

Institute Management System

Project Proposal (synopsis)

Submitted to



In partial fulfilment of the requirement

for the award of the degree of

BACHELOR IN COMPUTER APPLICATIONS

(BCA)

Summary

Project Title : “Online Institute Management System”

Project Code : BCSP-064 .

Project Categories : Web Based RDBMS , OPPS

Server Side Lang : JSP (JAVA SERVER PAGES)

Backend Database : Oracle database

Prepd And Submit By : Bishwajeet Pandey

Enrollment number : 180056886

Study Center Code : 0516P

Address : Basahi , Jantabazar , Saran
841206 , Bihar

Mobile No : 7011186789

Email : bishwajeetpandey49@gmail.com

Date : 26/06/2020

Guide Details

Name

Address

Qualification of the Guide

**Industrial / Teaching
experience of the Guide**

Signature

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Title of The Project

Online Institution Management System

My project title is Online Institute Management System . For Chanakya Institute of Computer Science . This will be the most Important Online Software Package for the online automation of the Institute Management. Which will give the use of computer to manage institute .

Till now the entire process of the Institute management which is very hard to maintain the data or information . Therefore I create this online automation of Institute management .

2. Introduction

This Project is aimed towards developing web based **student admission , Re-registration , result management , activity scheduling** and student **information system** for a Institute.

This system can be used as information management System for the Institute.

For a given student/staff (technical/non-technical) the Administrator creates login id and & password , using these student/staff(technical/Non-technical) can access the system to either upload or download some information from the database.

Not only this added user will also get to know about the events and extra curriculum activities which will held into the Institution campus .

2(a) The main menu will mainly contain 10 parts as follows..

- **Student Login** (view result , view profile , edit profile, view courses details, ask doubt from teacher)
- **Teacher Login** (view profile , edit profile ,replay to the doubts of students)
- **Admission Portal** (For New Applicant to get admission)
- **Re-Registration Portal** (For old students to get re-registration in next Semester)
- **Events** (Student know details about the events and extra curriculum activities which will held into the Institute campus and register themself in that events)
- **online mcq tests** (teachers can conduct online mcq test of theirs subject and students can give the test by simply login)
- **Alumni Registration**
- **Enquiry**
- **About us**
- **contact us**

now we can see that nearly everything is very much possible to preform with a single click , so this application will help to computerize the system of Institute management so that student and other staff member can access the system online.

2(b) These are the some key features of this system which is as follows :

- to reduce the headache of maintaining records of students and teacher s related documents.
- to reduce cumbersome job of maintaining several documents like marks sheet and grade card of every student , all program details ,all courses details .
- it will eliminate the delays int the generation of results , this system also help in maintaining the records of those students who has not given exam or either fail in exams .
- searching will become more efficient and fast in comparison of manual searching.
- if any student facing doubts in any subject than he/she can ask questions from the teachers of that particular subject.
- if any student want to get the fresh admission or any student wants to get Re-registration he/she does not need to the go to the counter and stand in queue he/she can easily do this stuffs through this automated system.
- Student can know details about the events and extra curriculum activities which will held into the Institution campus.
- Student Can also fill online examination forms.
- Admin can view the profile of all students as well as teachers .
- Admin can add new courses and programs.
- Admin can get all type of reports reggrading Admission and Re-registration.
- teachers can easily conduct MCQ based online class tests.

so above this the whole process of Institute management system and its working by our system we can make it simple and fast process by automating it.

It maintains two level of user

1.Administrator level

2.user level

3. objective

The main objective to develop this project is as follows :

- Develop a robust system that can maintain record related to new-admission, Re-registration, program details offered by Institute ,course details ,student marks , student Grade card etc.
- Teachers can conduct MCQ based online class tests. through online test both teacher and student can save the time expanding between paper and result.
- Student can ask their doubts directly from teachers of different subjects .
- **No long queues:-**candidate don't go to substitute long queues to collect/submit application form .
- **Cost cutting :-** reduce the cost involve in process of Admission , Re-registration,semester end Result generation, final Grade Card generation.
- **operation efficiency :-** improve the operational efficiency by improving the quality of process.
- **increase accuracy and efficiency:-**in traditional paper based admission ,Re-registration process Institute officials receive hundreds of application every day this process is tiresome. doing tiresomework affect people with fatigues . sold process is error prone . Each error could cost students their academic career and academic prospects. so this system is very reliable and eliminates chances of such errors.

4. Project Category

RDBMS:-

Relational database management databases which the data and the relation between various entities can be represented in form of tables each with a number of rows and columns of each table is given a unique name and is known as a relation. The RDBMS has eliminated all parent child relationship. this is similar to table with rows or columns of data values. Each table is independent entity it is non-procedural . These system are in great demand today because program written in 4th generation languages that work with RDBMS are in equally demand .

Brief introduction about RDBMS :

A relational database is a digital database based on the relational model of data, as proposed by E. F. Codd in 1970.[1] A software system used to maintain relational databases is a relational database management system (RDBMS). Many relational database systems have an option of using the SQL (Structured Query Language) for querying and maintaining the database.

This model organizes data into one or more tables (or "relations") of columns and rows, with a unique key identifying each row. Rows are also called records or tuples .Columns are also called attributes. Generally, each table/relation represents one "entity type" (such as student or result). The rows represent instances of that type of entity (such as "Lee" or "chair") and the columns representing values attributed to that instance (such as Enrolment no or name).

Each row in a table has its own unique key. Rows in a table can be linked to rows in other tables by adding a column for the unique key of the linked row (such columns are known as foreign keys). Codd showed that data relationships of arbitrary complexity can be represented by a simple set of concepts.

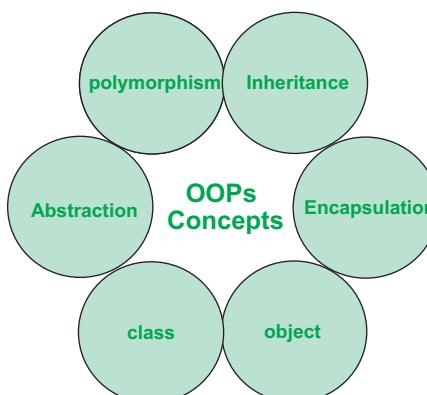
Part of this processing involves consistently being able to select or modify one and only one row in a table. Therefore, most physical implementations have a unique primary key (PK) for each row in a table. When a new row is written to the table, a new unique value for the primary key is generated; this is the key that the system uses primarily for accessing the table. System performance is optimized for PKs. Other, more natural keys may also be identified and defined as alternate keys (AK). Often several columns are needed to form an AK (this is one reason why a single integer column is usually made the PK). Both PKs and AKs have the ability to uniquely identify a row within a table. Additional technology may be applied to ensure a unique ID across the world, a globally unique identifier, when there are broader system requirements.

OOPS:-

Object-oriented programming or is an approach or to design modular , reusable software system. it is the programming approach the represents concept as an "object" that have data fields and associated procedures referred as methods . objects , which are usually instances of classes are wont to interact with each other to style Applications and Computer programs.

Many of the most widely used programming languages (such as C++, Java, Python, etc.) are multi-paradigm and they support object-oriented programming to a greater or lesser degree, typically in combination with imperative, procedural programming. Significant object-oriented languages include Java, C++, C#, Python, R, PHP, JavaScript, Ruby, Perl, Object Pascal, Objective-C, Dart, Swift, Scala, Kotlin, Common Lisp, MATLAB, and Smalltalk.

Characteristics of an Object Oriented Programming language



5.Tools & platforms

Hardware requirements

Area	configuration
<i>Processor</i>	<i>pentium or above</i>
<i>Ram</i>	<i>1GB</i>
<i>Heard Disk Drive</i>	<i>80GB minimum</i>
<i>Key Board</i>	<i>105 key standard</i>
<i>Mouse</i>	<i>Optical standard</i>
<i>printer</i>	<i>as required</i>

Software requirements

languages	JSP (Java server pages), Java script , CSS , HTML ,XML
Frameworks & library	Bootstrap , Jquery
Back end	Oracle Database 10g Express Edition Release 10.2.0.1.0
web server	Tomcat 9
Software Development kit	Java JDK 1.8 or above
Database JDBC DRIVER	ojdbc14.jar
E-mail services by Application	activation.jar, mail.jar, techsoftemail.jar
Code editor	Microsoft vs code
others	CorelDRAW X7,Adobe Photoshp 7.0

The front-end will be HTML pages with JavaScript for client side validation where as all business logics will be in JSP (java server pages) reside at middle layer. And these layers will interact with third layer of database, which will be Oracle database . To start working on this project environment requirement is a HTTP web server having Tomcat 9 as web container in which Java code can run and oracle database.

6. System Analysis

6(a) Problem Definition

(I) Existing System

in this section , we will discuss the existing system and some of their drawbacks which force us to plan this whole idea of developing online Institute management system. let us take an example initially Institute appoints many employees to maintain the record of the student, teachers ,other staff . if any applicant wants to get the fresh admission or any student wants to get Re-registration he/she need to go to the counter pay their fees and wait for a week for updating and again went to the front office to know the status ,and this whole record use to maintain on card and files so there might be chance of missing .

suppose we want to organize an event in Institute we need to create posters , banners and make an announcement in classes so that students participate but if any student got absent on that day then he will remain unnotified.

DRAWBACKS OF THE OF MANUAL INSTITUTE MANAGEMENT SYSTEM

- This process is so much time consuming .
- There is a threat for the record of the student and teachers, in this case, there might be a chance that person makes entry on someone else record.
- There is no proper way of getting to know about the events and extra curriculum activities happening in institute.
- It might be the case that student tries to bribe the teachers to avoid the long queue . So, above this is the whole process of Institute management system and its working by our system we can make it a little bit more simple and fast process of automating it.
- We can automate this process by creating the application which will allow you to use these things in a fully functional way and the application will include the following entities (an entity is a real-world object).

(ii) Proposed System

The newly automated application help in following ways:

- student can easily get admission by register himself directly on the Institute application.
- Admin can easily view the list of all admission request of the applicants and also verify their documents if every thing is fine than Admin can approve the admission request of applicant and a unique Enrollment no. will be send on the applicant Email address.
- if admin find any invalid documents or information about the applicants than he can send E-mail to the applicant for correctness of documents or information.
- student can do Re-registration for next semester.
- Students can easily fill their examination forms .
- Students can easily view their result and grade-card by simply login into his/her profile.
- A student can register himself directly on the Institute application for any notification of the event and students can also post their queries .
- If any student facing doubts in any subject he/she can ask question by messaging that questions to the teacher s of that subject . There is also option to attach Screen Shot of that question and then send message .to the teachers.
- teachers can replay to the doubts of the students through messaging .
- Teachers can easily conduct MCQ based online class tests.
- if any other user have some quires they can easily send their quires from Institute application.
- Admin can easily post or delete time table of different classes.
- Admin can dynamically change the content of success story page by adding or removing students Name and images from Success Story Board.

6(b) System Requirements Specification (SRS)

1. INTRODUCTION

1.1 Purpose

The purpose of the SRS document is to define the system under development , namely the Chanakya Institute of Computer Science. The intended audience of this document include the site administrator of the Chanakya Institute of Computer Science and the End user of the Chanakya Institute of Computer Science. other intended audience include development team business analyst ,design team ,testing team ,infrastructure team and system team.

1.2 Scope

It may help collecting perfect management in details . in a very short time the collection will be obvious , simple and sensible . It also help in current works related to Student Admission ,Student Re-registration for next semester, generating student result, Grade Card , Showing result to students ,conducting MCQ based class test ,Support for applicant Query , Event Management etc.

our project aims at Business Process Automation i.e we have tried to Computerize various process of institute management system .

- In computer system the person has to fill the various forms & number of the copies of the forms can be easily generated at a time .
- To utilize the resources in an efficient manner by increasing the productivity through automation.
- The system generates type of information that can be used for various purpose .
- It satisfies the user requirement
- Be easy to understand by user and operator
- Be easy to operate
- Have a very good ui/ux
- Delivered on the schedule within the budget .

1.3 Definitions and Acronyms

Definition

Terms	Definition
user	Online users or Student of Chanakya Institute of Computer Science
Site admin	Admin who maintain / enhances Chanakya Institute of Computer Science
StakeHolders	people who has interest in Student of Chanakya Institute of Computer Science
Ques	Question ask from applicant “ are you already student of this institute
YOP	Year of passing
TEE	Term End Examinations
DEO	Data Entry Operator

2 General Description

2.1 Product Prospective : The System Mainly Contain application Server and web server. This system have mainly following Sub System :-

online Admission System

online Re-registration System

online Result management System

online MCQ based Examination System

Online Administration System

2.2 product Functions :

This System Mainly Supports Following high level Functions :

- **Online Admission** : Applicant will able to get online admission in programs . System Will display List of all Programs that is currently existing in Institute.
- **Online Re-registration** : Students of this Institute will able to do Re-registration in Next Semester .System will check the eligibility of that Student for re-registration and acts accordingly .
- **online Filling TEE Form** : Students of this Institute will able to fill in TEE form .System will check the eligibility of that Student for appearing in examination and acts accordingly .
- **Viewing Result** : Student can view TEE result as well as their Grade-card .
- **Uploading Result** : DEO can Upload the Result of all Students who appear in TEE .
- **Conducting MCQ test** : teachers of this Institution will able to conduct online MCQ based test of different Subjects and student can give this test and view theirs results .
- **Students doubts and teachers replay**: Student can ask question from the teachers of different subjects and teachers can replay to the questions .
- **Posting Events and extra-curricular activities** : Admin can post about Events and Extra-curricular activities which will be held in Campus .
- **Registration for Events and extra-curricular activities** : Students can view all the Events and extra-curricular activities and register them self . Admin can get the Report of students Registration .
- **Adding/removing Program**: Admin can add/remove different Programs .
- **Adding/removing Courses**: Admin can add /remove courses from different Programs .
- **Adding/removing DEO** :Admin can add/remove Data Entry Operator .
- **Generating Reports** : System will able to generate different Types of Reports and Admin will get that report .
- **Uploading Time Table** : Admin Can Upload the classes Time-table for different Programs .
- **Uploading Content of Success Story Board**: Admin can upload the Content of Success Story Board .

2.3 User Characteristics :

There are mainly two kinds of users of this system :

- **Online users**: these are the Students ,applicants , teachers and Alumini of institutions who will access the system online. The users are from India for first iteration for and the preferred language is Hindi & English . Users can have minimal technical Knowledge and hence need intuitive navigation and simple Moderate page layouts.
- **Administrators** :Administrators is responsible for maintaining the system.

2.4 Constraints:

Following are the main constraints

- Initial release only Supported on MISE, Google Chrome and Firefox browsers.
- web application does not work with JavaScript Support.

2.4 Constraints:

The IT department of the institution has all the available hardware required to support the intended user load.

