JADAVPUR UNIVERSITY

Project report on online examination system

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Project submitted in partial fulfilment for the degree of Master of Computer Application

in the
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FACULTY OF ENGINEERING AND TECHNOLOGY

JADAVPUR UNIVERSITY

To Whom It May Concern

I hereby recommend that the project entitled "**Online Examination System**" has been carried out by **SK Anarul** (Reg. No.: 149892 of 2019-20, Class Roll No.: 001910503032) under my guidance and supervision and be accepted in partial fulfilment of the requirement for the degree of **MASTER of COMPUTER APPLICATION** in **DEPARTMENT of COMPUTER SCIENCE and ENGINEERING, JADAVPUR UNIVERSITY** during the academic year 2021-2022

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CERTIFICATE OF APPROVAL

This is to certify that the project entitled "**Online Examination System**" is a bonafide record of work carried out by **SK ANARUL** in fulfilment of the requirements for the award of the degree of ***Master of Computer Application*** in the ***Department of Computer Science and Engineering***, ***Jadavpur University***. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the thesis only for the purpose for which it has been submitted.

Signature of Examiner 1
Date:

Signature of Examiner 2
Date:

ACKNOWLEDGEMENT

With my most sincere and gratitude, I would like to thank **Prof. Jamuna Kanta** Sing, Department of Computer Science & Engineering, my supervisor, for his overwhelming support throughout the duration of the project. His motivation always gave me the required inputs and momentum to continue with my work, without which the project work would not have taken its current shape. His valuable suggestion and numerous discussions have always inspired new ways of thinking. I feel deeply honoured that I got this opportunity to work under him.

I would like to express my sincere thanks to all my teachers for providing sound knowledge base and cooperation.

I would like to thank all the faculty members of the Department of Computer Science & Engineering of Jadavpur University for their continuous support.

Last, but not the least, I would like to thank my batch mates for staying by side when I need them.

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INTRODUCTION

We have seen a big change in our education system in the last few months during this pandemic situation. With the use of the internet and many latest technologies, students can now access different online learning options. This has also resulted in giving mock tests at home via the internet. They don't have to be physically present in the classrooms to receive quality education.

So, in this new area of online education, educational institutes and corporate companies who conduct exams have started utilizing exceptional online exam software like Online Examination System to ensure safety and quality in each part of the examination process.

Online Examination System is a technology-driven way to simplify examination activities like defining exam patterns with question banks, defining exam timer, objective/ subjective question sections, conducting exams using the computer or mobile devices in a paperless manner.

Online Examination System is a cost-effective, scalable way to convert traditional pen and paper-based exams to online and paperless mode.

Candidates can appear for the exam using any desktop, laptop, or mobile device with a browser. Exam results can be generated instantly for the objective type of questions.

It can simplify overall examination management and result in generation activity.

ADVANTAGES

There are so many advantages in online examination system these are.

1.In the online examination system, the student does not have to go to any classroom. He can take the exam from home, so his time is not wasted.

2. A student can verify his/her skill with mock test.

3. If there is good internet connectivity then student is able to give exam from any place.

4.The online examination system has saved a lot of time for the student as they does not need to go to any class

5.Many IT companies can take exams of many students at a same time.

DISADVANTAGES

1. Some people are burdened with stress with the onset of Examinations. The Stress of Performance creates Pressure for many.

2. Exhaustion, stress and other problems related to examinations create fear and hatred which in turn leads to loss of interest and faith in studies.

3. Many students are deprived of such facilities due to poor internet connectivity in village area.

OBJECTIVE

The purpose of the online examination system is to test the subject knowledge of the students. Such a system eliminates logistical hassles and drawbacks in the traditional mode of the pen-and-paper examination.

1.Conduct exams effortless: Computer-based tests as a method of conducting an assessment enable users to manage an exam easily. The functionalities of an exam software such as user-friendly dashboard, multiple languages, support for multiple question types and formats, detailed reporting, automatic instant results help in smooth conduction.

2. Candidates can take exam at any time in online examination system. Students spend a lot of time in preparation for this.

3. In the online examination system, only those students who will be given exam access by the teachers can take the exam.

4. A teacher can easily manage many students, A student cannot cheat in Online Examination System

MODULE DESCRIPTION

Online examination system is an web based application to conduct examination online. It has modules like course management, question bank, examination, giving examination, calculate results, view results, store test data, generates score cards with print and mail facility. Administrator module to manage examination, questions and its options.

Modules:

- Admin
- End User
- Guest users
- Teacher
- Institution Admin
- admin dashboard
- admin can create course
- manage course
- view all user
- manage examination
- manage examinee
- manage all guest users
- change password
- Manages fees payment
- manage issues and feedbacks

End User

- User can register yourself through admin approval
- user can login with valid email and password
- Forgot password (user can remover own password)
- Register yourself under a course
- Take exams with secure environment
- Check score card and print scorecard
- Pay fees
- To do list
- Contact mentor directly
- view enquiry ticket (Regarding complaint) Change password yourself

GUEST USERS-

- Teachers Manages all examinee access
- Authority to add or delete examinee user
- Can change examinee details
- Add and manage examination
- Conduct examination
- Add question set
- Change question if requires
- View all score cards and print as pdf
- visit the website
- guest user can enquiry to admin directly
- Institution
- View all upcoming examination
- Generates notice to all user
- Verify fee structure
- Manages examination and user

TABLE DESCRIPTION

We have discussed all the database tables and records used for this project implementation.

TABLE NAME: REGISTRATION

Here, I used a registration table and stored registration number as a primary key (not null).

FIELD NAME	DATA TYPE	KEY
REG.NO	NUMBER	PRIMARY KEY

TABLE NAME: REGISTRATION

Every field denote as a mandatary field.

FIELD NAME	DATA TYPE	KEY
NAME	VARCHAR	NOT NULL
DOB	NUMBER	NOT NULL
GENDAR	VARCHAR	NOT NULL
EMAIL ID	VARCHAR 2(25)	PRIMARY KEY
PH NO	NUMBER (10)	NOT NULL
ADDRESS	VARCHAR 2(20)	NOT NULL
PASSWORD	VARCHAR 2(20)	NOT NULL

TABLE NAME: LOGIN

Here, I have created another table name(login) here login id denotes as a mandatary field (Must be required) and password (Not null). After registering, a student can able to login this system using valid user id and password.

FIELD NAME	DATA TYPE	KEY
LOGIN ID	VARCHAR 2(10)	PRIMARY KEY
PASSWORD	VARCHAR 2(10)	NOT NULL

TABLE NAME: STUDENT

Here, I have created a student table for store all information of student.

FIELD NAME	DATA TYPE	KEY
STUDENT ID	VARCHAR 2(10)	PRIMARY KEY
STUDENT NAME	VARCHAR 2(25)	NOT NULL
STUDENT EMAIL ID	VARCHAR 2(25)	NOTNULL
DOB	NUMBER	NOT NULL
PH NO	NUMBER (10)	NOT NULL
ADDRESS	VARCHAR 2(20)	NOT NULL
PASSWORD	VARCHAR 2(20)	NOT NULL

TABLE NAME: ADMIN

Here, I have created an Admin database table and record (Admin id & password). Admin can able to login system using valid id and password. And overall system managed by admin.

FIELD NAME	DATA TYPE	KEY
ADMIN ID	VARCHAR 2(20)	PRIMARY KEY
ADMIN PASSWORD	VARCHAR 2(20)	NOT NULL

TABLE NAME: SUBJECT

Here, I have Created a subject table to store all details of subject.

