**PREFACE**

This project has been submitted in the fulfillment of the requirements for the diploma of engineering. We the team members of this project, take pleasure in presenting the detail project report that reflects our efforts in academic year 2009-10.

Our project involves designing a Grid framework for executing complex applications where the process is divided into threads and accordingly the threads are executed by the executors. The outputs generated by the executors are given back to the manager which in turn gives the results to the owner. This is a dedicated in which the manager can select particular executors to run the application.

Initially manager is started by connecting it to a storage application. The executors are connected to the manager by providing the required credentials. Once the executors get connected to the manager the execution of the required can be started.

Additionally there is a Grid console which keeps track of the executors connected and the applications running. A record of all the operations performed by either of the logger is maintained in a log file.

**ACKNOWLEDGEMENT**

We have immense pleasure in presenting the report for our project entitled “College Management System”.

We would like to take this opportunity to express our gratitude to a number of people who have been sources of help & encouragement during the course of this project.

We are very grateful and indebted to our project guide Mr. Atul D. Mairale & our respected HOD Mr. Ashish Kulkarni for providing their enduring patience, guidance & invaluable suggestions. They were the one who never let our morale down & always supported us through our thick & thin. They were the constant source of inspiration for us & took utmost interest in our project.

We would also like to thank all the staff members for their invaluable co-operation & permitting us to work in the computer lab.

We are also thankful to all the students for giving us their useful advice & immense co-operation. Their support made the working of this project very pleasant.

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**CHAPTER-1**

**INTRODUCTION**

**Introduction**

For accomplishing big projects , the number of developers work collectively on different modules . Their efforts when combined together gives the final outcome .However ,a member working on one module may encounter the need to understand other modules . Hence , he may feel the need of telling the concerned member to explain his module . It may be time consuming and troublesome for the concerned member to explain the entire code of the module .Therefore,there arises a need for a tool like CLASS BROWSER which gives the class diagram of the entire module(project) . It is quite reliable and easy to understand.It also helps in debugging large projects.

The traditional view of software development takes an algorithmic perspective. In this approach, the main building block of all software is the procedure or function. This view leads developers to focus on issues of control and the decomposition of larger algorithms into smaller ones. There is nothing inherently evil about such a point of view except that it tends to yield brittle systems. As requirements change and the system grows, systems built on algorithmic focus turn out to be very hard to maintain.

The contemporary view of software development takes an object-oriented perspective.In this approach , the main building block of all software systems is the object or class.Simply put, an object is a thing, generally drawn from the vocabulary of the problem space or the solution space ; a class is a description of a set of common objects. Every object has identity, state ,and behavior.

* 1. **OBJECTIVES**

To implements a College Management System in computerized by using java.

**Scope:**

This project deals with the various functioning in College management process. The main idea is to implement a proper process to system .In our existing system contains a many operations registration, student search, fees, attendance, exam records, performance of the student etc. All these activity takeout manually by administrator.

In our model, it deals with the Operations in system. For example, when students fill the registration form the record is stored in the database. And display the details of student is perform by retrieving information from database table.

**Description of the project:**

We identify several problems including unauthorized privilege escalation, incorrect use of cryptography, vulnerabilities to network threats, and poor software development processes. We show that only college administrator can start the system.administrator can search the particular student by his/her enrollment number or student idAnd we are adding notification module where administrator should add the notification with start and end date.

* 1. **INITIAL INVESTIGATION**

the first phase of software project is to gather requirements .Gathering software requirements begins as a creative brainstorming process in which the goal is to develop an idea for a new and modules that no other software vendor has thought. New software modules ideas normally developed as a result of analyzing the project

The main function of requirements gathering phase is to take an abstract idea that fills a particular needs or that solves a particular problems and create a real world project with a particular sets of objectives, timeline and team.

Some of the highlights of the requirements gathering phase include:

* Collecting project ideas.
* Gathering customer requirements and proposed solution.
* Justifying the project.
* Submitting the request for proposal
* Getting the team in phase.
* Preparing the requirements documents.

**Collecting project ideas:**coming up with project ideas can prove expansion exercise.

* 1. **SELECTION OF LANGUAGE**
* JAVA
* MYSQL

we are selects the java language for our project, because Java is a object oriented programming language.

It has two lives, one as a stand-alone computer language for general-purpose programming and the other as a supporting language for Internet programming.