3 Specific Requirements

3.1 External interface Requirements: this section provide details of all inputs and outputs including hardware , software , communication and mockup prototype.

3.1.1 User Interfaces : application should contain following user interfaces :

- **Login Page** for authenticate registered users .this screen should accept user id , password and authenticate .

- **Applicant registration page:** This page mainly contains Input Fields like name , Email-id , phone number and password where applicant can register themself . All the fields should be strictly validated through javascript so that applicant can not provide Invalid data for further processing .
- **Admission form :** This page contains all the necessary input fields required for admission processing where applicant can enter their details .All the fields should be strictly validated through javascript so that applicant can not provide Invalid data for further processing .
- **Re-registration form :** This page contains all the necessary input fields required for Re-registration in next semester where student can enter their details .All the fields should be strictly validated through javascript so that applicant can not provide Invalid data for further processing .
- **Student Panel :** After the authentication of student Login , Student redirected to this page. This page mainly Contain student name , student image , welcome Massage , program course details ,logout button and a navigation bar to go to different pages like Re-registration page , Event-registration page ,Fill TEE form page, viewing TEE Result , viewing grade-card page ,MCQ test page etc .
- **Teacher Panel :** After the authentication of teacher login , teacher will be redirected to this page .This page mainly contain teacher name ,teacher image ,welcome message ,edit profile option ,logout button and a navigation bar to go to different pages like conduct MCQ test page ,Set questions page ,view test report page etc.
- **Admin Panel:** After the authentication of Admin login , Admin will be redirected to this page .This page mainly contain Admin name ,Admin image ,welcome message ,edit profile option ,logout button .According to his privilege there will be a navigation bar to go to different pages to do different work.
- **DEO panel:** This panel is for Data Entry Operator to Upload TEE marks of student . mainly this page contain DEO name , DEO image , welcome message ,Logout button and a navigation bar to go to different pages like Upload Result for Passed Students , Upload Result for failed students etc.

3.1.2 Hardware Interface:

There is no direct hardware interface specifically for this application. The web application runs on an hosted application server .

3.1.3 Software Interface:

This application should integrate with database to store /retrieve/update/delete some information . JDBC APIs are the most preferred way of integration .

3.2 Performance Requirements:

The following are the Key Performance requirements :-

- all page should load within 5 seconds .
- Search should be displayed within 1 second .

3.3 Software System Attributes Requirements:

Reliability : Application Should Provide reliable and relevant processing of data.

Availability : Application should be available 99% of times . All software upgrades , patches and fixes should be done without shutting down the application .

6(b) Planning and Scheduling Chart

Gantt Chart

Task Name	Q1 2020			Q2 2020		
	March 20	April 20	May 20	June 20	July 20	Aug 20
Planning						
Research						
Design						
Implementation						
Follow Up						

7. System Design

7(a) Data flow diagram

As information moves through software , it is modified by a series of transformations. A **Data Flow Diagram** is a graphical representation that depicts information flow and the transforms that are applied as data moves from input to output . DFDs do not supply the detailed descriptions of modules but graphically describe a system's data and how the data interact with the system. The information flow continuity must be maintained i.e input and output to each refinement must remain the same.

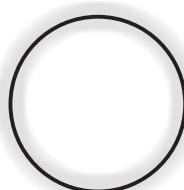
To Construct Data flow diagram we use the following symbols

1. ARROWS



An arrow identifies data flow in motion

2. Circles



Circles (also known as bubbles) represent a process that converts data into information

3. Open-Ended Boxes



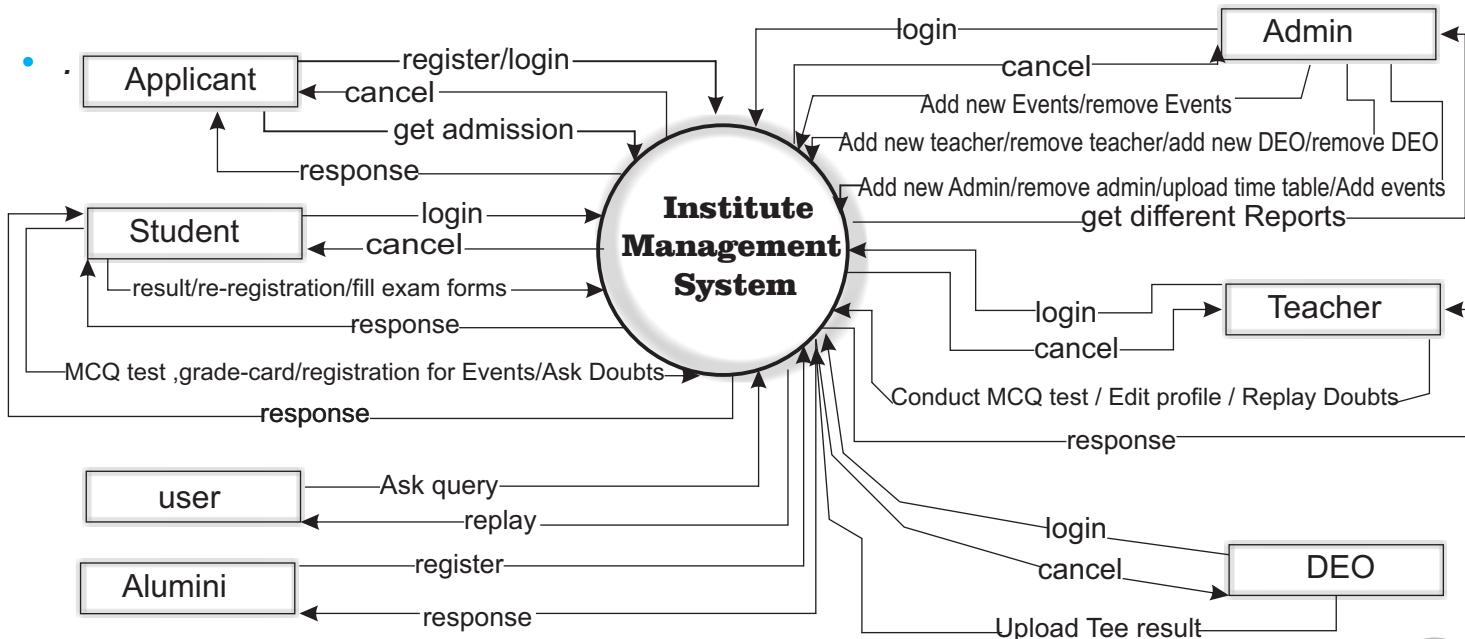
An open-ended box represents a data store or temporary repository of data

4. Rectangle

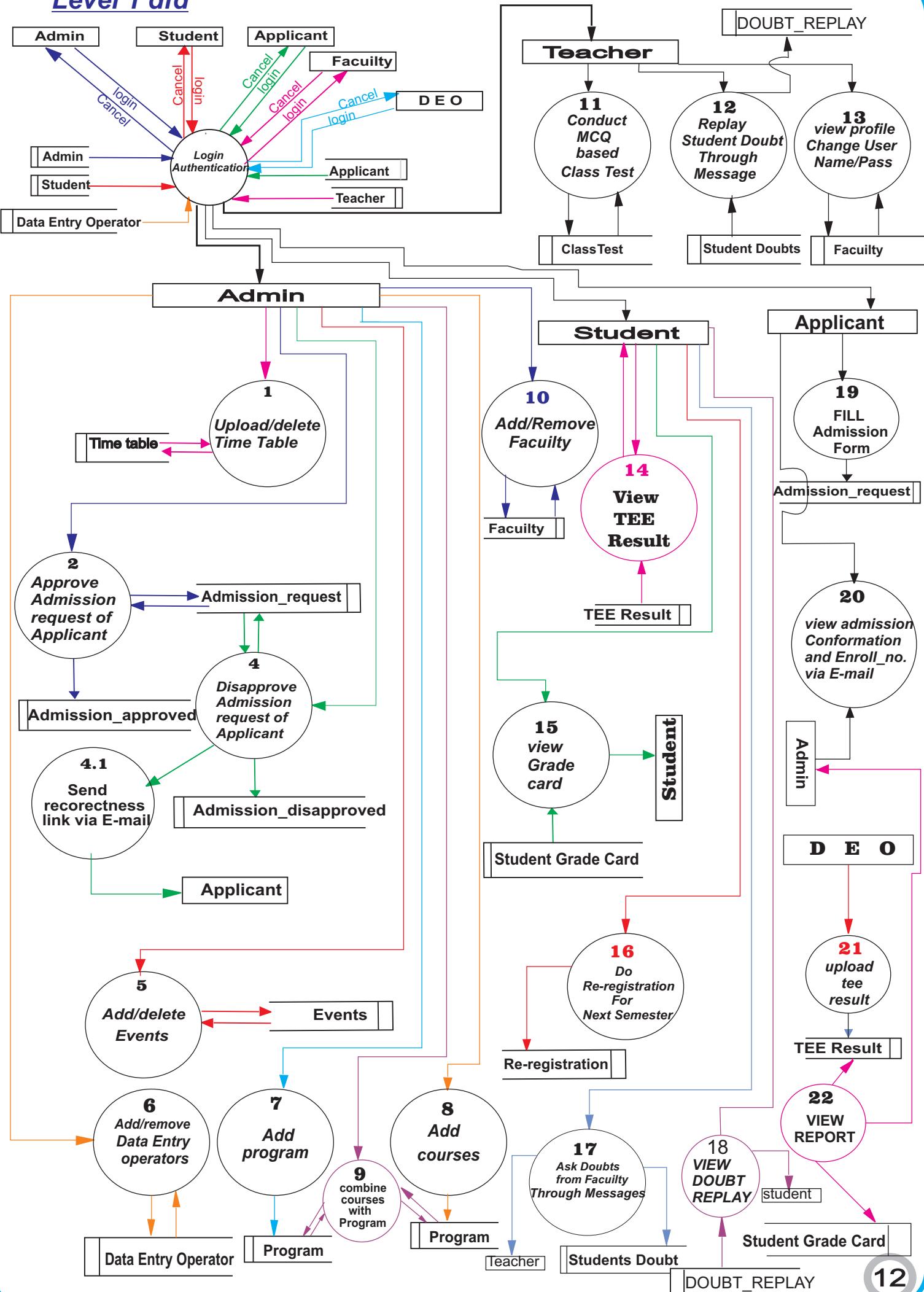


Rectangle defines a source (originator) of destination of the system data. it is used to represent an external entity

0-level (context level)

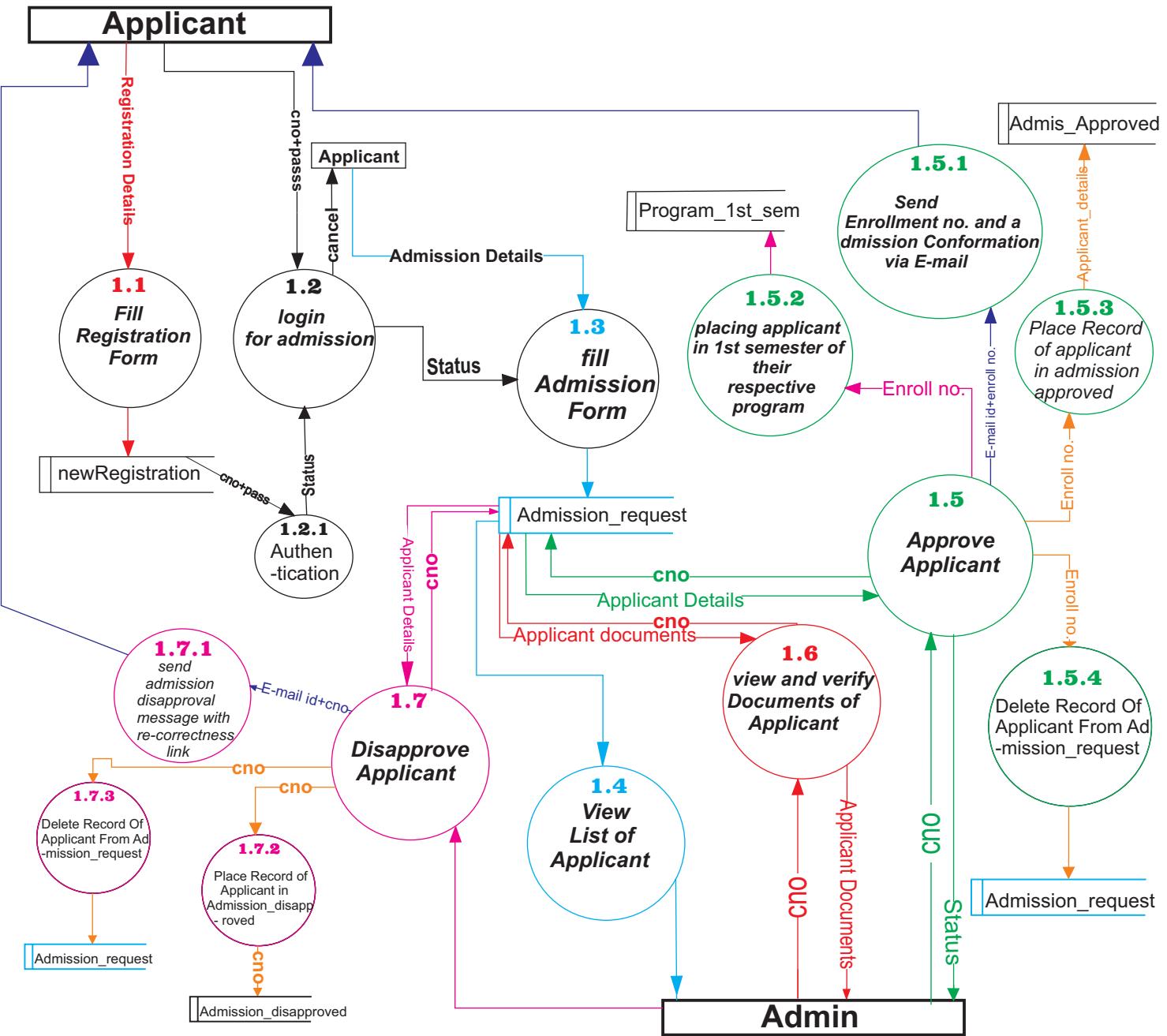


Level 1 dfd

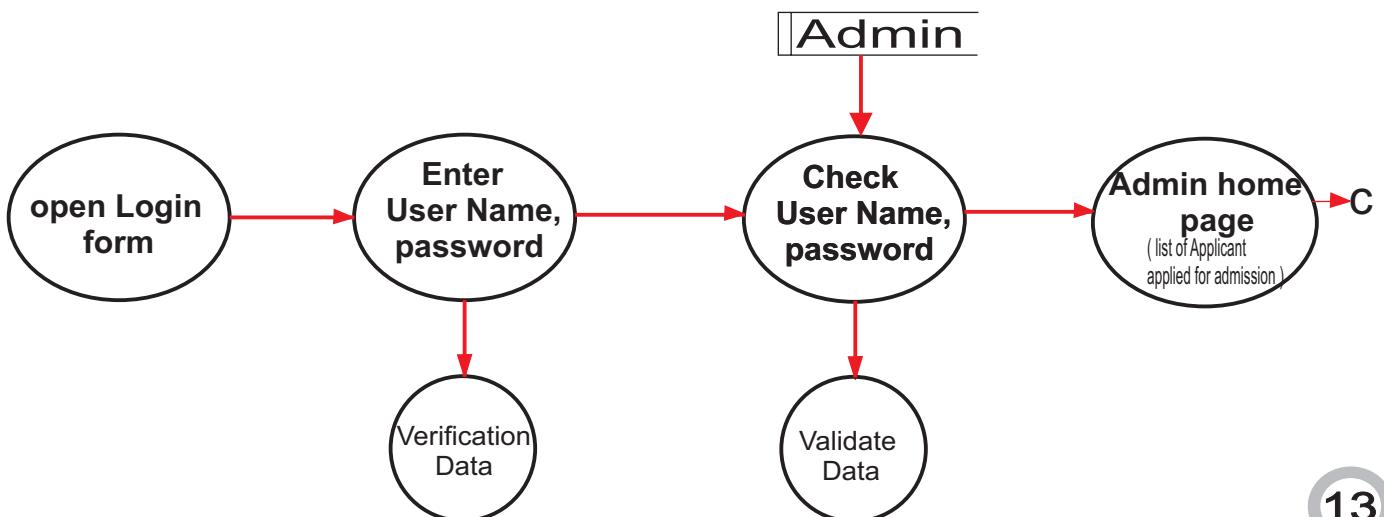


Level 2 DFD(data flow diagram)