FIELD NAME	DATA TYPE	KEY
SUBJECT- ID	VARCHAR 2(20)	
SUBJECT-NAME	VARCHAR 2(20)	
SUBJECT-TYPE	VARCHAR 2(20)	

TABLE NAME: EXAMINATION

Here, I have Created an examination table to store all details of exam.

FIELD NAME	DATA TYPE	KEY
EXAM-ID	VARCHAR 2(10)	
EXAM-DATE	VARHAR 2(20)	
EXAM-TYPE	VARCHAR 2(20)	
EXAM-TIME	TIME	

TABLE NAME: Result

Here, I have used a table called result to show the student's id and their result in descending order.

FIELD NAME	DATA TYPE	KEY
STUDENT-ID	VARCHAR 2(20)	PRIMARY KEY
RESULT-DESC	VARCHAR 2(25)	NOT NULL

TABLE NAME: QUESTION BANK

Here, I have Created a question bank table to store all details of question.

FIELD NAME	DATA TYPE	KEY
QUES-ID	VARCHAR 2(10)	PRIMARY KEY
QUESTN	VARCHAR 2(20)	NOT NULL
SUB-ID	VARCHAR 2(20)	NOT NULL
QUES-TYPE	VARCHAR 2(20)	NOT NULL
ANS	VARCHAR	NOT NULL
OPTION	VARCHAR	NOT NULL

TABLE NAME: TEACHER

Here, I have Created a TEACHER table to store all information of teacher.

FIELD NAME	DATA TYPE	KEY
TEACHER-ID	VARCHAR 2(10)	PRIMARY KEY
TEACHER-NAME	VARCHAR 2(20)	NOT NULL
TEACHER-SUBJECT	VARCHAR	NOT NULL
TECCHER-PH NO	NUMBER	NOT NULL
TEACHER-ADDRESS	VARCHAR 2(25)	NOT NULL

TABLE NAME: PAYMENT

Here, I have Created a payment table to store all details of payment.

FIELD NAME	DATA TYPE	KEY
PAYMENT- TYPE	VARCHAR 2(25)	NOT NULL, AUTO INCREMENT

SYSTEM DESIGN

ENTITY RELATIONSHIP DIAGRAM(ERD)

An entity relationship diagram (ERD), also knowns as an entity relationship model, is a graphical representation that depicts relationship among people, object, place, concepts or events within an information technology (IT) system. An ERD use data modelling techniques that can help define business processes and serve as the foundation for a relational database.

There are five components of an entity relationship diagram. Similar components will be designated by the same shape. For example, all entities type might be enclosed in a rectangle, while all attributes are enclosed in a diamond. The components include:

- Entities: Which is object or concepts that can have data stored about them. Entities refer to tablets used in database.

- Attributes: Which are properties or characteristic of entities. An ERD attributes can be denoted as a primary key, which identifies a unique attribute, or a foreign key, which can be assigned to multiple attributes.

- Relationship: between and among those entities.

- Action: Which describe how entities share information in the database.

ERD SYMBOLS:

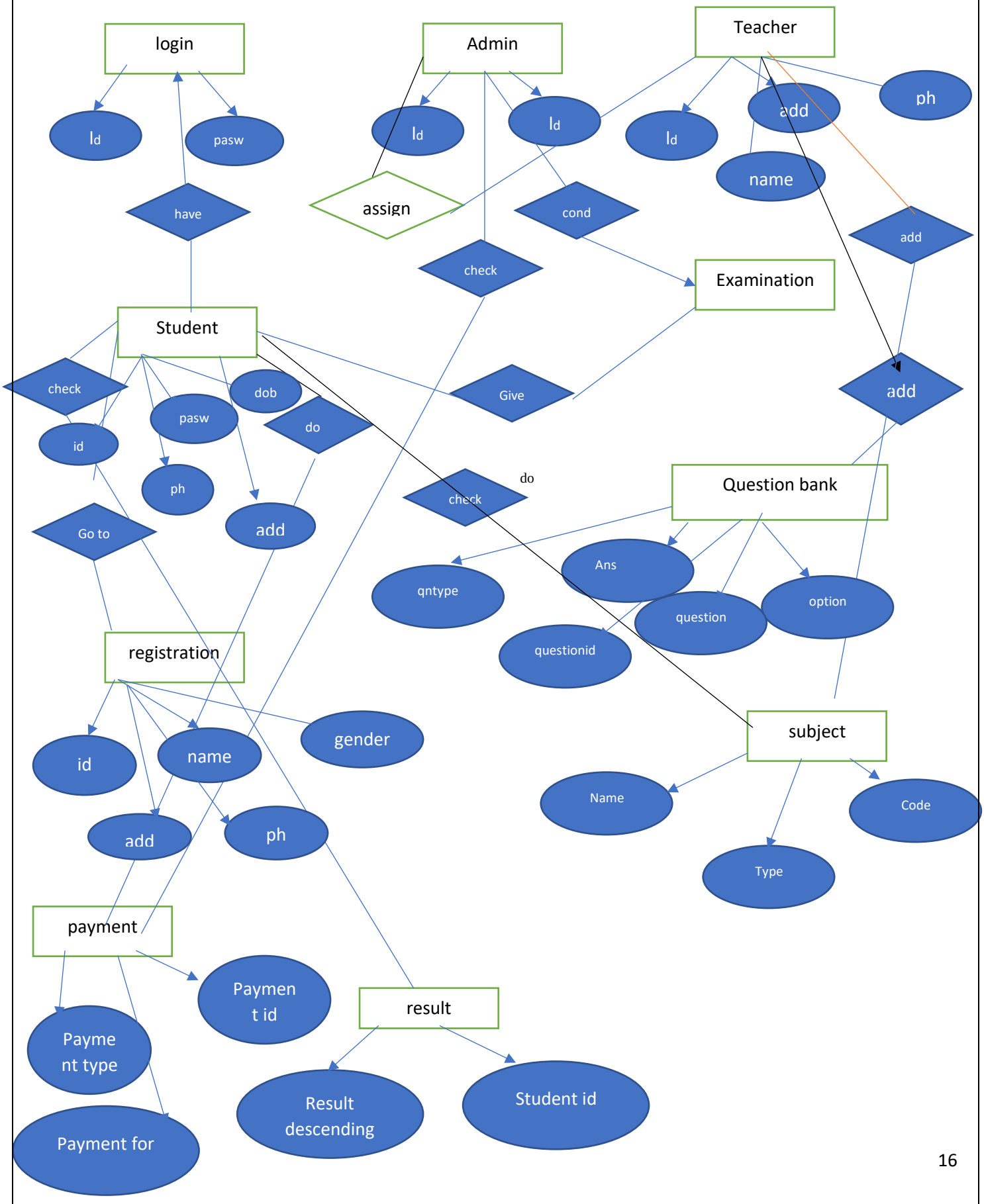
1.A rectangle defines entity.

2.An oval defines attributes.

3.A diamond defines relationship between two entities.

4.A arrow defines the direction of relation.

ENTITY RELATIONSHIP DIAGRAM(ERD)



Entity is database table. Using Entity relationship diagram (ERD) it is very easy to understand what is the relationship of one entity / table with another entity / table.

I discussed the relationship between all the entities that I have used for my project implementation (login, admin, teacher, student, examination, registration, subject, payment, result).

For example, the relationship between student and registration is that the student can register with his information, then the student can login with his user id and password. The login (entity) relationship with the student is that the user can login using the ID password. The relationship of the student with the payment (entity) is that the student can pay his fees. The relationship with the examination (entity) is that the student can give the exam. The relationship with the result (entity) is able to see the result.

