with the maintenance of University data, records, instructions, and students information within the University. UMS is an automation system, which is used to store the informations, students record, and information of courses. Starting from registration of a new student in the college, it maintains all the details regarding the attendance and marks of the student.The project deals with the retrieval of information through an INTRANET based campus wide portal. It collects related information from all the departments of an organization and maintains files, which are used to generate reports in various forms to measure Individual and overall performance of the students. Development process of the system starts with System analysis. System analysis involves creating a formal model of the problem to be solved by understanding requirements.

KEYWORDS: MODEL-VIEW-CONTROLLER (MVC), ASP.NET, C#.NET code, SQL Server

1. INTRODUCTION:

The university management system is developed to override the problems prevailing in the practicing manual system, this software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. University Management System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

Every organization/university, whether big or small, has challenges to overcome and managing the information of students, faculties, Registrations, courses at the management level. This is designed to assist in strategic planning and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executive who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

2. PURPOSE OF THE SYSTEM:

The objective of the project on University is to manage the details of Students, Classes, Instructors, and Courses. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Students, Registrations, and Classes. It tracks all the details about the students, faculties, courses.

3. EXISTING SYSTEM:

In the existing system the exams are done only manually but in proposed system we have to computerize the exams using this application.

- Lack of security of data.
- More man power.
- Time consuming.
- Consumes large volume of pare work.
- Needs manual calculations.
- No direct role for the higher officials.

4. PROPOSED SYSTEM AND ADVANTAGES OF THE SYSTEM:

The aim of the proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work.

- Security of data.
- Ensure data accuracy's.
- Proper control of the higher officials.
- Minimize manual data entry.
- Minimum time needed for various processing.
- Greater efficiency.
- Better service.
- User friendliness and interactive.
- Minimum time required.

5. HARDWARE AND SOFTWARE REQUIREMENTS:

5.1 Servers:

Operating System Server: Windows 8 or later
Database Server: Microsoft SQL server – 2010
Client: Microsoft Internet Explorer
Tools: Microsoft Visual Studio.Net-2012
User Interface: ASP.NET
Web Application: ASP.NET MVC4
Code Behind: C#.NET

5.2 Hardware specification:

Processor: Intel Pentium or more
Ram: 512MB Ram
Hard Disk: PC with 20GB

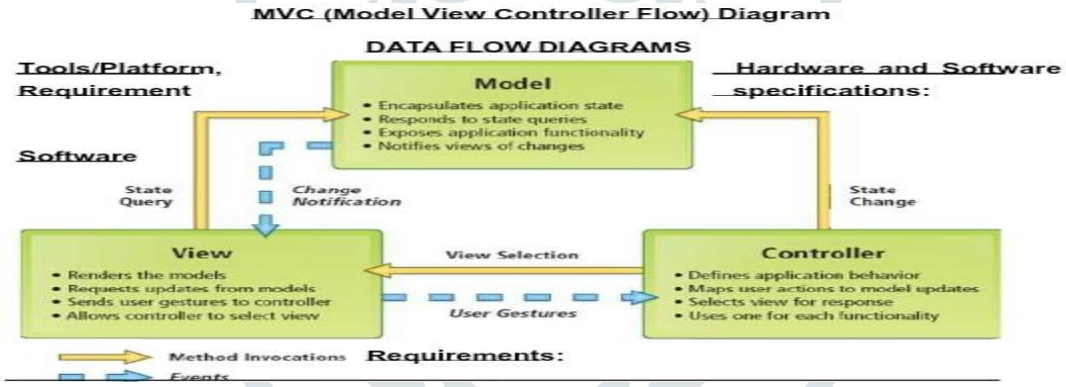
6. DESCRIPTION OF ASP.NET AND MODEL-VIEW-CONTROLLER (MVC), C# and SQL:

6.1 ASP.NET:

ASP.NET is an open-source server –side web application framework designed for web development to produce dynamic web pages. It was developed by Microsoft to allow programmers to build dynamic web sites, web applications and web services. It supports three major development models: web pages, web forms and MVC (Model View Controller).

6.2 MODEL-VIEW-CONTROLLER:

Model View Controller or MVC as it is popularly called, is a software design pattern for developing web applications. A model View Controller pattern is made up of the following parts:
MODEL: The lowest level of the pattern which is responsible for maintaining data.
VIEW: This is responsible for displaying all or a portion of the data to the user.
CONTROLLER: Software code that controls the interactions between the model and view. The MVC abstraction can be graphically represented as follows.



6.3 C#:

C# is a multi paradigm programming language encompassing strong typing, imperative, declarative, functional, generic, object-oriented, and component-oriented programming disciplines.

6.4 SQL:

SQL stands for Structured Query Language. SQL lets us access and manipulate databases. SQL is an ANSI (American National Standards Institute) standard. SQL can execute queries against a database , retrieve data from a database, insert records in a data base, update records in a database, delete records from a database , create new databases, create new tables in database, create stored procedures in a database, create views in a database, set permissions on tables, procedures and views.