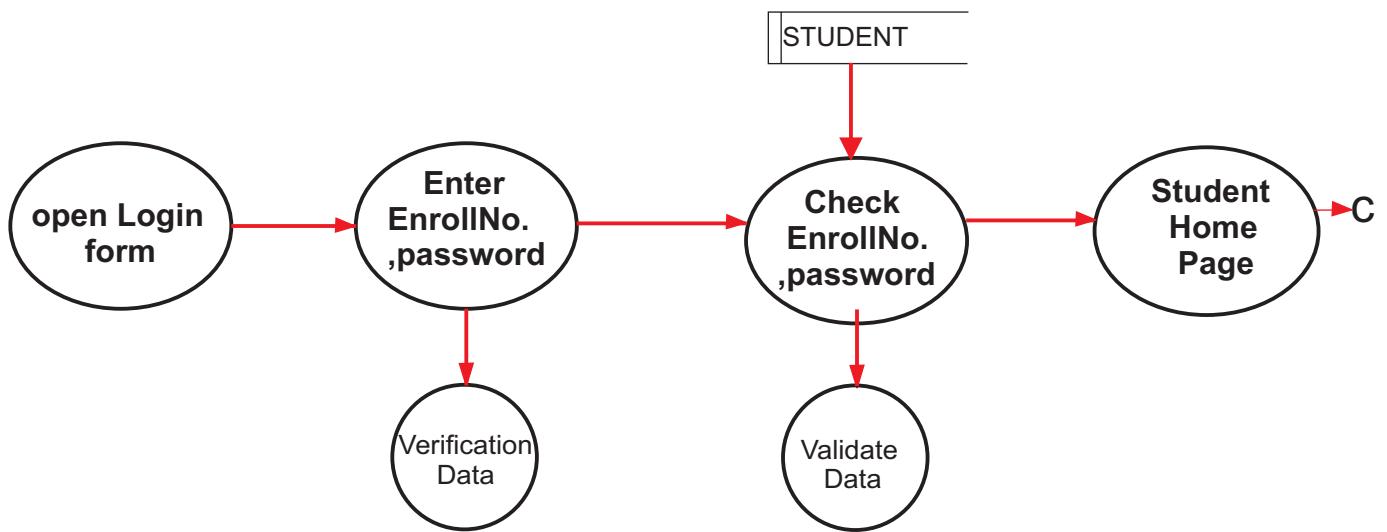
(1) Level-2 DFD of online admission



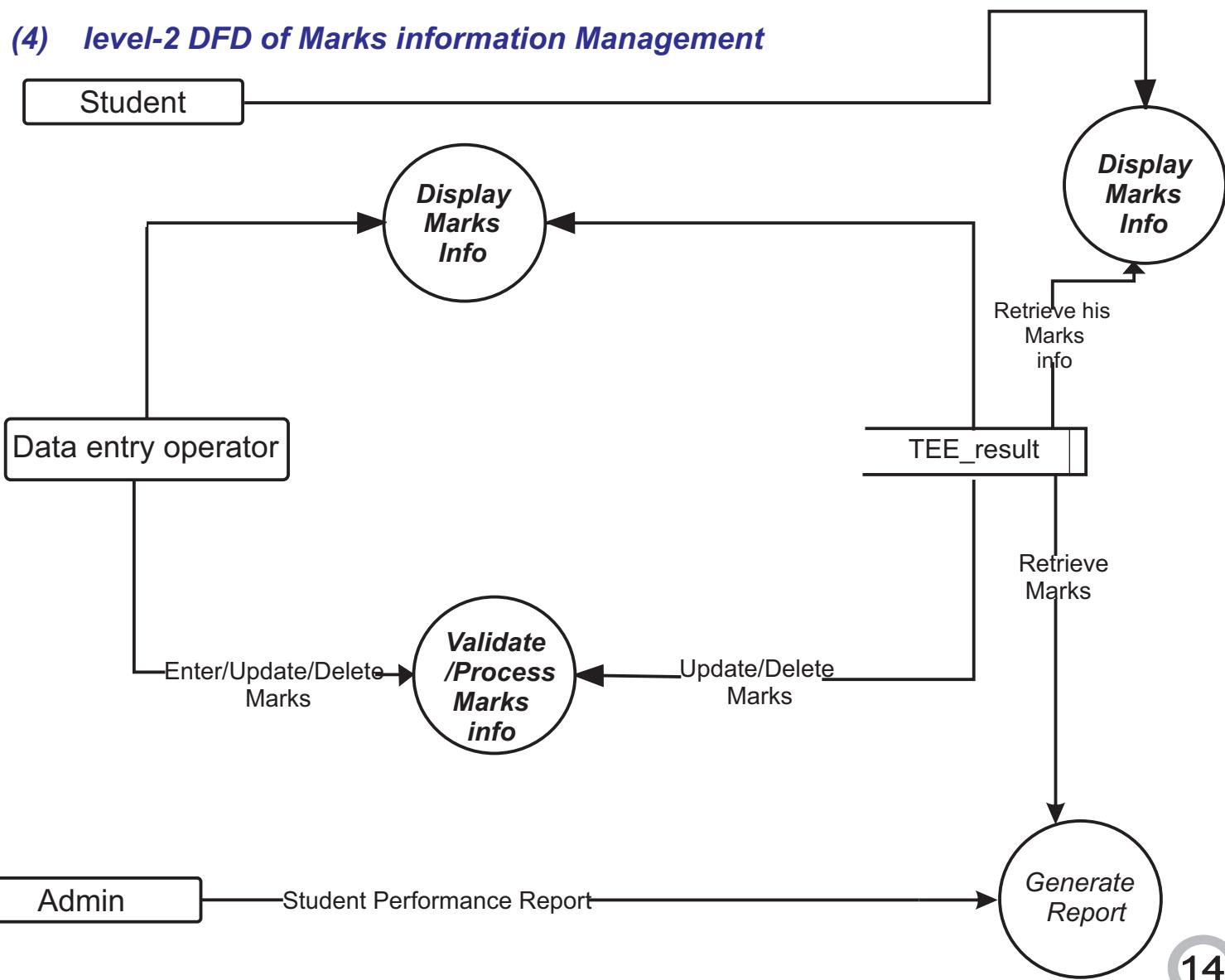
(2) Level-2 DFD Admin Login



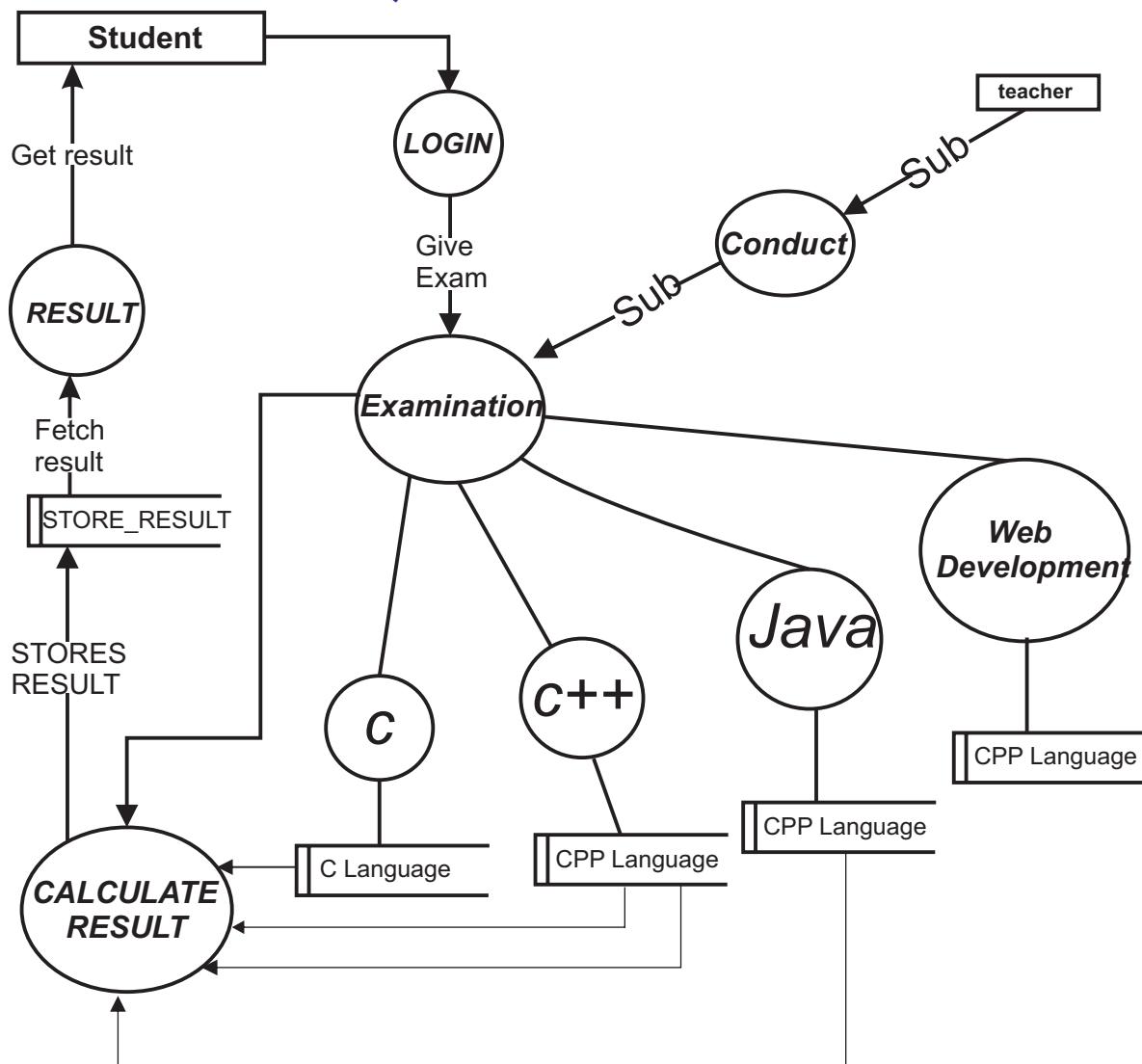
(3) Level-2 DFD of Student Login



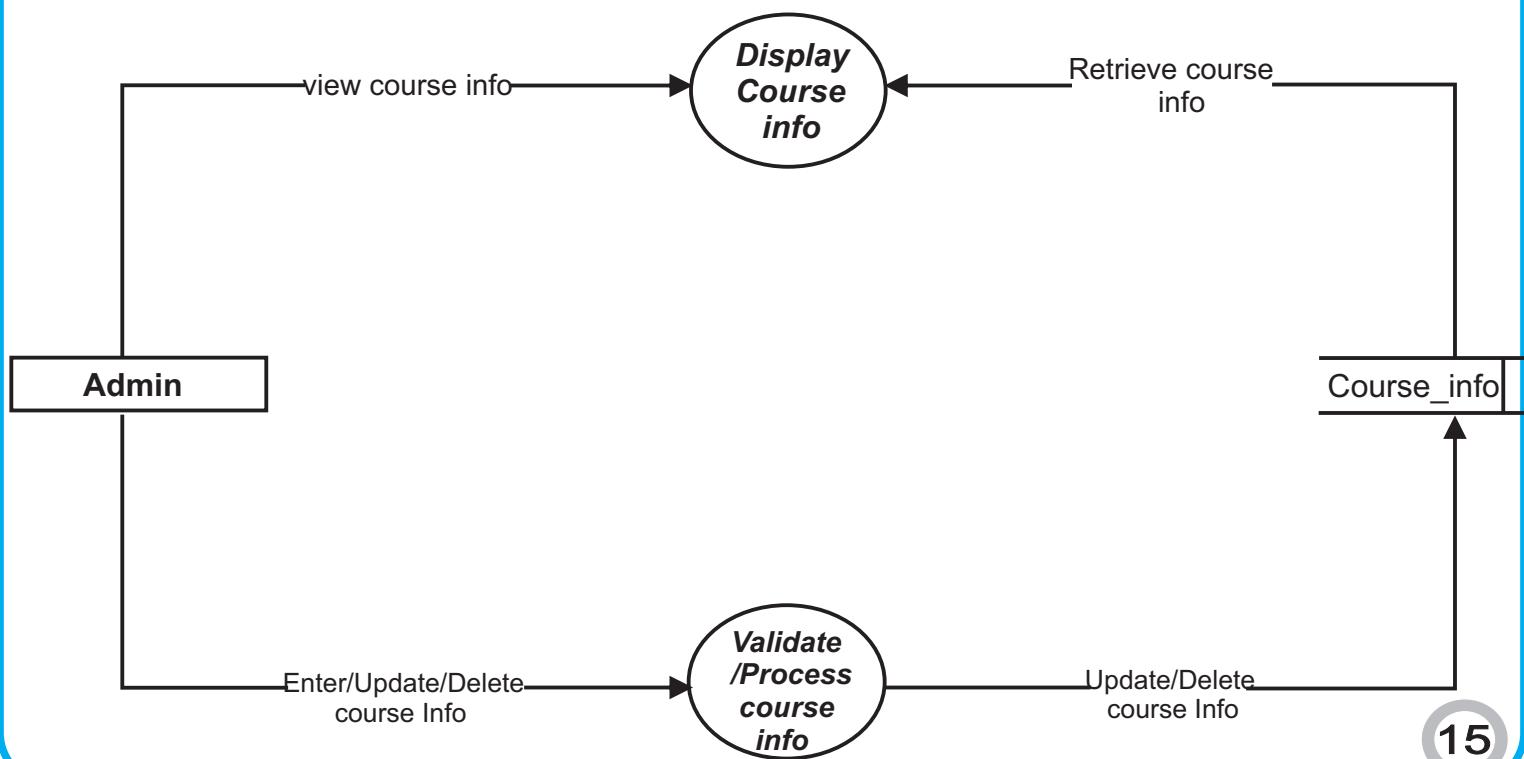
(4) Level-2 DFD of Marks information Management