Similarly, the login (entity) relationship with the admin and the teacher is that both the admin and the teacher can login the system with a valid user ID and password. The relationship with the subject (entity) is that both subjects can add, remove.

DFD (Data Flow Diagram)

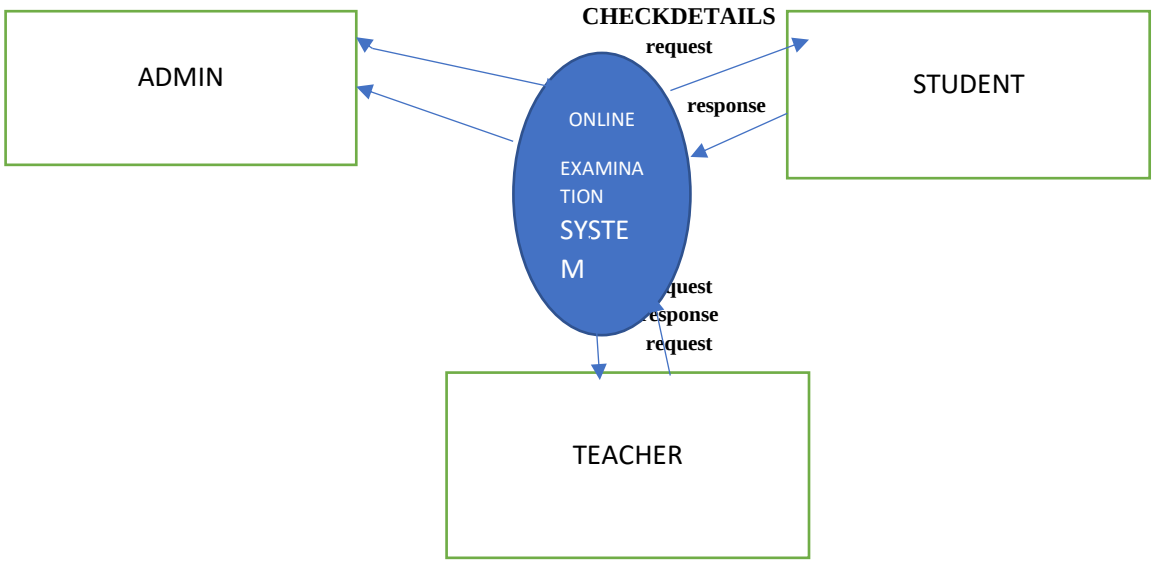
DFD— A data flow diagram (DFD) is a way of representing a flow of a data of a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data flow diagram has no control composed of the same types of symbols and the validation rules are the same for all DFDs there are three main types of data flow diagram context diagram — context diagram DFD are diagram that present an overview of the system and its interaction with the rest of "world".

It is the method of choice over technical description for three principal reasons such as "easier to understand by technical and nontechnical audiences, it can provide a high-level system overview, complete with boundaries and connection to other system and it proved a detailed representation of system components "A context level data flow diagram (DFD) provides an at a glance look at an information system and the ways it exchanges data with outside entities. They are often used for high level planning. You can use this context level DFD template to create your own A level 0 data flow diagram (DFD), also known as a context diagram, shows a data as a whole and emphasizes the way its internals with external entities' Level 0 is also called a context Diagram. It is a basic overview of the whole system or process being analysed or modelled... Level 0 DFD is broken down into more specific level 1 DFD. Level 1 DFD depicts basic modules in the system and flow of data among various modules.

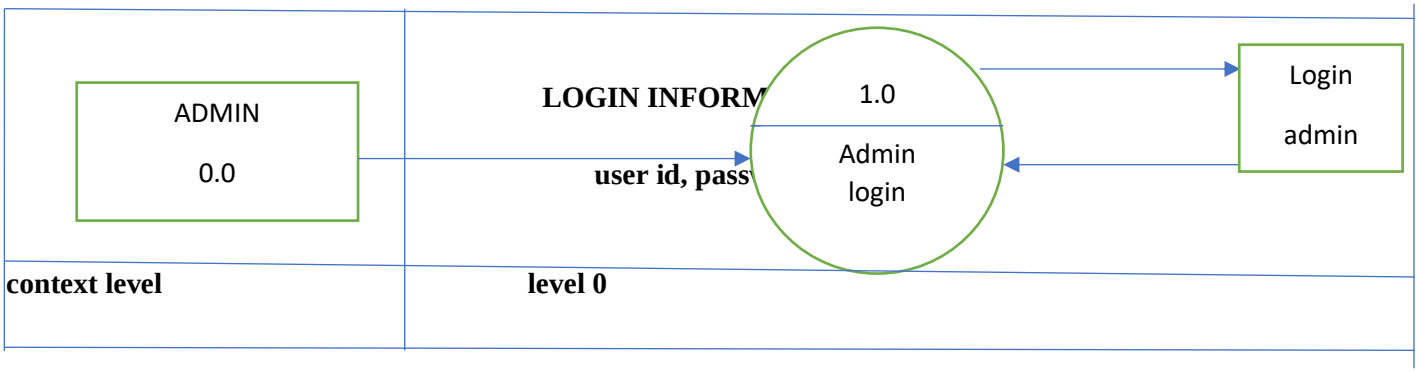
DFD SYMBOLS - Entities– Entities are source and destination of information data. Entities are represented by a rectangle with their respective names. Process– Activities and action taken on the data are represented by circle are edged rectangles Data Storage — There are two variants of data storage – it can either be represented as a rectangle with absence of both smaller sides or as an open sided rectangle with only one side missing. Data Flow – Movement of data is shown by pointed arrows. Data movement is shown from the base of arrow as its source towards head of the arrow as destination.