Java offers the following features:

1. Compiled and Interpreted.
2. Platform-Independent and Portable.
3. Object-Oriented.
4. Robust and Secure.
5. Distributed
6. Architecture-Neutral.
7. Familiar and Simple.
8. Multithreaded and Interactive.
9. High Performance.
10. Dynamic and Extensible

**Overview of Swing**

The swing package is part of Java Foundation Classes (JFC) in the java platform. The JFC encompasses a group of features to help people build GUIs; swing provides all the components from buttons to split panes and tables.

The swing package was first available as an add-on to JDK 1.1. Prior to the introduction of the swing package.the Abstract Window Toolkit (AWT) components provided all the UI components in the JDK 1.0 and 1.1 platform. Altough the JAVA 2 platform still supports the AWT components, we strongly encourage using swing components instead .You can identify swing components because their names start with J.

* Icons
* Actions
* Pluggable look and feel
* Support for assistive technology
* Separate data and State models

**CHAPTER-2**

**FEASIBILITY STUDY**

**2.1 INTRODUCTION**

Whenever a new system (a hardware or software) is to be introduced, there is a need to study the new system in every aspect or manner before working on it. We get the idea whether the project is adequate or not.

**The feasibility study on 3mejor questions:**

1. Does the candidate system meet the user requirement?
2. Is the problem worth solving?
3. The impact of the system on organization.

**2.2 TECHNICAL, ECONOMICALLY & OPERATIONAL FEASIBILITY**

1. **Financial feasibility:**

Financial feasibility refers to financial support required. It refers to finance incurred during the development of the project.

1. **Technical feasibility:**

Technical feasibility refers to technical knowhow and auxiliary devices required.

1. **Behavioral feasibility:**

Refers to reaction of the people towards the project.

1. **Operational feasibility:**

Operational feasibility means is it possible to practically implement the project. While installing this software, the hardware and software requirements should be specified.

* 1. **FEASIBILITY GAINEED BY OUR SYSTEM**

**Technical Feasibility**

Since our project in JAVA so we need to have a strong base in programming. A computer with JDK installed is needed.

**Economical Feasibility**

TO implement the system we require more than one computer.Since the system will be implemented in existing environment there will be no need to buy the computers. The system is economically feasible to implement.

**Operational Feasibility**

Our system will be easy to install and use. Hence our system is operationally feasible.

**Cost-Benefit Analysis**

the cost incurred by our system includes only the software cost and cost of the computer needed to run the project The benefits incurred by our system will include.

**CHAPTER-3**

**SYSTEM ANALYSIS**

**3.1 INTRODUCTION**

The main function of the analysis phase is to look carefully at the requested features with an eye towards the issue that each may create in the actual coding. This phase is the time during which reasonably deliverable thoughts of each team member can decide.

**User requirements:**

The following requirements are raised during the analysis of the needs of the users:

Ø A Person Should be able to login to the system through the first page of the Application.

Ø The Administrator can create users as per user requirement.

Ø A general user will have access to see the status of particular Student id number.

Ø Student (user) can use all the facilities, same as which are provided to him in the college.

Ø Student can see attendance, notices, grades, report and other facilities in updated manner.

Ø There will be a separate page for every student as his account in which he can get notices, attendance, grades, assignments etc.

Ø Faculty can give the attendances and notices for the students.

Ø The administrator verifies all these reports and generates them for users to view them.

After analyzing the requirements of the task to be performed, the next step is to analyze the problem and understand its context. The first activity in the phase is studying the existing system and other is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity serves as a basis of giving the functional specifications and then successful design of the proposed system. Understanding the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution.

* 1. **ROLE OF SYSTEM ANALYSIS**
* **Memory constraints:** There may be some memory constraints due to advance detailed database, which has many primary, foreign, unique keys and large datasets.
* **Software interfaces:** Frontend is in Advanced JAVA and Backend is in Oracle MYSQL Workbench, interface is through ODBC controller.
* **System features:** Simple GUI, easy to use, no special training required, cost should be feasible, protected through authentication process
* **Major concepts used:** We have linked our frontend and backend software using ADODB Connection. We have used data environment and data reports in our project. We have used modules to make certain variables accessible globally.

**CHAPTER-4**

**APPLICATION DESIGN**

**4.1 FORM DESIGNING**

* **Login Form:-**

This is login form of the Software, it ask for the id and password of the user, access is given to the authorized persons only. types of logins are there Admin only.