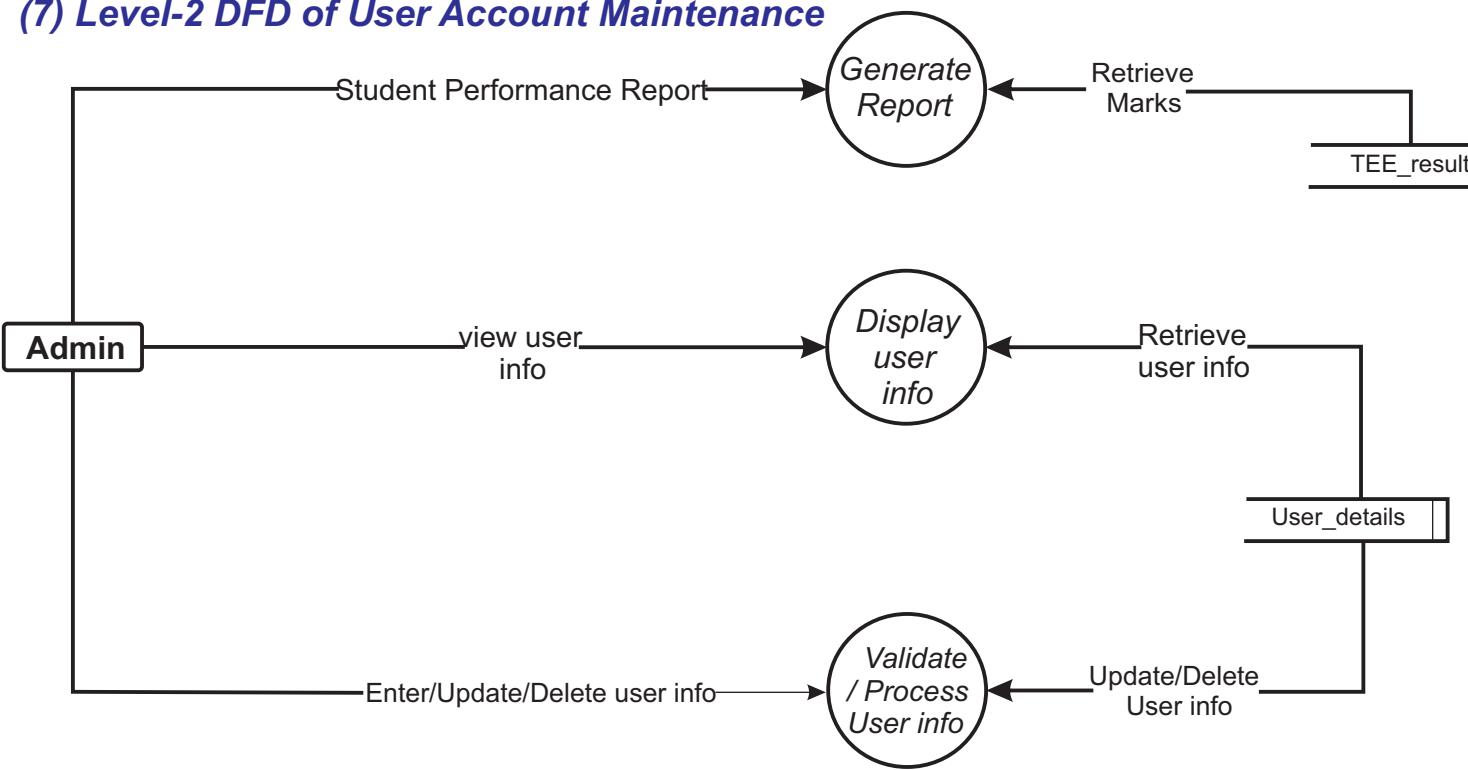
(5) Level-2 DFD of online MCQ based class test



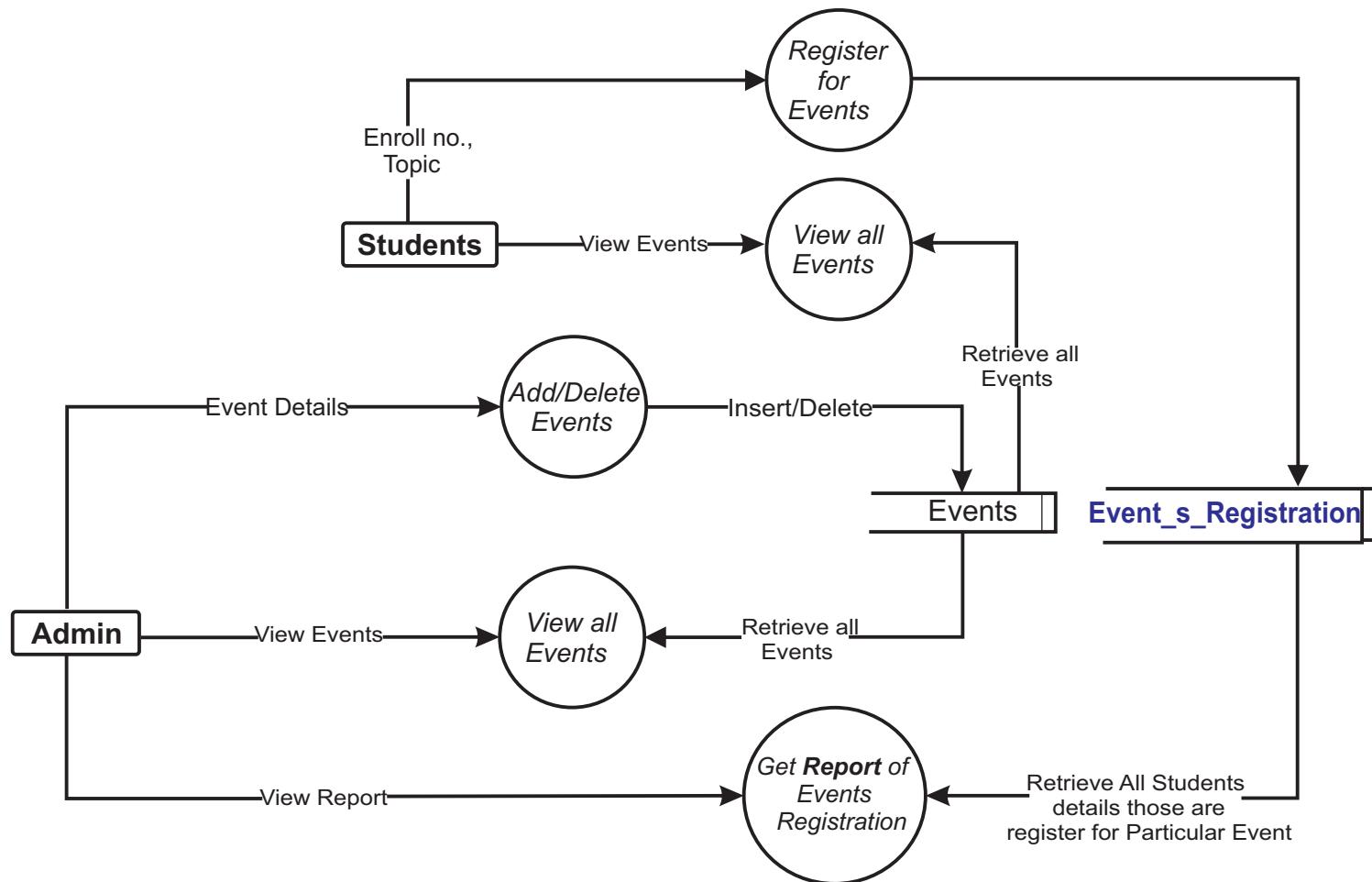
(6) Level-2 Course Information Management DFD



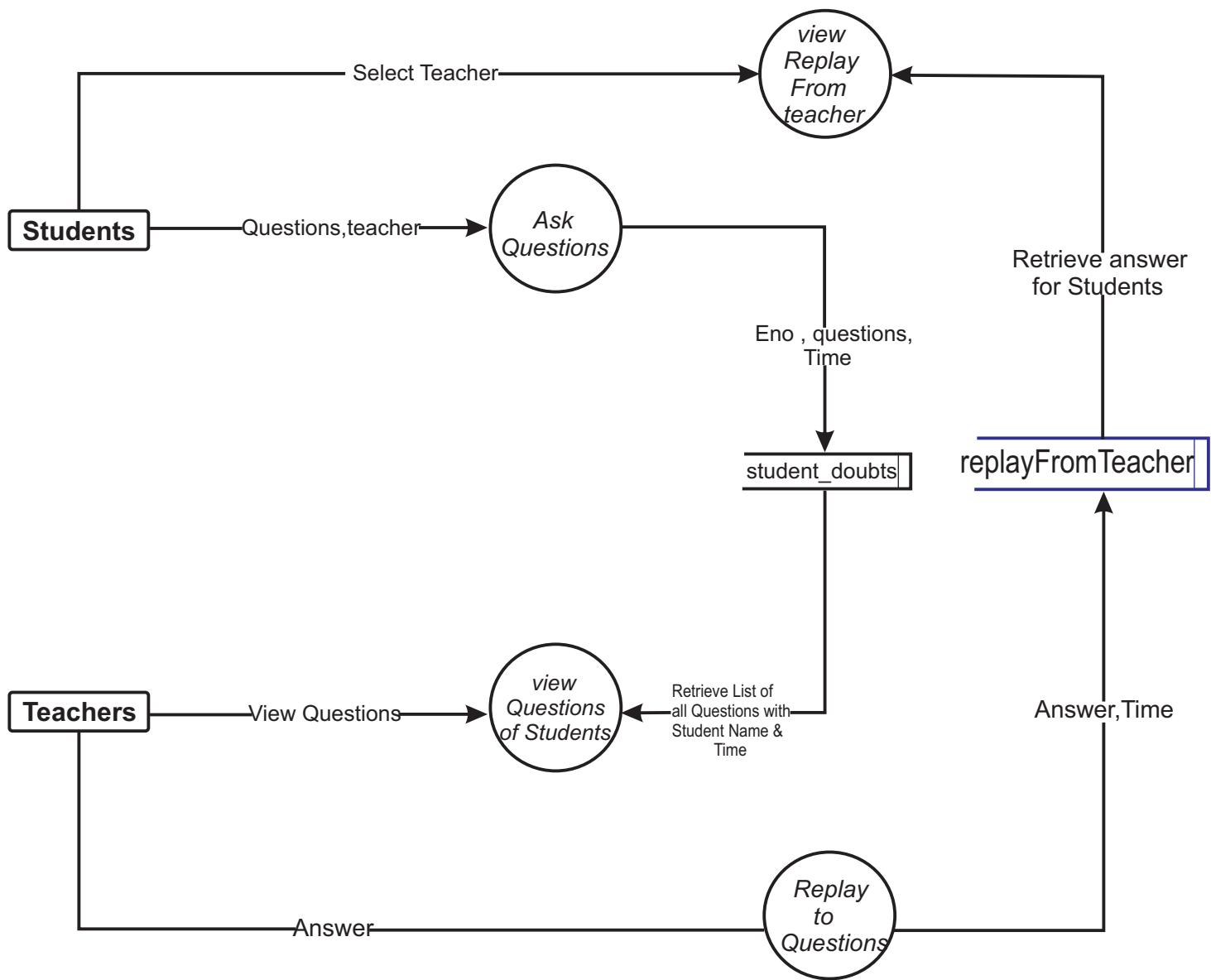
(7) Level-2 DFD of User Account Maintenance



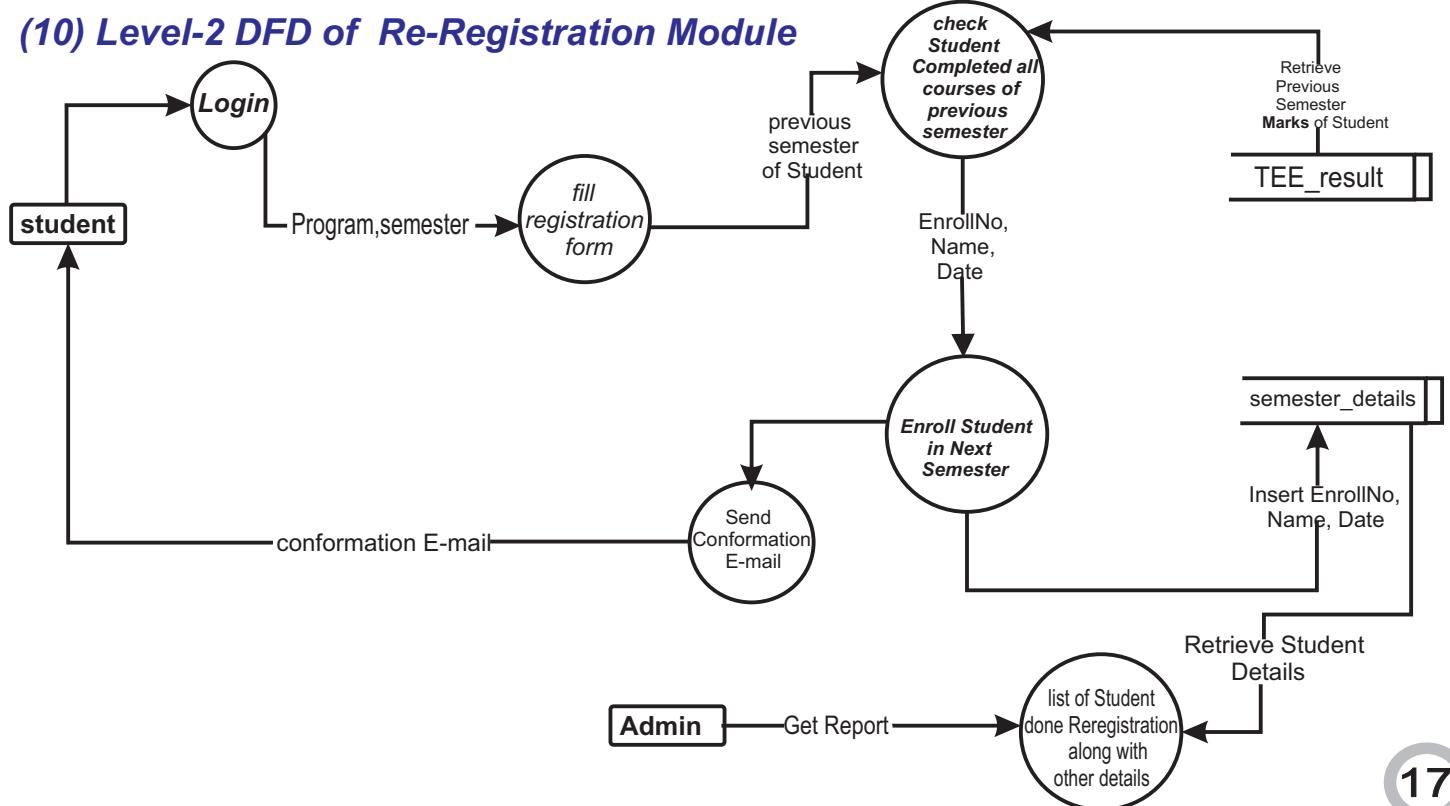
(8) Level-2 DFD of Event & extracurricular activity Management