DFD MODEL

0 LEVEL DFD FOR ONLINE EXAMINATION

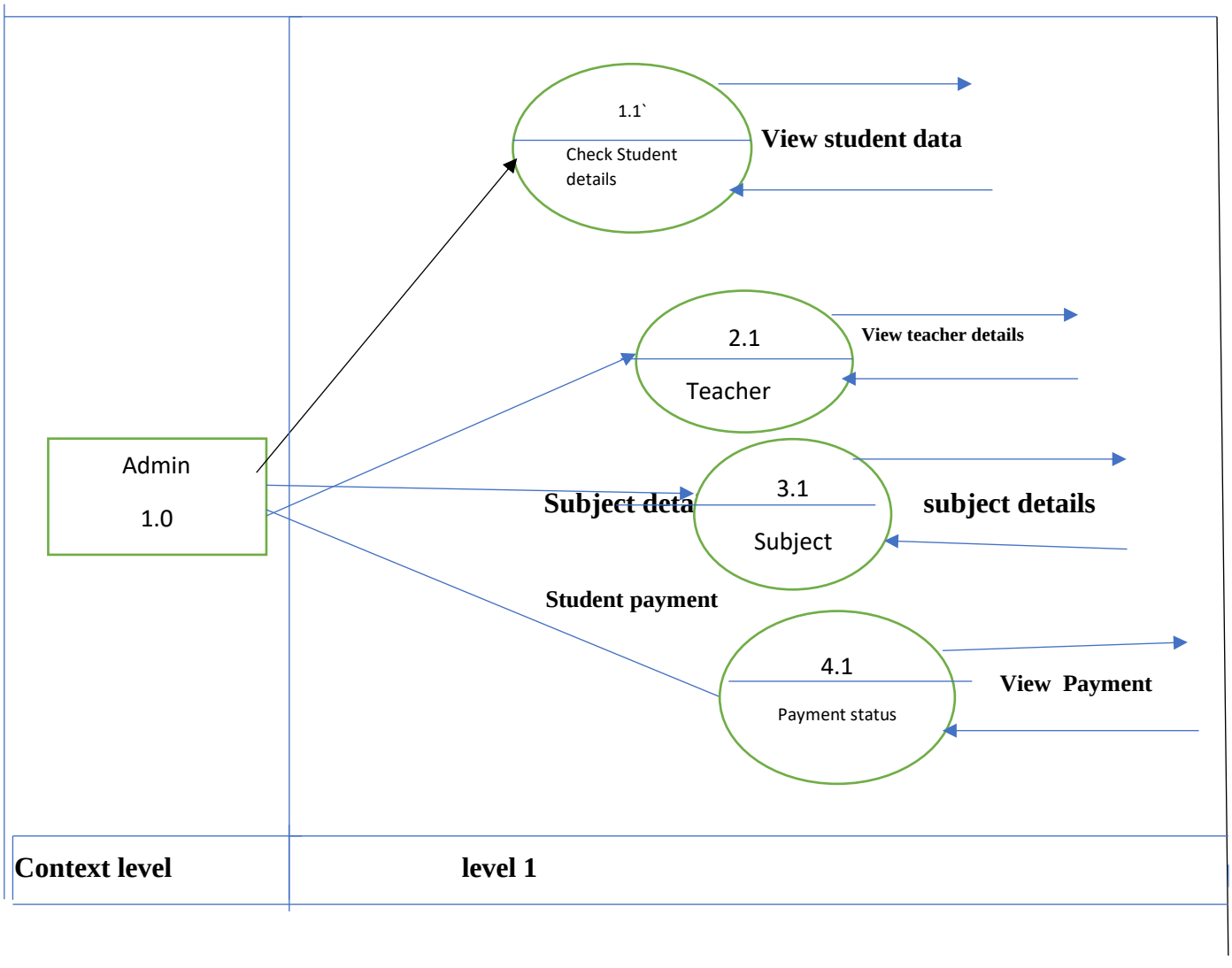


First Level DFD (Data Flow Diagram) for Admin



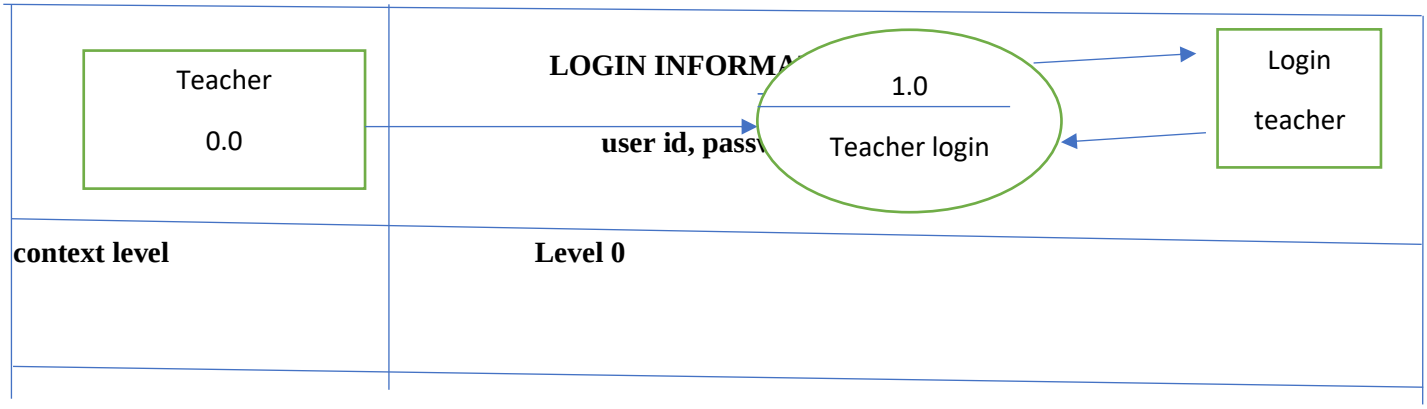
Admin can login to system by entering user ID and password as shown in Admit First Level (0 Level) DFD**.**

Second Level DFD (Data Flow Diagram) for 1.0 Admin



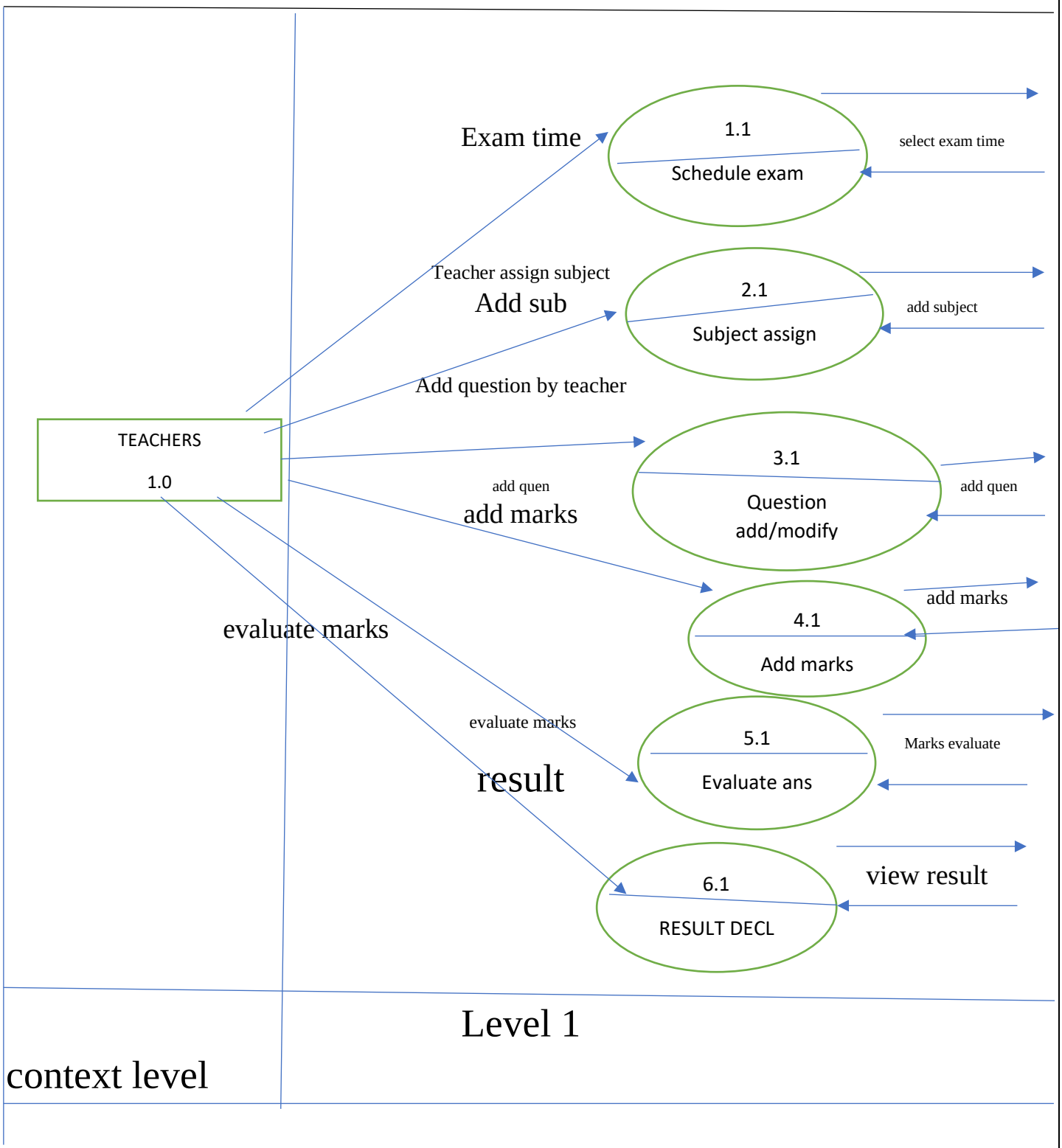
Admin Second Level (1 Level DFD) After logging in to the admin system, all the tasks to be performed are shown in DFD format. For example, after logging in, the admin can view all the information of the student, assign the teacher, upload the subject and view the payment status.