7. *NUMBER OF MODULES AND DIAGRAMS:*

- About
- Contact
- Student
- Course
- Instructors
- Departments

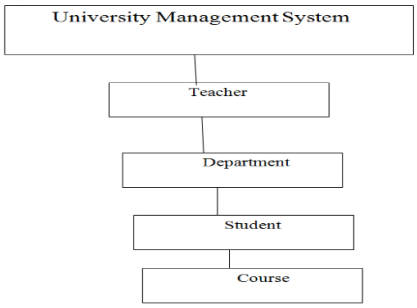
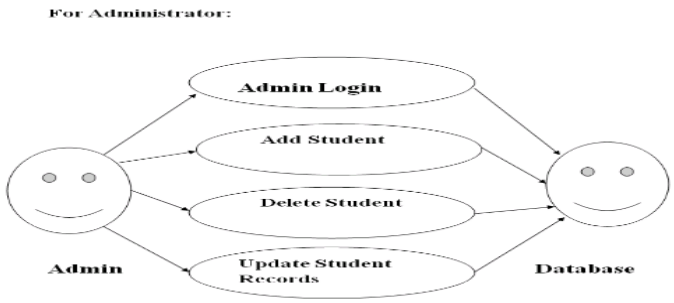
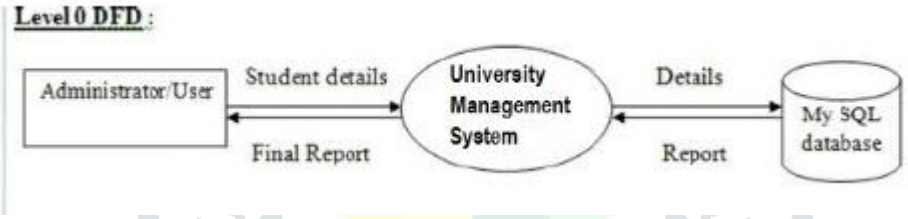


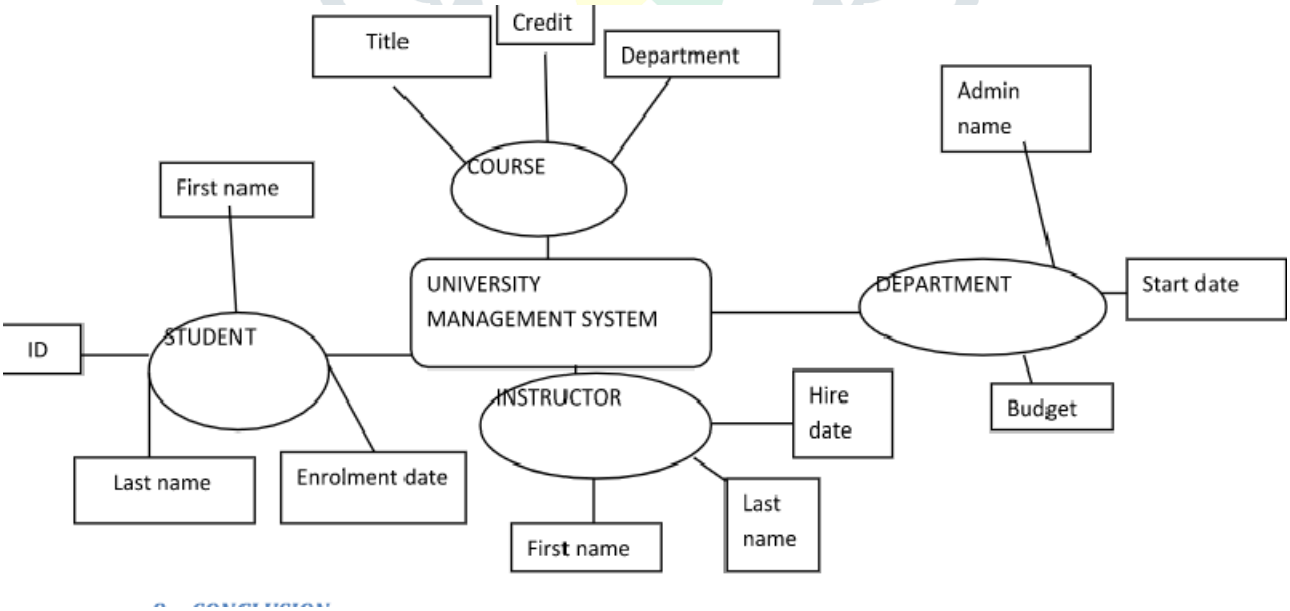
Figure 1: User Hierarchy



DATAFLOW DIAGRAM:



USER CASE DIAGRAM:



8. CONCLUSION:

It has been a great pleasure for us to work on this exciting and challenging project. This project proved good for us as it provided practical knowledge of not only programming in ASP.NET and C#.Net web based application and no some extent Windows Application and SQL server, but also about all handling procedure related with "UNIVERSITY MANAGEMENT SYSTEM". It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

FUTURE *WORK:*

We also want to modify our application for the future work. We hope this work will help us in our future work.

- The aim of this project is to manage each and every section, such as every Student, Teacher and Staff.
- There will be a system for downloading Admission form for new applicant
- It will show every updated notice given by University authorities.

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