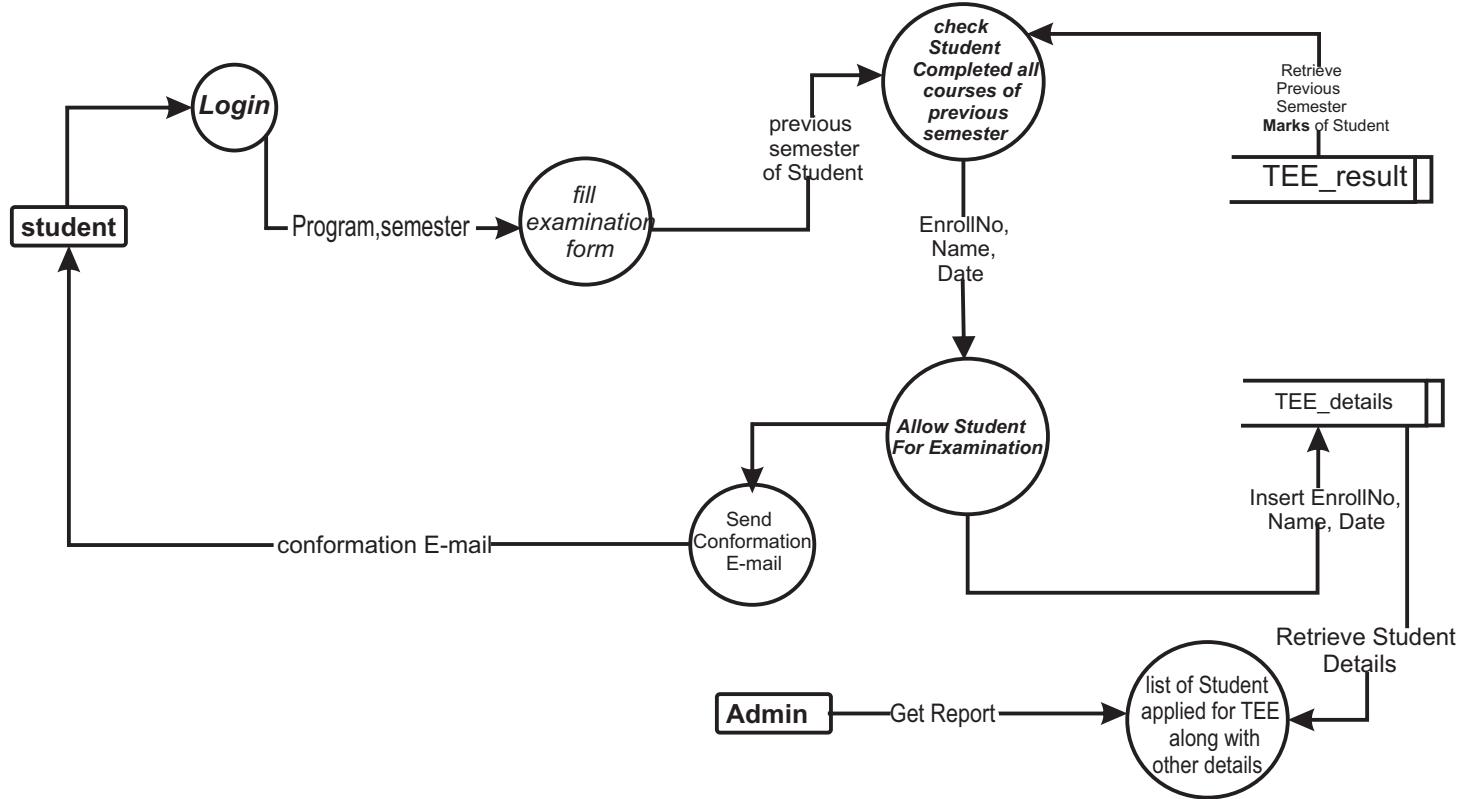
(9) Level-2 DFD of Students Question teachers replay Module



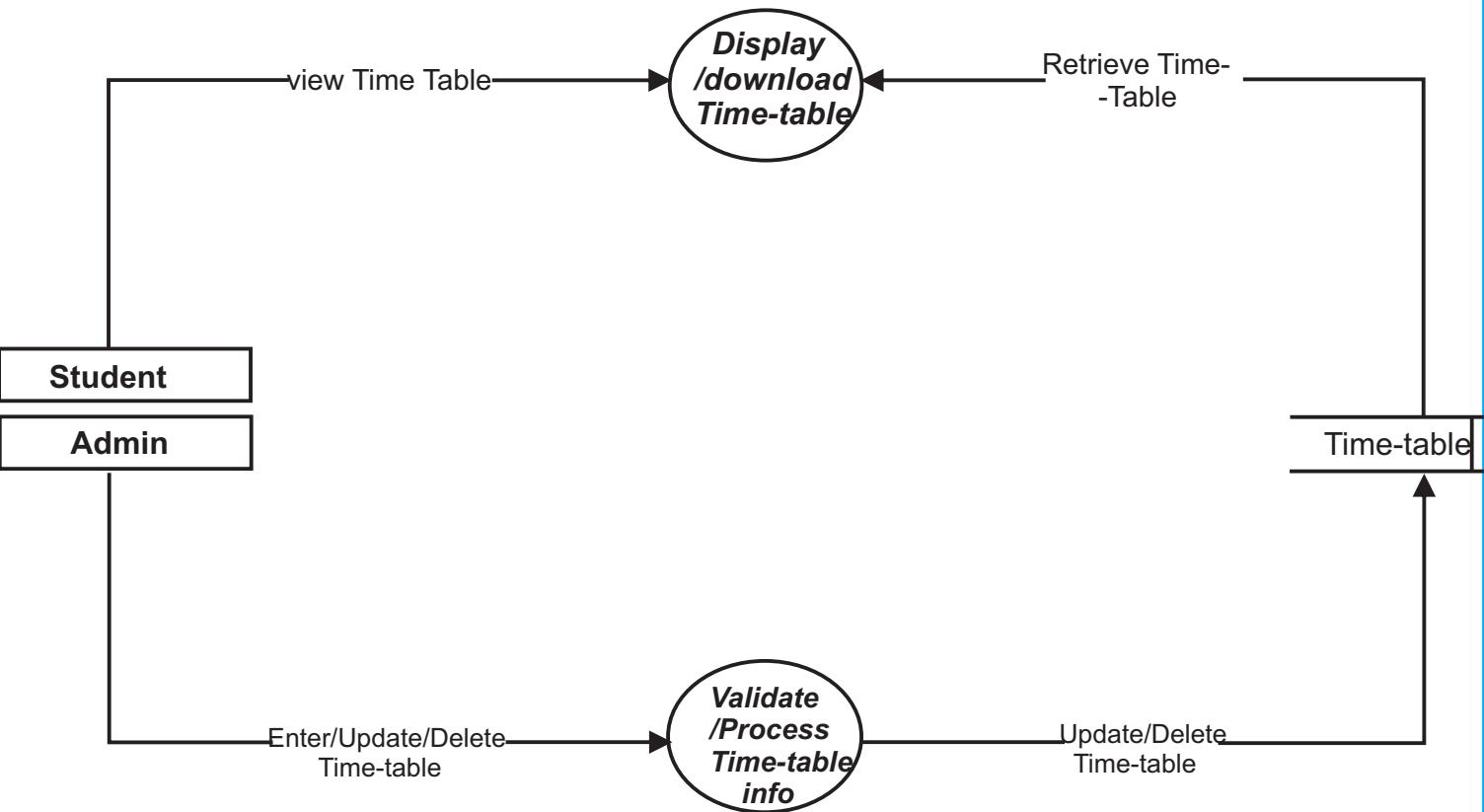
(10) Level-2 DFD of Re-Registration Module



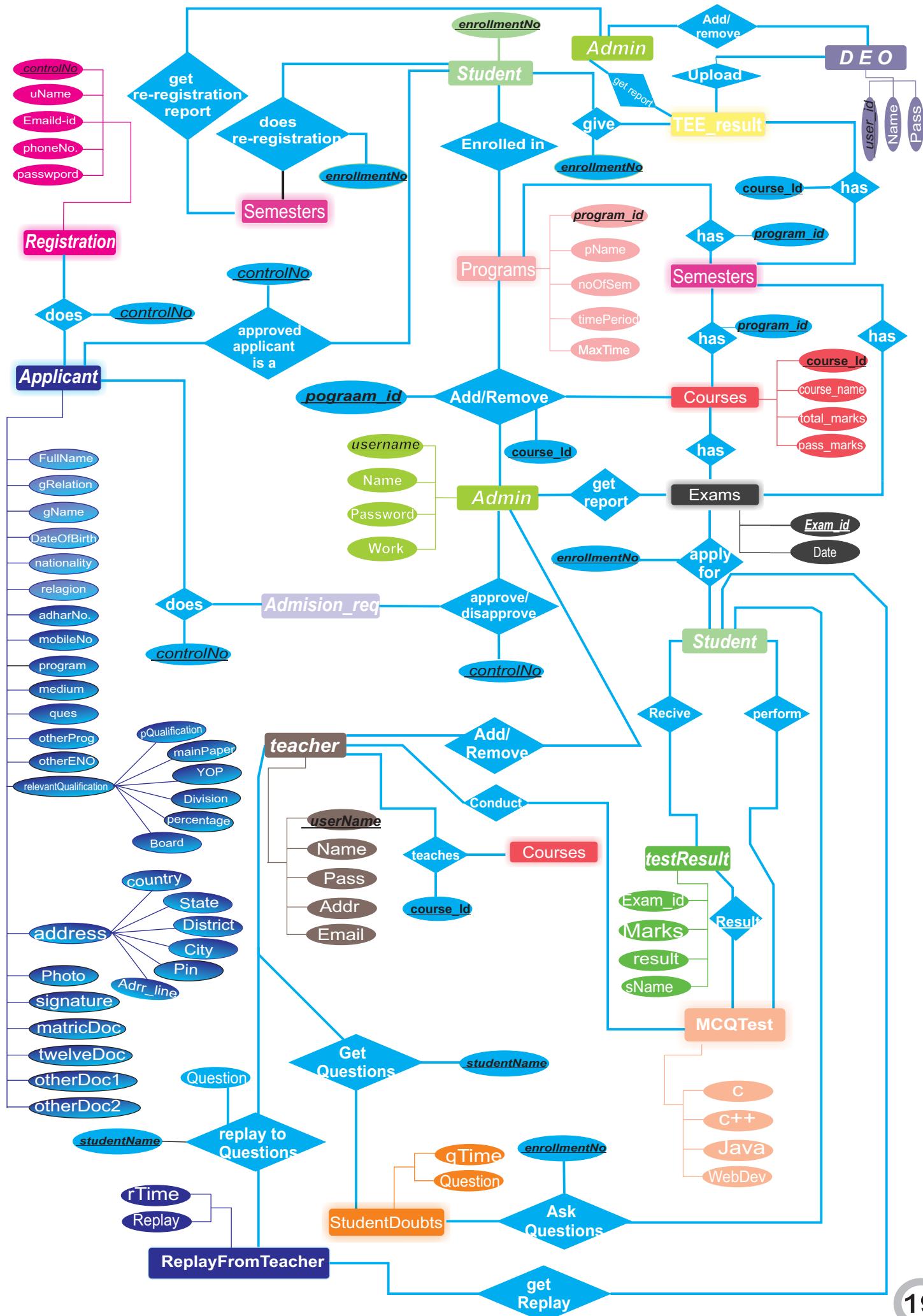
(11) Level-2 DFD of filling TEE(Term End Examination) form

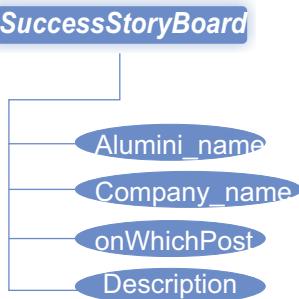
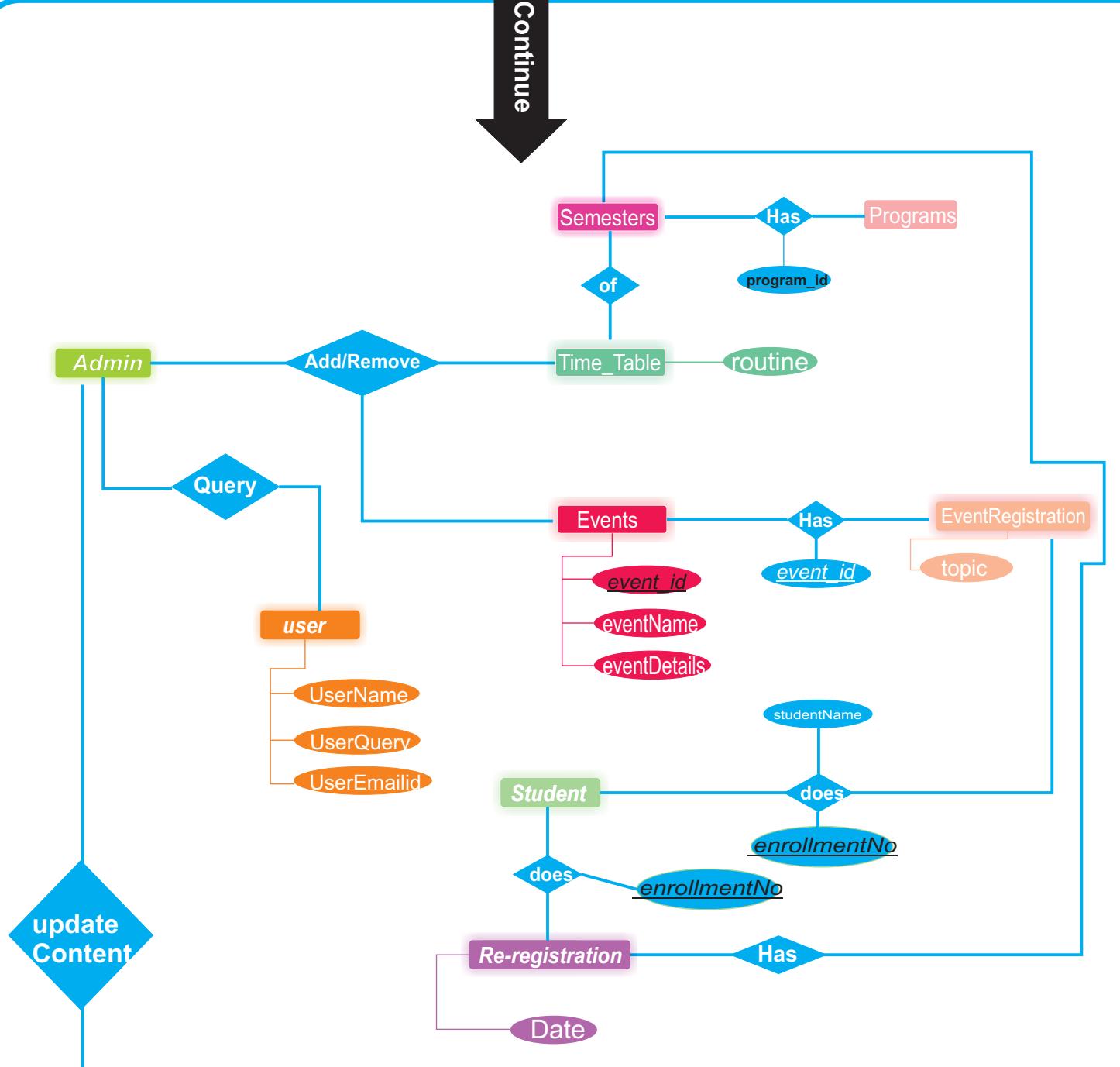