First Level DFD (Data Flow Diagram) for Teacher:



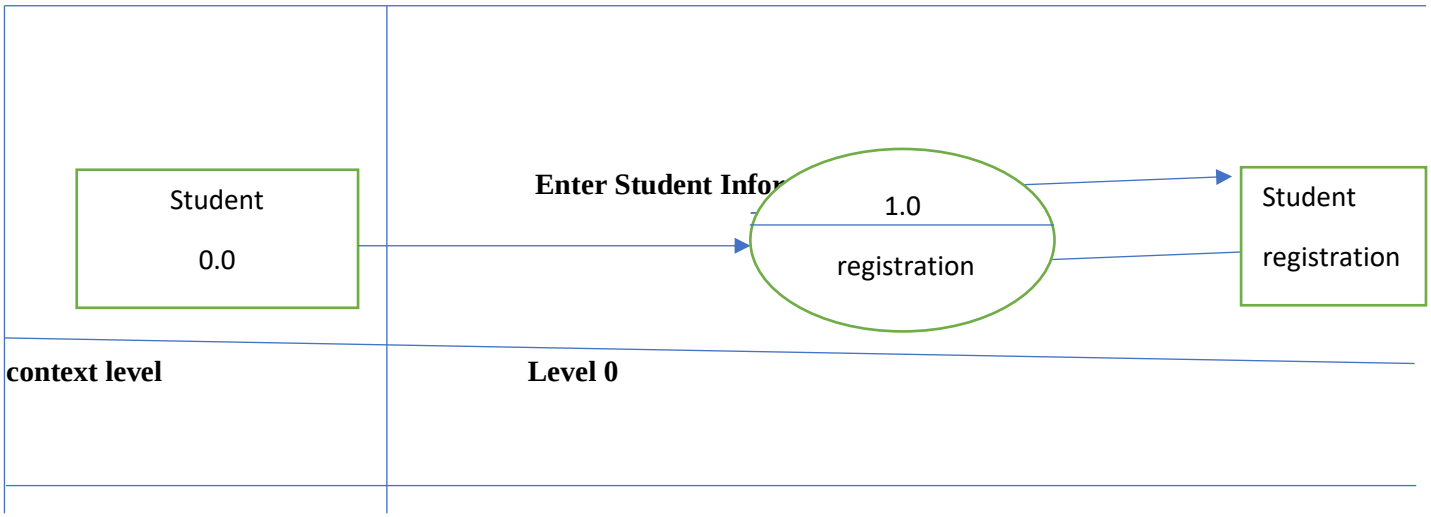
In Teacher's First Level DFD, how a teacher can login to the system by entering the user ID and password is shown in DFD format.

1 level DFD for teacher



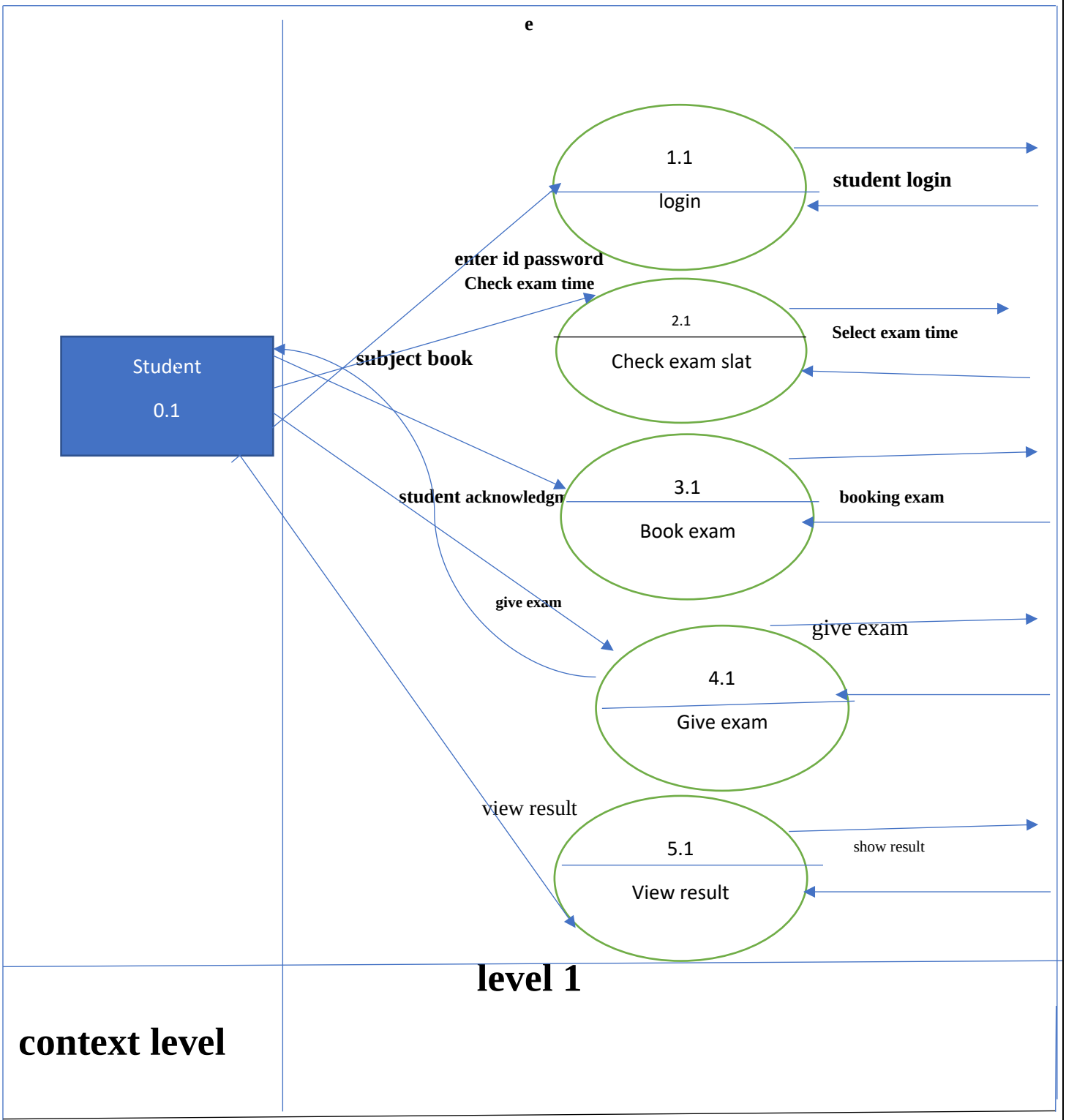
Everything that the teacher can do after logging in to the system is shown in the second level DFD of the teacher. For example, exam schedule (time) can be selected, subject can be assigned, question add, mark evaluate / per question, result can be declared.

First Level DFD (Data Flow Diagram) for Student:



Student's Zero (0) Level DFD shows how a student can register with his / her information.