.

* **MDI form:**

This screen acts as the home screen for this software. Through this MDI form we can access its child forms. This form gives the user further 5 options:-

* + **Login Page** :it contains LOGIN, LOG OUT,and EXIT option to exit from software.
  + **Registration:**This module is designed for registration
* **Form list and details**

1. **Registration Entry Form:** registration entry form can be used to enter the new entry of student.
2. **Student Search Form:** student search form can be used by admin, for searching particular student related entering branches and year.
3. **Notification Form:** notification form can be used to add notification related to the exams and schedule of the college. Full authority is given to the admin.
4. **Fees Form:** this can be generated the fees report of the students.

**4.2 FRONT END - BACK END CONNECTIVITY**

**Java as Front end**

1. Java offers several benefits to the developer creating front end application for database server.
2. Java is platform independent language hence can be executed on architecture that support on JVM.
3. Java also reduces cost related to deployment & maintenance of hardware & software.
4. Java base clients are think like that uses minimum hardware resources .
5. There are big insentive to create java based solution for corporate as shifting there application across the architecture will not involved overhead or cost.

**MySQL-Back end**

Databases are the systems that contain many different objects used together to facilitate fast and efficient access to the data.

**MySQL** is an application program interface form Microsoft that lets a programmer writing Windows applications; get access to a relational as well as non-relational database from both Microsoft and other database providers.

**Setting up MySQL Control:**

First step to use the MySQL in project is to add the MySQLData Control to the form. The setting up of MySQLData Control involves first few steps:

1. Connecting to a data source and,

2. Specifying a command to gain access to the data source.

3. Executing the command.

4. Storing the rows in a cache i.e., the Record set.

**CHAPTER-5**

**SYSTEM DESIGN**

**5.1 INTRODUCTION**

Purpose of **College Management System for a College (CMS)** Design Document is to describe the design and the architecture of **CMS**. The design is expressed in sufficient detail so as to enable all the developers to understand the underlying architecture of **CMS.** Logical architecture of **JDBC** driver, Server, **DML**, **DDL**, Session and Data Store are explained.

**CMS** requires Java **JRE** 1.5 or higher. Since **CMS** is written in Java, it can run on any platform that supports the Java runtime environment 1.5 or higher. The compiled files are contained in Java Archives (**JAR’**s) and have to be defined in the CLASSPATH environment variable.

**Logical View:**

it provides the user with an abstract view of the overall system functionality

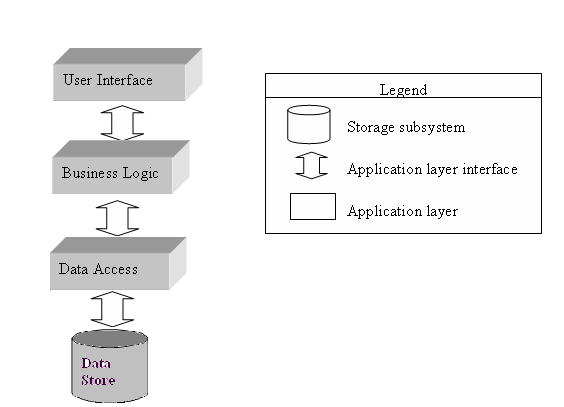


fig: abstract view of CMS(College Management System)

**5.2 EVALUATION OF GOOD DESIGN SOFTWARE (LIFE CYCLE MODEL)**

**System Definition**

**Scope and Boundaries**

Scope of this system can be described as follows:-

1. It is a standalone module, available for desktop application used by computer

Administrator to store student’s data.

1. The storing and retrieval of data is quick
2. It is an offline application.
3. Access is given to only authorize person and no other person can access this

software.

1. Data security is maintained properly by authentication of users.
2. Large amount of data can be processed quickly with ease

**User view**

1. **Admin:** It is the administrator account having rights to govern wholesoftware. He can create and delete student and details ,create and change password, he also have rights to add and delete record, various criteria and notification.
2. **User:**usersare having only read permission; user type can only see his details, he will not be able to manipulate or change any information,it also have same privileages as that of admin.