(12) Level-2 DFD of Uploading Time Table by Admin

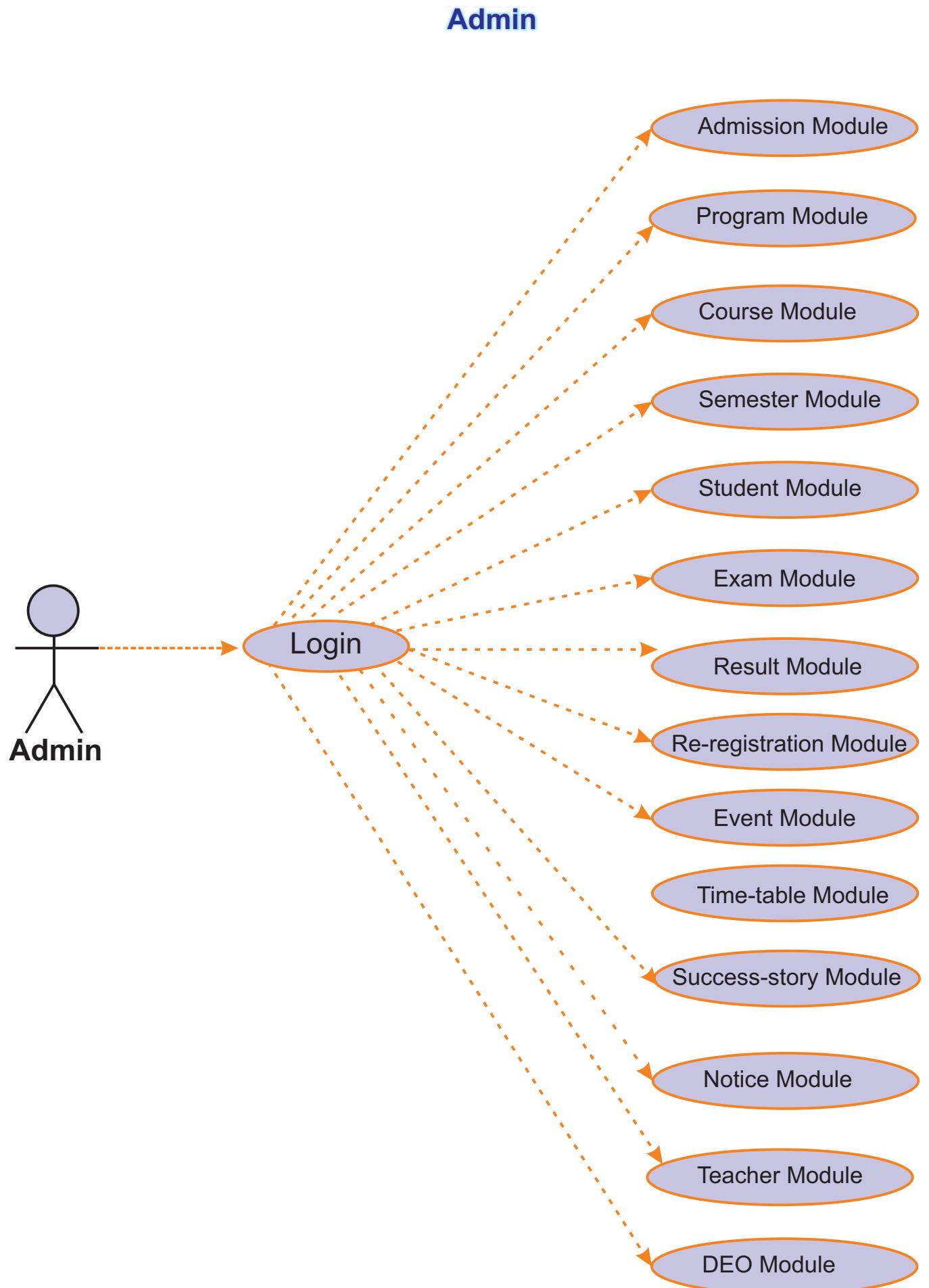


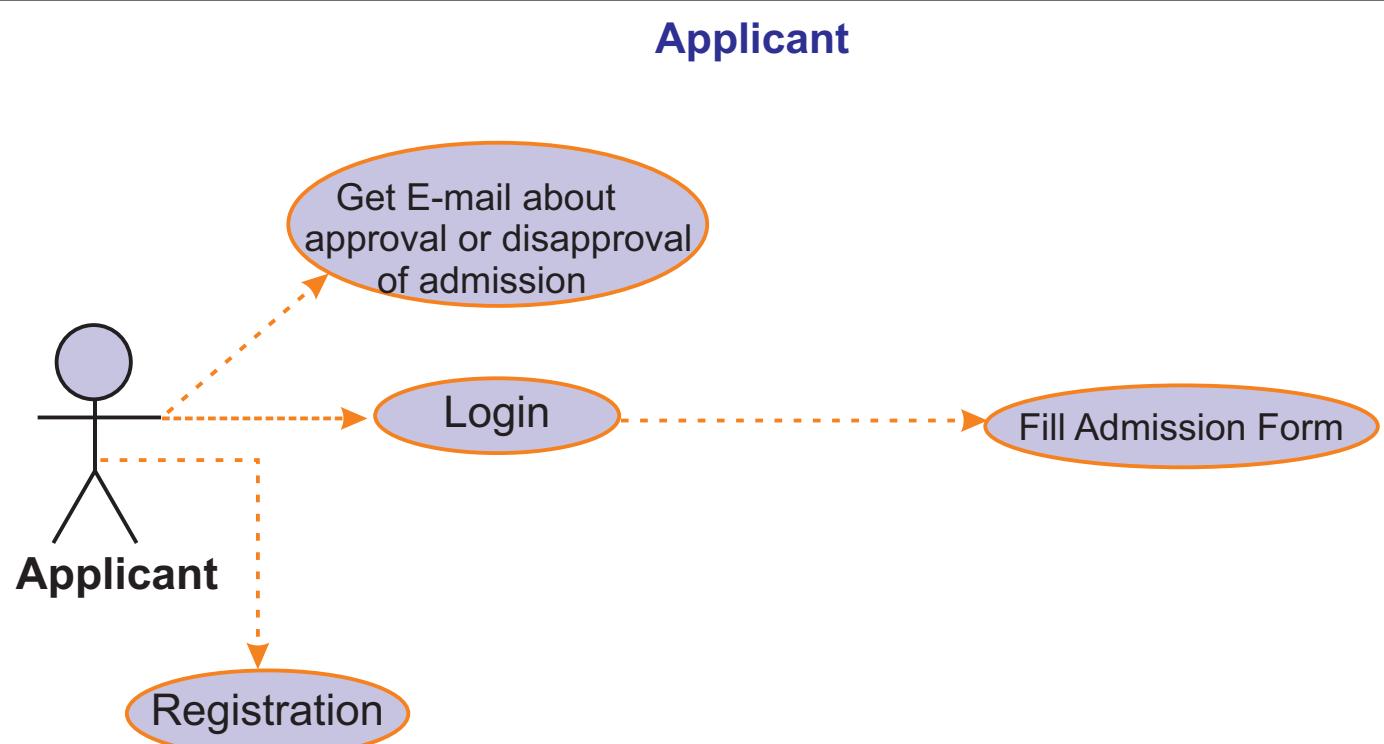
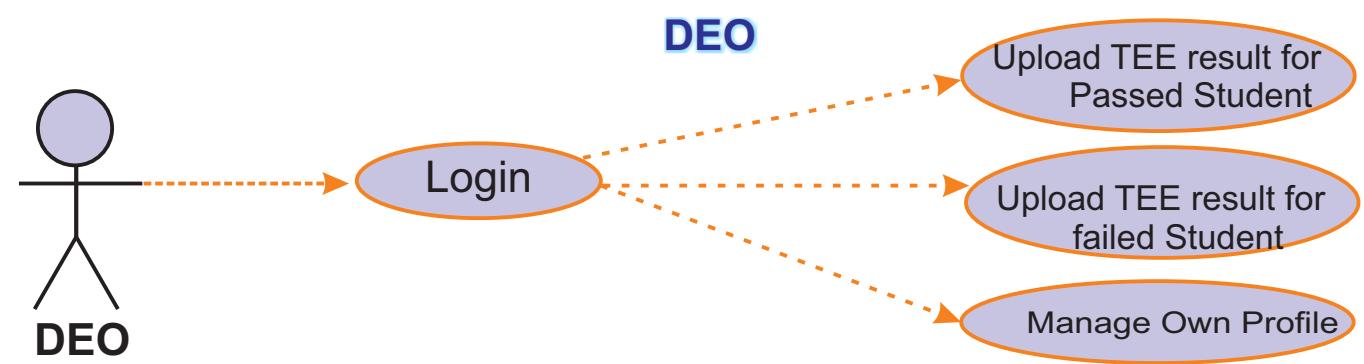
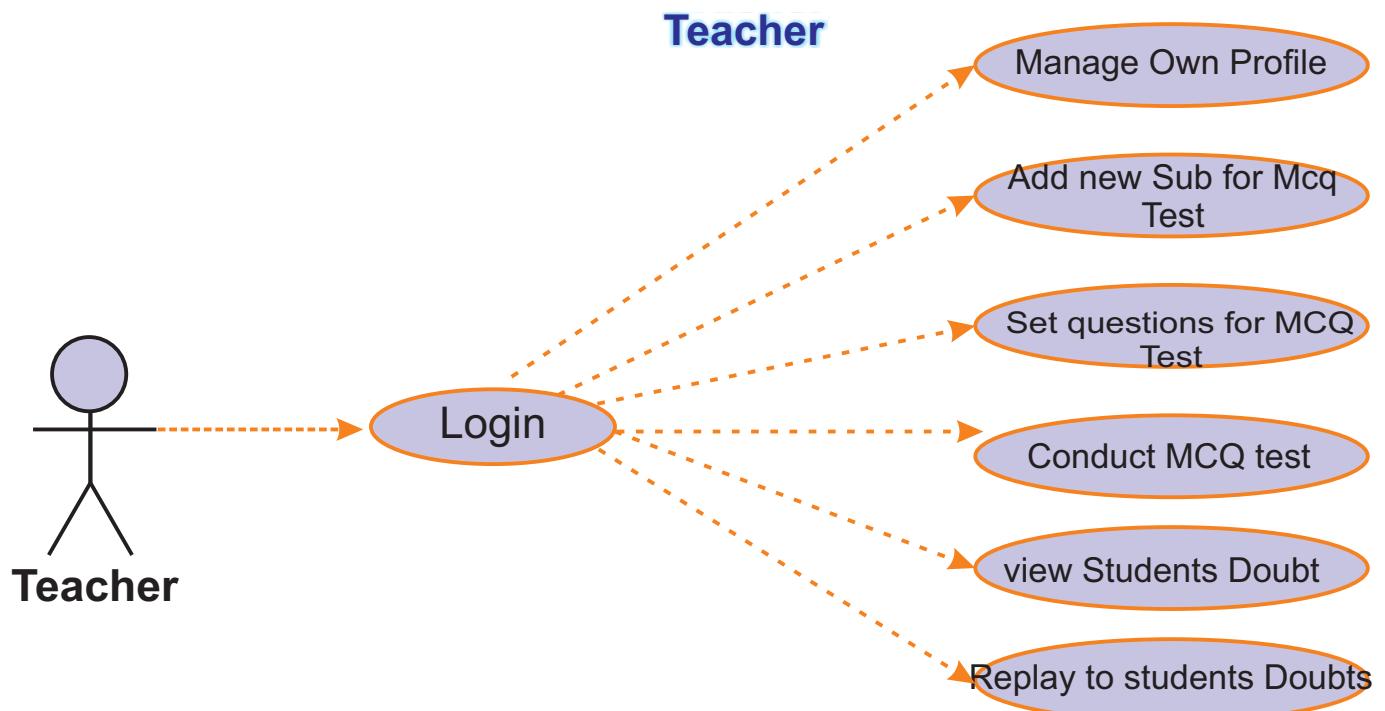
Entity Relationship Diagram (ERD)