1 level DFD for student:



The One level DFD of the student shows how the student can login to the system, take the exam, see the result, select the time, can choose the subject of the exam.

LIMITATION

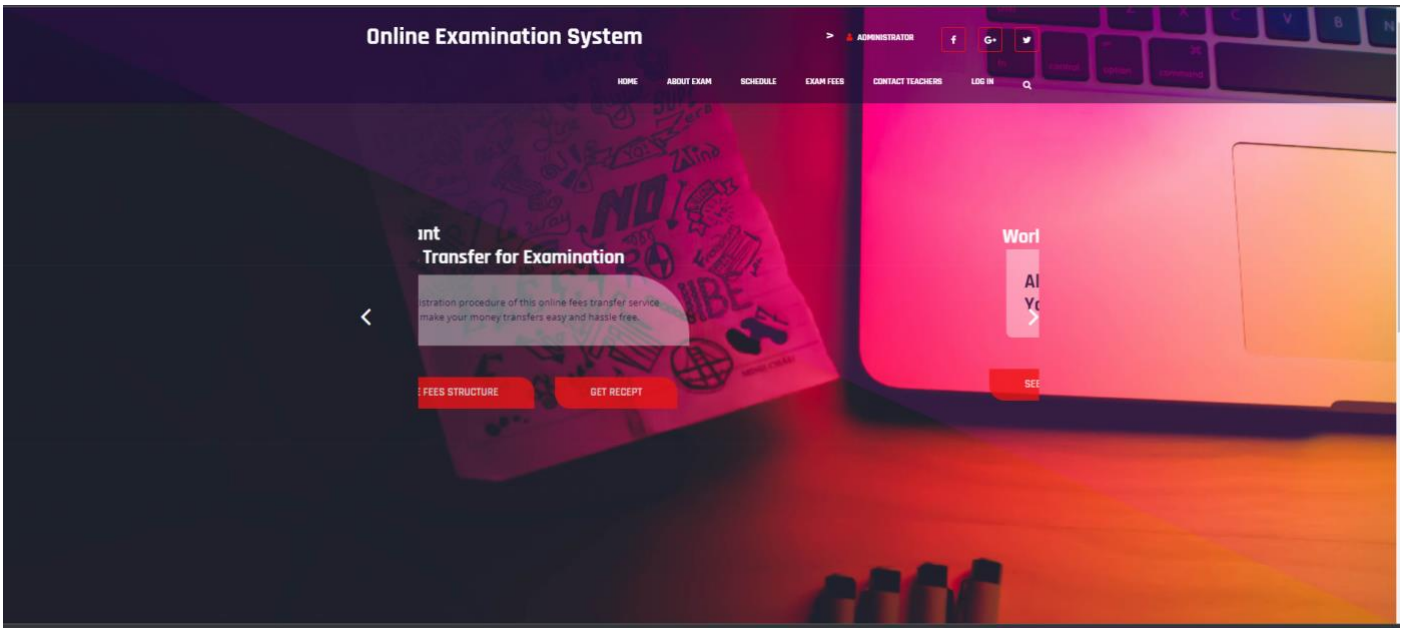
In Online examination system an examinee can answer a large number of questions but do not find the opportunity to answer from his ideas or thoughts, because there is a set time for answering each question.

Sometimes even if the examinee answers before the time cannot go to the next question.

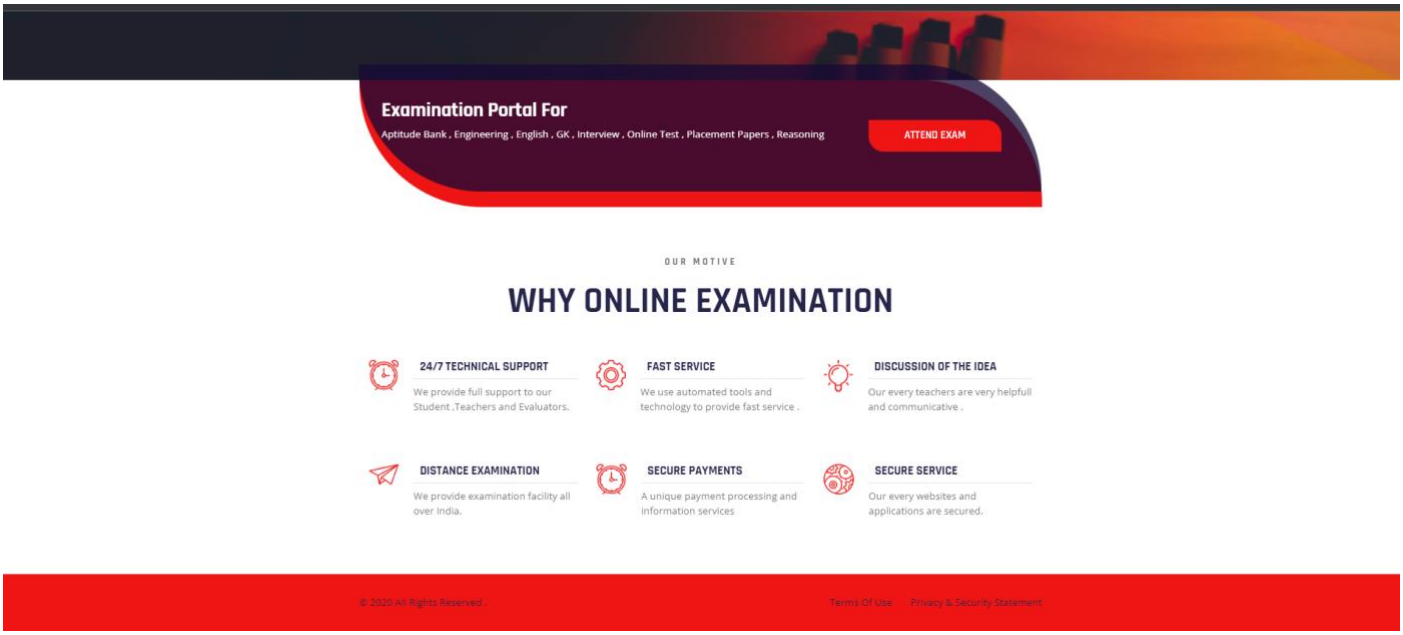
If the network got disconnected then in many cases you have to take the exam again.

EXPERIMENT RESULT

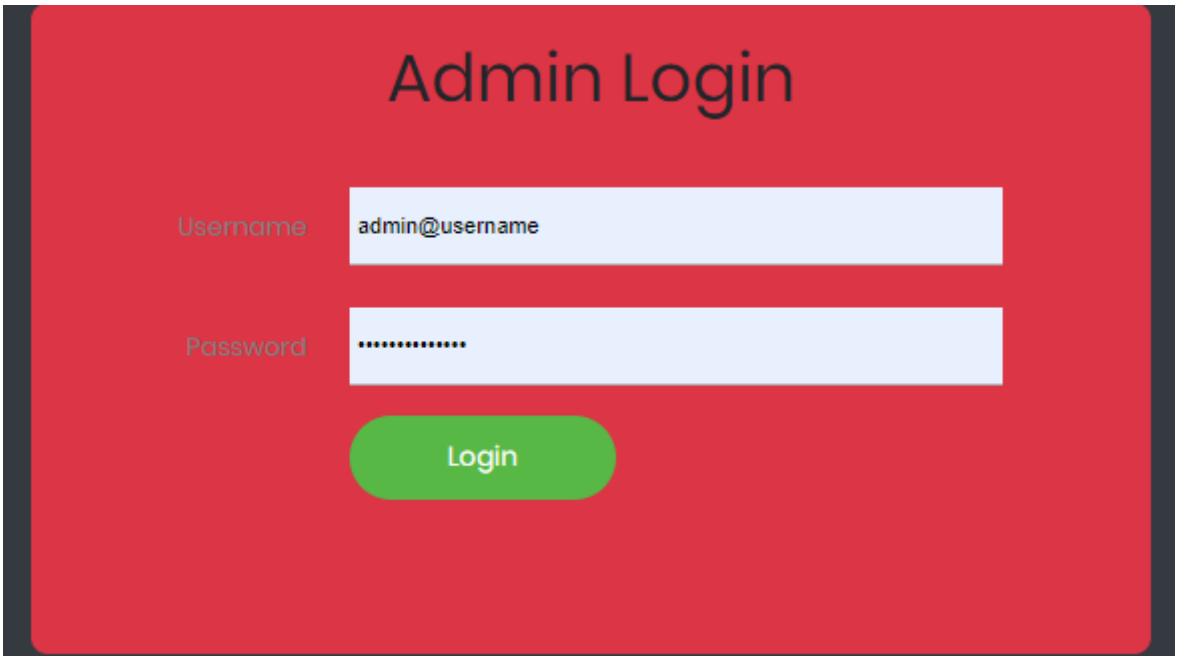
This section contains some screenshots of the component of the system