**CHAPTER-6**

**DATA FLOW DIAGRAM**

**6.1 CONTEXT LEVEL DFD**

**Level-0**

**CMS**

**admin**

**CMS**

**Student**

**6.2 LEVEL- 1 DFD**

**Level-1**

**Login**

**Registration**

**Help**

**Notification**

**Performance**

**Attendance**

**Fees**

**Student Search**

**6.3 LEVEL- 2 DFD**

**Level -2**

**Admin**

**Login**

**Help**

**Notification**

**Home Page**

**Registration**

**Performance**

**Attendance**

**Fees**

**Student Search**

**Data Base**

**CHAPTER-6**

**ENTITY RELATIONSHIP DIAGRAM**

**Entity Relationship Diagram**

profile

Student\_details

Successful search

se

Provides

login

Admin

Consist of

Student Search

Provides

Registration

Provides

Criteria

notification

Attendance

**7.1 MODULE DESCRIPTION**

**Login:**

The login page only used by the authority or admin.

**Admission:**

The admission form can be filled by the student who wants to register him/herself. And after admission complete, the details can be stored in database.

**Student Search:**

The student search form is only designed for the searching particular student or details about the student.

**Fees:**

The fees module only accessible for the admin .The details about the fees detail is contain in this module.

**Attendance:**

This module displays the attendance record of the student and also displays the defaulter’s list.

**Notification:**

Notification module only used for adding notification,start date and time. This is acts as a small alarm system for any task i.e. submission, examination time- table etc.

**Help:**

The help can be provided any application help.

**7.2 DATABASE TABLE**

|  |  |
| --- | --- |
| **Table name** | **Purpose** |
| 1.admin | Admin table contain password and user name field. |
| 2.admission | Admission table contain student details like name, dob, address etc. |
| 3.notification | Notification table contain notification detail. |
| 4.performance | Performance table contain the performance details about the student. |
| 5.studenttable | Studenttable table hold the stud id. |
| 6.fees | Fees table contain the fees details of the students. |

**GANTT CHART**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | December | | | | January | | | | February | | | March | | | | | |
|  | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 | W1 | W2 | W3 | W4 |
| **1) Problem Definition** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Meet internal guide |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify  basic needs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify project constraints |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Establish project statement |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone:-Product statement defined | | | | | | | | | | | | | | | | | |
| **2) Feasibility** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Economical feasibility |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Technical feasibility |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Behavioural feasibility |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone:- Feasibility study complete | | | | | | | | | | | | | | | | | |
| **3) Requirement Determination** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify input |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify output |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Process control |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Synopsis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone:- Synopsis is ready | | | | | | | | | | | | | | | | |

Ruchira Represents:

Pooja Represents:

Monica Represents:

Priyanka Represents:

**7.3 SCREEN SHOTS**

**7.4 SYSTEM REQUIREMENTS**

**Operating system: -** Microsoft Windows 7/XP.

**Front End: -**Java

**Back End: -** Oracle, MYSQL (Database plays an important role in solving the Problem of information management).

**SOFTWARE**

1. JAVA

Java is a object oriented programming language.

It has two lives, one as a stand-alone computer language for general-purpose programming and the other as a supporting language for Internet programming.

Java offers the following features:

1. Compiled and Interpreted.
2. Platform-Independent and Portable.
3. Object-Oriented.
4. Robust and Secure.
5. Distributed
6. Architecture-Neutral.
7. Familiar and Simple.
8. Multithreaded and Interactive.
9. High Performance.
10. Dynamic and Extensible.

Java 2 Version 1.7 adds up to the existing functionality and “tightens up” the development environment.

Version 1.7 contains several important upgrades, enhancements, and additions like changes to the collections Framework and the networking classes.

Both versions 1.5 and 1.7 maintain nearly 100 percent source code compatibility with prior versions and also support SWINGS.

Hence, we have used Java 2 for developing our application.

**Future Enhancement:**

* Online examination module would be introduced to conduct online examination.
* Scheduling of the staff. i.e. , time table setting of the staff
* Further, the faculty can upload the videos of their lectures on to this site and students who had missed those classes can view those videos.

**CONCLUSION**

The project entitled as **College Management System** is the system that deals with the issues related to a particular institution.

* This project is successfully implemented with all the features mentioned in system requirements specification.
* The application provides appropriate information to users according to the chosen service.
* The project is designed keeping in view the day to day problems faced by a college.
* Deployment of our application will certainly help the college to reduce unnecessary wastage of time in personally going to each department for some information.

Awareness and right information about any college is essential for both the development of student as well as faculty. So this serves the right purpose in achieving the desired requirements of both the communities.

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