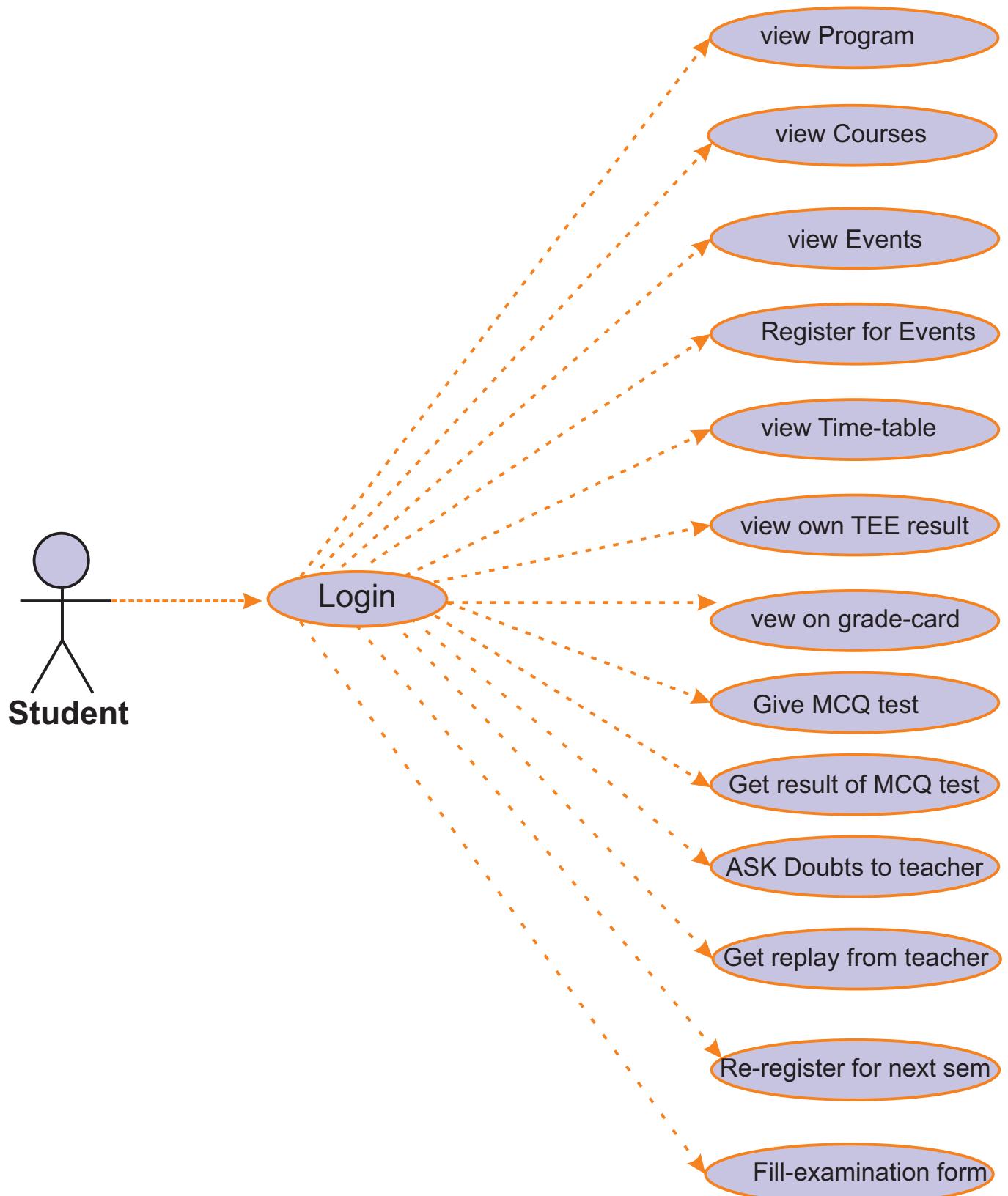


6 (c) use case diagrams





Student



8. Number of Module

(1) super Admin / sub admin Module

(2) DEO Module

(3) Admission Module

(4) Re-registration Module

(5) Term End Examination Module

(6) Result Management Module

(7) MCQ based test Module

(8) Student Doubt Teacher Replay Module

(9) Course Management Module

(10) Event & Extra - carriullam activities Module

(11) Time-Table Module

(12) Alumni Registration Module

(13) Enquiry Module

9.Database Description

Applicant_registration			
Attributes	Data Type	Size	Constraints
<i>U_control_no</i>	varchar2	20	<i>PK</i>
<i>U_password</i>	varchar2	20	<i>not null</i>
<i>U_name</i>	varchar2	35	<i>not null</i>
<i>U_full_name</i>	varchar2	40	<i>not null</i>
<i>U_Email_ID</i>	varchar2	60	<i>not null</i>
<i>U_Phone_no</i>	number	15	<i>not null</i>

Super_admin_login			
Attributes	Data Type	Size	Constraints
<i>Usern_name</i>	varchar2	20	<i>PK</i>
<i>password</i>	varchar2	20	<i>not null</i>
<i>name</i>	varchar2	35	<i>not null</i>
<i>Profile_image</i>	blob		<i>not null</i>
<i>Email_ID</i>	varchar2	60	<i>not null</i>

Sub_admin_login			
Attributes	Data Type	Size	Constraints
<i>Usern_name</i>	varchar2	20	<i>PK</i>
<i>password</i>	varchar2	20	<i>not null</i>
<i>name</i>	varchar2	35	<i>not null</i>
<i>Profile_image</i>	blob		<i>not null</i>
<i>Email_ID</i>	varchar2	60	<i>not null</i>
<i>Type_of_admin</i>	varchar2	60	<i>not null</i>

Data_Entry_operator_login			
Attributes	Data Type	Size	Constraints
<i>Usern_name</i>	varchar2	20	<i>PK</i>
<i>password</i>	varchar2	20	<i>not null</i>
<i>name</i>	varchar2	35	<i>not null</i>
<i>Profile_image</i>	blob		<i>not null</i>
<i>Email_ID</i>	varchar2	60	<i>not null</i>

Teacher_login			
Attributes	Data Type	Size	Constraints
<i>Usern_name</i>	varchar2	20	<i>PK</i>
<i>password</i>	varchar2	20	<i>not null</i>
<i>name</i>	varchar2	35	<i>not null</i>
<i>Profile_image</i>	blob		<i>not null</i>
<i>Email_ID</i>	varchar2	60	<i>not null</i>

TEE_details_(term_End_examination)			
Attributes	Data Type	Size	Constraints
<i>Enrollment_No</i>	varchar2	30	<i>fK</i>
<i>prog_id</i>	varchar2	30	<i>fk</i>
<i>Semester</i>	number	1	<i>not null</i>
<i>rdate</i>	date		<i>not null</i>
<i>Student_name</i>	Varchar2	40	<i>not null</i>

Applicant_admission_request				
Attributes	Data Type	Size	Constraints	Description
Control_Number	varchar2	30	PK	
Full_name	varchar2	40	not null	
Grelation	varchar2	10	not null	Guardian Relation
Gname	varchar2	30	not null	Guardian Name
Date_of_birth	Date		not null	
Gender	varchar2	7	not null	
Nationality	varchar2	15	not null	
Religion	varchar2	11	not null	
Adhar_no	number	15	not null	
Mobile_no	number	10	not null	
Enrolling_program	varchar2	30	not null	Applicant applying for which Program
Medium	varchar2	10	not null	
S_ques	varchar2	3	not null	Are you already student of our Institute ?(yes/no)
Other_program	varchar2	25	null	if already student than Program name
Other_enroll_No	varchar2	26	null	If already student than enroll_no
Prev_qualification	varchar2	30	not null	Previous Qualification
Prev_main_paper	varchar2	20	not null	Main Paper (about previous qualification)
Prev_YOP	varchar2	5	not null	Year of Passing
Prev_division	varchar2	7	not null	Division
Prev_percentage	varchar2	3	not null	Percentage
Prev_board	varchar2	40	not null	From which board applicant passed
Address_line1	varchar2	40	not null	
Address_line2	varchar2	40	null	
City	varchar2	40	not null	not null

Continue

<i>Country</i>	<i>varchar2</i>	40	<i>null</i>	<i>By default India</i>
<i>State</i>	<i>varchar2</i>	10	<i>not null</i>	<i>Guardian Relation</i>
<i>District</i>	<i>varchar2</i>	30	<i>not null</i>	<i>Guardian Name</i>
<i>PIN</i>	<i>Date</i>		<i>not null</i>	
<i>Applicant_photo</i>	<i>blob</i>	7	<i>not null</i>	<i>Applicant Profile Image</i>
<i>Applicant_signature</i>	<i>blob</i>	15	<i>not null</i>	<i>Applicant Signature</i>
<i>Tenth_document</i>	<i>blob</i>	11	<i>not null</i>	<i>10th Class Mark Sheet</i>
<i>Twelve_document</i>	<i>blob</i>	15	<i>not null</i>	<i>12th Class Mark Sheet</i>
<i>Other_doc1</i>	<i>blob</i>	10	<i>null</i>	<i>Other documents</i>
<i>Other_doc2</i>	<i>blob</i>	30	<i>null</i>	<i>Other document</i>

details_on_enrollement			
Attributes	Data Type	Size	Constraints
<i>S_enrollment</i>	<i>varchar2</i>	20	<i>PK</i>
<i>s_control_no</i>	<i>varchar2</i>	20	<i>not null</i>
<i>password</i>	<i>varchar2</i>	35	<i>not null</i>
<i>Program</i>	<i>varchar2</i>	40	<i>not null</i>
<i>Semester</i>	<i>varchar2</i>	60	<i>not null</i>

BCA			
Attributes	Data Type	Size	Constraints
<i>EnrollementNo</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Program</i>	<i>varchar2</i>	20	<i>not null</i>
<i>Semester</i>	<i>number</i>	1	<i>not null</i>
<i>Assign_date</i>	<i>Date</i>		<i>Not_Null</i>

CIT			
Attributes	Data Type	Size	Constraints
<i>EnrollementNo</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Program</i>	<i>varchar2</i>	20	<i>not null</i>
<i>Semester</i>	<i>number</i>	1	<i>not null</i>
<i>Assign_date</i>	<i>Date</i>		<i>Not_Null</i>

MCA			
Attributes	Data Type	Size	Constraints
<i>EnrollementNo</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Program</i>	<i>varchar2</i>	20	<i>not null</i>
<i>Semester</i>	<i>number</i>	1	<i>not null</i>
<i>Assign_date</i>	<i>Date</i>		<i>Not_Null</i>

Admission_Approved

Attributes	Data Type	Size	Constraints	Description
Control_Number	varchar2	30	fK	
Full_name	varchar2	40	not null	
Grelation	varchar2	10	not null	Guardian Relation
Gname	varchar2	30	not null	Guardian Name
Date_of_birth	Date		not null	
Gender	varchar2	7	not null	
Nationality	varchar2	15	not null	
Religion	varchar2	11	not null	
Adhar_no	number	15	not null	
Mobile_no	number	10	not null	
Enrolling_program	varchar2	30	not null	Applicant applying for which Program
Medium	varchar2	10	not null	
S_ques	varchar2	3	not null	Are you already student of our Institute ?(yes/no)
Other_program	varchar2	25	null	if already student than Program name
Other_enroll_No	varchar2	26	null	If already student than enroll_no
Prev_qualification	varchar2	30	not null	Previous Qualification
Prev_main_paper	varchar2	20	not null	Main Paper (about previous qualification)
Prev_YOP	varchar2	5	not null	Year of Passing
Prev_division	varchar2	7	not null	Division
Prev_percentage	varchar2	3	not null	Percentage
Prev_board	varchar2	40	not null	From which board applicant passed
Address_line1	varchar2	40	not null	
Address_line2	varchar2	40	null	
City	varchar2	40	not null	not null

Continue

<i>Country</i>	<i>varchar2</i>	40	<i>null</i>	<i>By default India</i>
<i>State</i>	<i>varchar2</i>	10	<i>not null</i>	<i>Guardian Relation</i>
<i>District</i>	<i>varchar2</i>	30	<i>not null</i>	<i>Guardian Name</i>
<i>PIN</i>	<i>Date</i>		<i>not null</i>	
<i>Student_photo</i>	<i>blob</i>	7	<i>not null</i>	<i>Student Profile Image</i>
<i>Student_signature</i>	<i>blob</i>	15	<i>not null</i>	<i>Student Signature</i>
<i>Tenth_document</i>	<i>blob</i>	11	<i>not null</i>	<i>10th Class Mark Sheet</i>
<i>Twelve_document</i>	<i>blob</i>	15	<i>not null</i>	<i>12th Class Mark Sheet</i>
<i>Other_doc1</i>	<i>blob</i>	10	<i>null</i>	<i>Other documents</i>
<i>Other_doc2</i>	<i>blob</i>	30	<i>null</i>	<i>Other document</i>
<i>Enrollement_No</i>	<i>varchar2</i>	30	<i>Pk</i>	

MCQ_TEST			
Attributes	Data Type	Size	Constraints
<i>M_test_id</i>	<i>varchar2</i>	30	<i>PK</i>
<i>M_test_Name</i>	<i>Varchar2</i>	30	<i>not null</i>
<i>Tdate</i>	<i>Date</i>		<i>not null</i>

QUESTIONS			
Attributes	Data Type	Size	Constraints
<i>Q_No</i>	<i>varchar2</i>	30	<i>PK</i>
<i>QUESTION</i>	<i>Varchar2</i>	200	<i>not null</i>
<i>OPTION1</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>OPTION2</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>OPTION3</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>OPTION4</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>ANSWER</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>MCQ_test_Id</i>	<i>Varchar2</i>	30	<i>fk</i>

MCQ_ANSWER			
Attributes	Data Type	Size	Constraints
<i>Q_NO</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Stud_answer</i>	<i>Varchar2</i>	60	<i>not null</i>
<i>Real_answer</i>	<i>varchar2</i>	60	<i>not null</i>
<i>M_test_id</i>	<i>varchar2</i>	30	<i>FK</i>

All_Courses			
Attributes	Data Type	Size	Constraints
<i>Course_id</i>	<i>varchar2</i>	20	<i>pK</i>
<i>Course_name</i>	<i>varchar2</i>	20	<i>not null</i>
<i>Program_ID</i>	<i>Number</i>	20	<i>null</i>
<i>Semester</i>	<i>Number</i>	1	<i>Null</i>

MCQ_Result			
Attributes	Data Type	Size	Constraints
<i>M_test_id</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Total_Marks</i>	<i>Number</i>	3	<i>not null</i>
<i>Total_score</i>	<i>Number</i>	3	<i>not null</i>
<i>Enroll_no</i>	<i>varchar2</i>	30	<i>FK</i>
<i>Student_name</i>	<i>Varchar2</i>	40	<i>not null</i>

BCA_Result			
Attributes	Data Type	Size	Constraints
Enrollment_No	varchar2	30	fK
MAT1	Number	3	null
ECO1	Number	3	null
COMP1	Number	3	null
CMPLAB1	Number	3	null
ENG1	Number	3	null
CPP3	Number	3	null
Ds3	Number	3	null
DBMS3	Number	3	null
SAD3	Number	3	null
SADL3	Number	3	null
DBMSL3	Number	3	null
CPPLAB3	Number	3	null
DSLAb	Number	3	null
DIS1	Number	3	null
ECO2	Number	3	null
CIANG2	Number	3	null
COA2	Number	3	Null
CSKILL2	Number	3	null
CLANGLAB2	Number	3	null
JAVA4	Number	3	null
JAVA4L	Number	3	null
ALGO4	Number	3	null
ALGO4L	Number	3	null
STAT4	Number	3	null
STAT4L	Number	3	null
NET4	Number	3	null
NET4L	Number	3	null

CIT_Result			
Attributes	Data Type	Size	Constraints
Enrollment_No	varchar2	30	fK
CIT01	Number	3	null
CIT02	Number	3	null
CIT03	Number	3	null
CIT04	Number	3	null