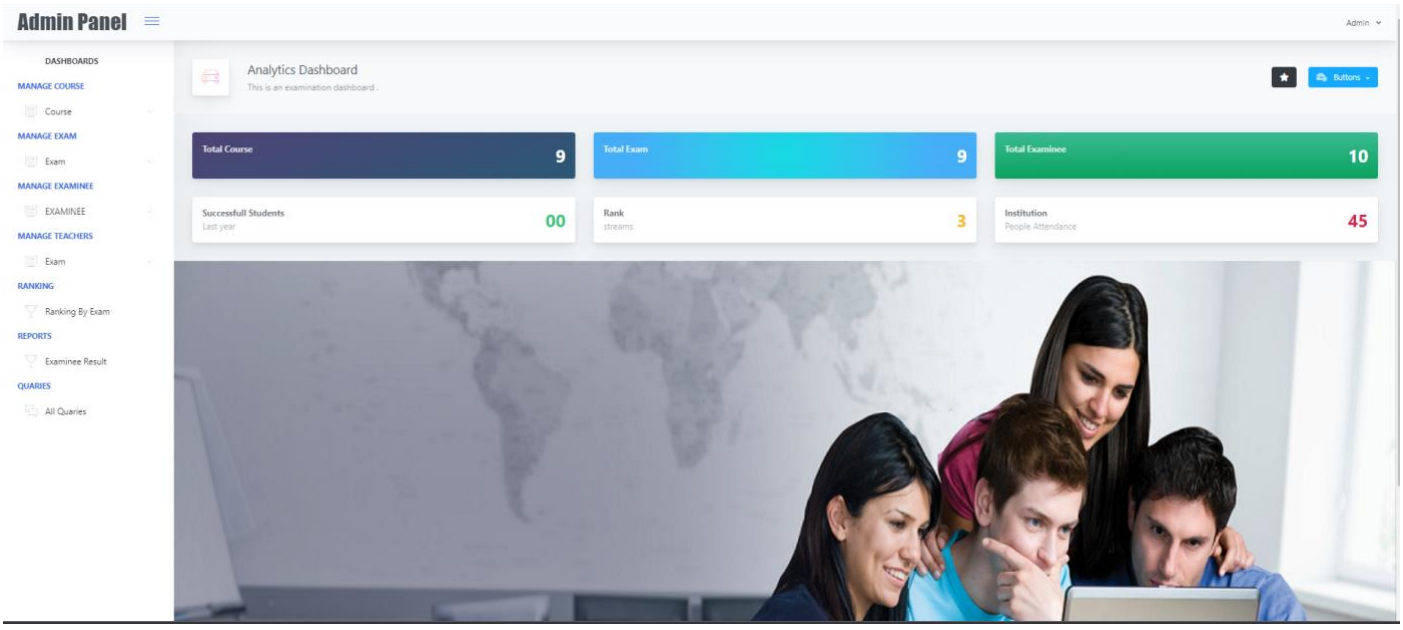
This is my system home page



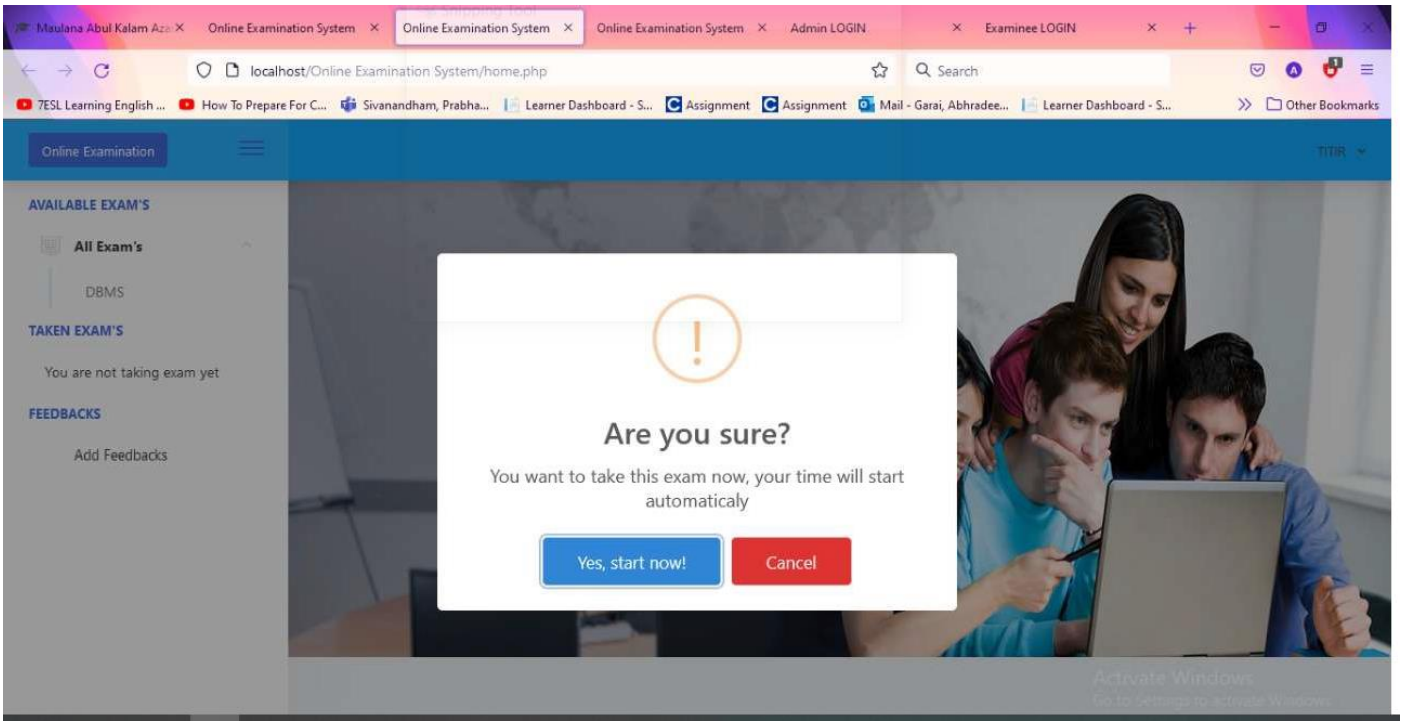
Exam details



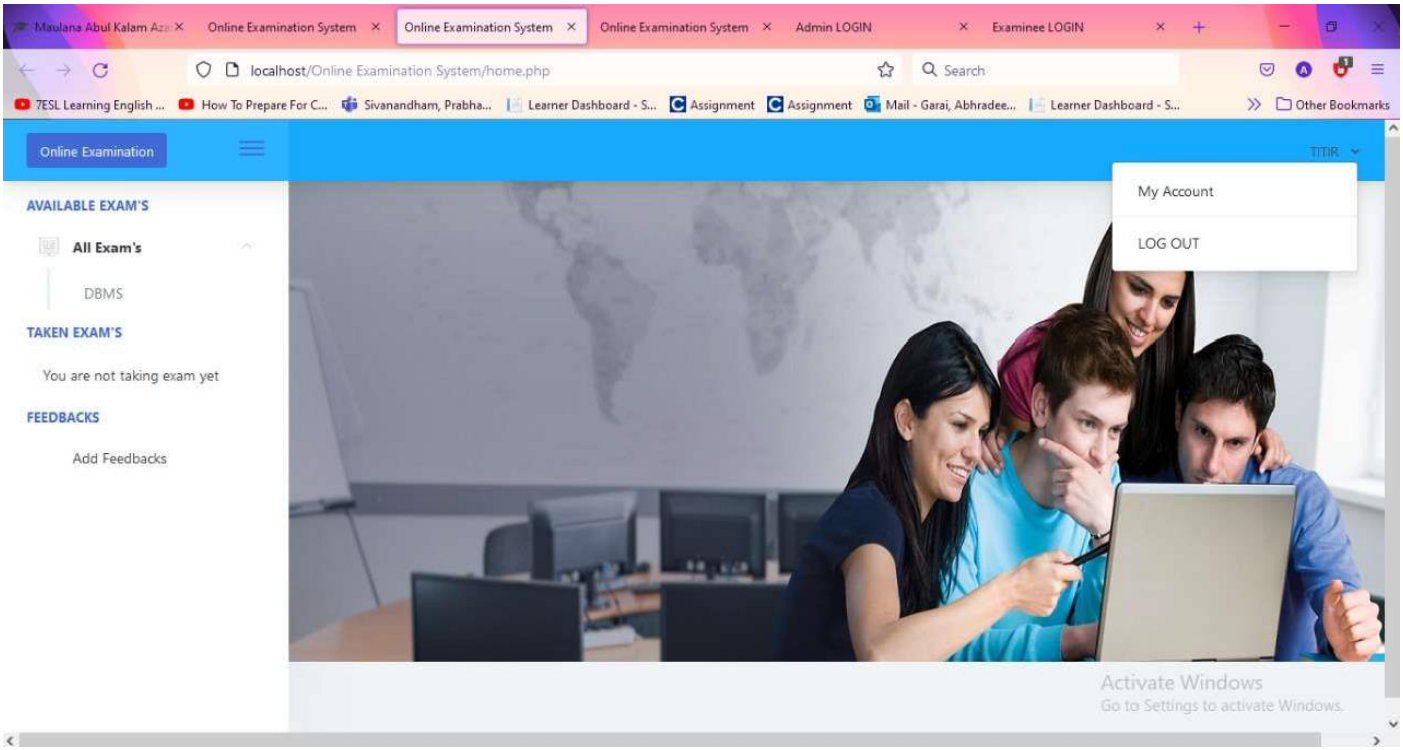
Login screen that allows the admin login to the system



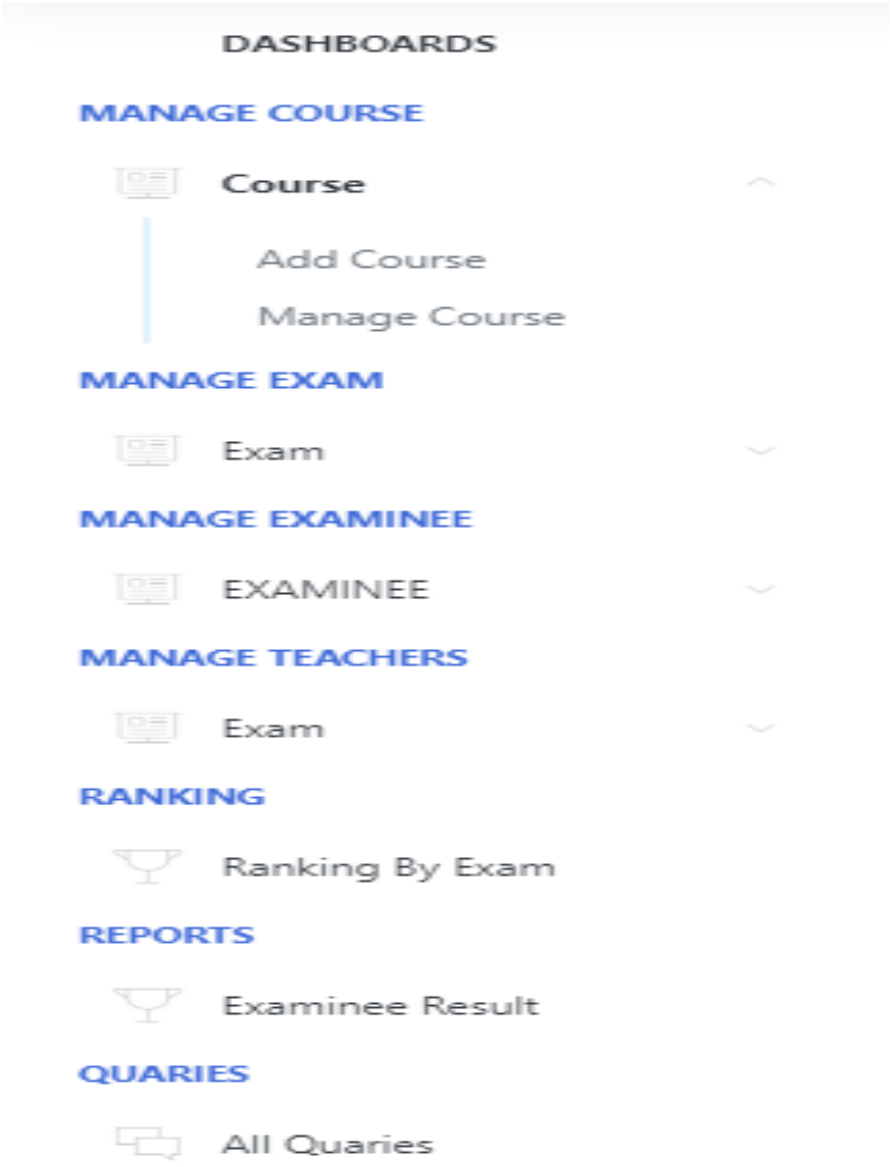
After admin login. Here admin can do all kind of work like course manage(add/delete), teacher assign and also exam manage.



Reconfirmation of starting the exam



Details of examination



All features that can do my system

CONCLUSION

The project was successfully designed and is tested for accuracy and quality. During this project I have accomplished all the objectives and this project meets the needs of the organization. The developed will be used in searching, retrieving and generating information for the concerned requests.

I have successfully created an online Examination System.

Reference

For working in my project we take help from these web sites and books listed below:

- Book : Php And Mysql In Easy by Mike Mcgrath
- Book : Beginning PHP and MySQL by Jason Gilmore
- www.programmer2programmer.net
- www.readymadeproject.coom
- http://ajprofessionals.googlepages.com/
- www.wikipedia.org
- www.php.net