Courses_details			
Attributes	Data Type	Size	Constraints
Course_id	varchar2	10	FK
Total_marks	varchar2	20	not null
Passing_marks	Number	10	null

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<i>SOE5</i>	Number	3	<i>null</i>
<i>SOE5L</i>	Number	3	<i>null</i>
<i>WPROG5</i>	Number	3	<i>null</i>
<i>WPROG5L</i>	Number	3	<i>null</i>
<i>NUM5</i>	Number	3	<i>null</i>
<i>NUM5L</i>	Number	3	<i>null</i>
<i>NET5</i>	Number	3	<i>null</i>
<i>NET5L</i>	Number	3	<i>null</i>
<i>BSC5</i>	Number	3	<i>null</i>
<i>os6</i>	Number	3	<i>null</i>
<i>Ecom</i>	Number	3	<i>null</i>
<i>Project</i>	Number	3	<i>null</i>
<i>Semester</i>	Number	1	<i>Not null</i>

MCA_Result			
Attributes	Data Type	Size	Constraints
<i>Enrollment_No</i>	varchar2	30	fK
<i>PSAP1</i>	Number	3	<i>null</i>
<i>COALP1</i>	Number	3	<i>null</i>
<i>DISMAT1</i>	Number	3	<i>null</i>
<i>SAD1</i>	Number	3	<i>null</i>
<i>CSKILL1</i>	Number	3	<i>null</i>
<i>ICWD1</i>	Number	3	<i>null</i>
<i>CCOA1L</i>	Number	3	<i>null</i>
<i>DFS2</i>	Number	3	<i>null</i>
<i>Os2</i>	Number	3	<i>null</i>
<i>DBMS2</i>	Number	3	<i>null</i>
<i>OOTJP2</i>	Number	3	<i>null</i>
<i>CSKILL1</i>	Number	3	<i>null</i>
<i>ALAB</i>	Number	3	<i>null</i>
<i>DAA3</i>	Number	3	<i>null</i>
<i>OOAD3</i>	Number	3	<i>null</i>
<i>ADMAT3</i>	Number	3	<i>null</i>
<i>MSE3</i>	Number	3	<i>null</i>
<i>MLABMC3</i>	Number	3	<i>null</i>
<i>MOS4</i>	Number	3	<i>null</i>
<i>DCAN4</i>	Number	3	<i>null</i>
<i>MADBMS4</i>	Number	3	<i>null</i>
<i>MINPROJ4</i>	Number	3	<i>null</i>
<i>MUADL4</i>	Number	3	<i>null</i>
<i>AIT5</i>	Number	3	<i>null</i>
<i>CGAM5</i>	Number	3	<i>null</i>
<i>AIKM5</i>	Number	3	<i>null</i>
<i>NASC5</i>	Number	3	<i>null</i>
<i>MPCOM5</i>	Number	3	<i>null</i>
<i>MCAPROJ6</i>	Number	3	<i>null</i>
<i>Semester</i>	number	1	<i>Not null</i>

Re_registration_report			
Attributes	Data Type	Size	Constraints
Enrollment_No	varchar2	30	fK
prog_id	varchar2	30	fk
Semester	number	1	not null
rdate	date		non null

Time_Table			
Attributes	Data Type	Size	Constraints
prog_id	varchar2	30	fK
Semester	number	1	null
Routine	blob		not null

Event_and_extra_curriculumal_activities			
Attributes	Data Type	Size	Constraints
Event_id	varchar2	30	Pk
Event_date	date		not null
Event_description	varchar2	900	not null

Event_Registration			
Attributes	Data Type	Size	Constraints
Event_id	varchar2	30	not null
Enrollement_no	varchar2	30	not null
Control_no	varchar2	30	not null
Topic	varchar2	100	not null

Success_story_board			
Attributes	Data Type	Size	Constraints
bord_id	varchar2	30	Pk
Student_name	varchar2	40	not null
Qualification	varchar2	40	not null
company_name	varchar2	60	not null
Post	varchar2	200	not null
Profile_pic	blob		not null

Enquiry			
Attributes	Data Type	Size	Constraints
User_name	varchar2	30	Pk
User_phone_no	number	15	null
User_email_id	varchar2	90	not null
Uerr_query	varchar2	900	not null

Notice_board			
Attributes	Data Type	Size	Constraints
Notice_id	varchar2	30	Pk
Notice_desc	number	900	null

Student_doubts			
Attributes	Data Type	Size	Constraints
Teacher_id	varchar2	30	fK
Student_enroll	number	1	not null
massage	varchar2	3000	not null
Que_time	date		not null

replay_from_teacher			
Attributes	Data Type	Size	Constraints
Teacher_id	varchar2	30	fK
Student_enroll	number	1	not null
massage	varchar2	3000	not null
Que_time	date		not null
replay_time	date		not null
replay_message	varchar2		not null

10.Processing logic of Each Module

The Processing logic of the modules are as follows :

1.) Super Admin / Sub Admin Module

This Module is used to add/remove sub Admin by super Admin on the basis of different privilege (like Admission controller Admin , Event Management Admin , Time-table managing Admin etc..) It can be also used for adding or removing teachers and DEO .

Using this module Super Admin can add/or remove different courses and can view teachers ,students and DEO details.

This Module also help in getting different types of reports like Re-registration report ,approved admission report , TEE report , Result reports for SuperAdmin.

So this module control overall activity of this system.

2.) DEO Module

This is a module for Data Entry Operator to upload TEE result of students .

3.) Admission Module

This module is used for Applicant who want to get Fresh Admission in this institute .

This module have two sub module :-

(I) Registration Module

First of all applicant have to register himself for getting admission .Once the applicant have successfully register he/she gets a unique CONTROL NO . This Control number and password will be send on a E-mail id provided by applicant at registration time

(II) Login Module .

For login purpose Student have to enter This Control No. and a password which he provided at registration time .If and only if applicant is authenticated than he/she will be redirected to admission form page . Every filed of this admission form will be strictly validated so that applicant should not provide wrong information .When the applicant will successfully submit admission form Admission Controller Admin can view all the details of applicant and if all the information and document is valid than he/she can approve the admission request of the applicant otherwise if admin find any type of invalid information or documents than he/she can disapprove the admission request of the applicant in that case he/she must have to provide a reason for disapproving . The reason along with re-correctness link will be send via email on the applicant Email id .

4.) Re-registration Module

Using this module student can re-register them self in next semester .

The Re-registration portal can be opened/removed by super Admin.

when the student gets login than only he/she can see Re-registration portal.

This module also generate Re-registration report of semesters of different programs for Super Admin.

5.) Term-End-Examination (TEE) Module

Using this module student can apply for Term-End-Examination .The Term-End-Examination portal can be open/removed by super admin .when the student gets login than only he/she can see TEE form portal . When the student navigate to this portal first of all list of all courses of that semester along with total price is shown if student continue than only he/she can apply for term end examination . This module also generate a TEE report for the super admin .

6.) Result Management Module

This module is used to manage over all result related work like generating TEE result , grade card and final marks sheet .

This module have mainly 3 sub Modules as follows :-

(I) TEE result

when student login he/she has given options to view /download TEE result .

when student click on the given button he/she will be redirected to TEE result processing page where based on student enrollment number his/her TEE result record from the database is fetched and shown to student .

(II) Grade card

when student login he/she has given options to view /download his/her grade card .

when student click on the given button he/she will be redirected to grade card processing page where based on student enrollment number his/her all previous semesters TEE result record will be fetched from the database combined as a whole and than shown to students .

(III) Final marks sheet

when student login he/she has given options to view /download his/her Final marks sheet .

when student click on the given button he/she will be redirected to final marks sheet processing page .

The main business logic of this page is to check wether student have passed all the courses of his/her program if so than generate his/her final marks sheet other wise give message as "you have not completed your all courses " .

7.) MCQ based test Module

This module is used for both teacher and student , teachers can conduct online test and student can give online test .

mainly this module is divided into two sub module as follows :-

(I) creating test by teachers

when teacher login to his/her profile there is option in navigation bar as MCQ test . when he/she click on this option he/she will be redirected to this module where again he/she has shown several options in Navigation bar as follows:

- Create test/delete test**

This page is used to create a new test of any subjects or delete existing tests .

- Set Questions**

From this page teachers can add new questions to already existing tests .

- Delete Questions**

from this page teacher s can delete questions from his/her tests.

- view report of test result**

This page is used to generate result reports of tests.

(ii) giving test by students

when student login to his/her profile there is option in navigation bar as MCQ test . when he/she click on this option he/she will be redirected to this module where again he/she has shown several options in Navigation bar as follows:

- Give MCQ test**

Here student will be shown a list of all tests when student selects any tests than he/she will be redirected to another page where all available questions of that particular test will be shown along with four options and a count down timer will start .now student have to choose any one option of questions and submit the test before the count down timer over.

- View MCQ test result**

From this page student can see his/her Mcq test result in which he has appeared .

8.) Student Doubts teacher replay module :

This module is used for both teachers and students . using this module students can ask any doubts from the teacher of that subject and teachers can view students doubts and can replay on student doubts .

This module is divided into Three sub module :-

(I) Students Doubts

when student login to his/her profile there is option in navigation bar as **Ask Doubts**. when he/she click

on this option he/she will be redirected to another page where a list of all teachers will be shown when student selects any teacher than again he/she will be redirected to another page where student will write his/her doubts and submit it .

(ii) view replay

Using this students can view the replay from teachers along with his/her questions(doubts) ;

(iii) give replay

This module is used by teachers to give replay on students doubts .

when teacher login to his/her profile there is option in navigation bar as **Ask Doubts**. when he/she click on this option he/she will be redirected to another page where a list of all students doubts for that particular teacher will be open and every doubts will be internally associated with replay buttons . when teacher selects any doubts than he/she can easily replay , after the replay that particular doubt will be removed from the list.

9.) Course Management Module

This module is used by superAdmin to add , remove , update , or delete any type of course details . From this module admin can also view all the courses of different programs and can also take a necessary action with course details .

10.) Event & Extra-curriculum activities management Module

This module is used by both sub admin and students . sub Admin can post Events and Extra-curriculum activities details and students can registers for that events and Extra-curriculum activities .

This module is divided into Two sub module :-

(I) Posting Events

When sub admin Login to his profile he/she she will show some options as follows

- **Add Event**

This option will be used by admin to add new Event with details like Event name , Event date ,Event description .

- **Delete Event**

This option is used by admin to delete any existing Events from the Event list .

- **view Events**

This option is used by admin to view all the existing events .

- **Events Registration Reports**

This page is used to generate Events registration reports . Admin have to only select the events and he will get the registration report (student details) about particular event .

(ii) Participating in Events

From this page student can see all the existing events details and can register them self for those events

11.) Time-table Module

This module is used by both sub admin as well as Students . after the login Sub admin can upload the time table of different semester of different programs . and students can view those time tables .

12) Alumni registration :-

This module is used by both former students and Admin . using this module former student can register them self and admin can get report of alumni registration details .

13.) Enquiry :-

Using this module any type of online user can ask query . this module is divided into two sub module :

(I) asking query

here user have to fill a Enquiry form in which he/she has to provide his/her Name , query ,phone no. and a valid Email id . when he submit the form his Enquiry record will be save into the database .

(ii) replaying query

this sub module is used for Enquiry Admin to view the user query and replay to them .

when Enquiry Admin login he/she will view the list of all queries along with user name and mobile number .when Admin selects any query he/she will be redirected to another page where he can write the replay and when click on the send button the replay will be sent to the user Email-id provided by user at enquiry time .

11.Types of testing

Introduction:-

Testing is a process of executing a program with the aim of finding error. To make our software perform well it should be error free . If testing is done successfully it will remove all the errors from the software.

Principles of Testing:-

- (i) All the test should meet the customer requirements
- (ii) To make our software testing should be performed by third party
- (iii) Exhaustive testing is not possible .As we need the optimal amount of testing based on the risk assessment of the application.
- (iv) All the test to be conducted should be planned before implementing it
- (vi) Start testing with small parts and extend it to large parts.

Levels of testing of Testing:-

1. Unit Testing

It focuses on smallest unit of software design. In this we test an individual unit or group of inter related units. It is often done by programmer by using sample input and observing its corresponding outputs. it is a level of software testing where individual units/ components of a software are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of any software. in object-oriented programming, the smallest unit is a method, which may belong to a base/ super class, abstract class or derived/ child class. (Some treat a module of an application as a unit. This is to be discouraged as there will probably be many individual units within that module.

2. Integration Testing

The objective is to take unit tested components and build a program structure that has been dictated by design .Integration testing is testing in which a group of components are combined to produce output .

Integration testing is offour types: (i) Top down (ii) Bottom up (iii) Sandwich (iv) Big-Bang

3.System Testing

System testing is testing conducted on a complete integrated system to evaluate the system's System testing takes, as its input, all of the integrated components that have passed integration testing. System testing is performed on the entire system in the context of either functional requirement specifications (FRS) or system requirement specification (SRS), or both. System testing tests not only the design, but also the behaviour and even the believed expectations of the customer. It is also intended to test up to and beyond the bounds defined in the software or hardware requirements specifications .

4.Acceptance testing

it is a Formal testing with respect to user needs, requirements, and business processes conducted to determine whether or not a system satisfies the acceptance criteria and to enable the user, customers or other authorized entity to determine whether or not to accept the system .

12.List of Reports

- Admission request report
- Admission Approved report
- Re-registration report
- TEE report
- TEE result report
- MCQ test result report
- Course details report
- Event registration report
- Alumni registration report
- Enquiry report

13. Limitation and future Enhancement

Future Enhancement

There are many future scope is mentioned below:

- in future our system can include online Accounting System , System Good Backup and restore facility .
- System is much flexible so in future it can increase easily and new modules can be added easily .
- in future pay staff salary as well as pay online fees can be easily added .
- in this age of fast growing technology and implementation of the latest technology there is always scope for further Improvement on the basis of users requirement and this system have enough potential to full-fill users requirements I near future.
- in future reports can be also customized according to need .
-

Limitation

These are some limitations of this system :-

- This system require knowledgeable person to use this system .
- This system does not cover pay staff salary .
- This system does not cover accounting of this institution .
- This system does not cover library management of this Institution .
- currently payment gateways is not integrated with this application .

Conclusions

By use of java technology this web application is very robust and secure and by using some front-end technology like CSS ,bootstrap , javascript & jquery user interface of this application is very attractive and user friendly .all the business logics is in JSP (java server pages) reside at middle layer. And these layers is interact with third layer of database, which will be Oracle database .

These are some goals which are achieved by this web application :-

- increase accuracy and efficiency
- Cost cutting
- Proper utilization of resources
- Operation efficiency
- Portable and flexible for further enhancement
- Robust and secure

14.Bibliography

website

- <https://www.w3schools.com>

Books

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- Java Programming with oracle JDBC (Book by Donald Bales)