

**Online Examination**

**Project Report  
On  
“ONLINE EXAMINATION”**



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# CERTIFICATE

This is to certify that this report embodies the original work done by **Vijay Indoria, Prashant Sharma, and Anoop Soni** during this project submission as a partial fulfillment of the requirement for the System Design Project of Masters of Computer Application IV Semester, of the Rajasthan Technical University, Kota.

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# **ACKNOWLEDGEMENT**

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We are grateful to our project guide Mrs. Kapila Pareek for the guidance, inspiration and constructive suggestions that helped us in the preparation of this project.

We also thank our colleagues who have helped in successful completion of the project.

Vijay Indoria  
Prashant Sharma  
Anoop Soni

## **Online Examination**

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1. Purpose.
2. Technologies used.
3. Hardware Interface.
4. Software Interface
5. Constraints.

## **Online Examination**

### **1. Purpose:**

- This Web Application provides facility to conduct online examination world wide.
- It saves time as it allows number of students to give the exam at a time and displays the results as the test gets over, so no need to wait for the result. It is automatically generated by the server.
- Administrator has a privilege to create, modify and delete the test papers and its particular questions.
- User can register, login and give the test with his specific id, and can see the results as well.

### **2. Technologies used:**

This project is a web application that is developed in ASP.NET having DB2 as back end.

1. Database Design (DB2)
2. Input Design (ASP.NET)
3. Coding (VB.NET)

### **3. Hardware Interface:**

#### **Client Side:**

Internet Explorer: 6.0  
Processor : Pentium IV 2.0 and above.  
RAM : 256 MB

## **Online Examination**

### **Server Side:**

|            |   |                           |
|------------|---|---------------------------|
| Processor  | : | Pentium IV 2.0 and above. |
| RAM        | : | 1 GB                      |
| Disk space | : | 4GB                       |

### **4. Software Interface:**

**Client Side:** .NET Framework, Web Browser, Windows XP/2000/Vista

**Web Server:** .NET Framework, Windows XP/2000/Vista

**Data Base Server:** DB2

### **5. Constraints:**

- User interface is only in English i.e. no other language option is available.
- User can login only with his assigned username and password i.e. no guest facility is available.
- Limited to HTTP/HTTPS.

## **Online Examination**

### **Feasibility Study**

#### **What are the user's demonstrable needs?**

User needs a web-based system, which will remove all the above-mentioned Problems that, the user is facing. The user wants a web-based system, which will reduce the bulk of paperwork, provide ease of work, flexibility, fast record finding, modifying, adding, removing and generating the reports.

#### **How can the problem be redefined?**

We proposed our perception of the system, in accordance with the problems of existing system by making a full layout of the system on paper. We tallied the problems and needs by existing system and requirements. We were further updating in the layout in the basis of redefined the problems. In feasibility study phase we had undergone through various steps, which are described as under:

How feasible is the system proposed? This was analyzed by comparing the following factors with both the existing system and proposed system.

#### **Cost**

The cost required in the proposed system is comparatively less to the existing system.

#### **Effort**

Compared to the existing system the proposed system will provide a better working environment in which their will be ease of work and the effort required will be comparatively less than the existing system.

#### **Time**

Also the time required generating a report or for doing any other work will be comparatively very less than in the existing system. Record finding and updating will take less time than the existing system.

#### **Labor**

In the existing system the number of staff required for completing the work is more while the new system will require quite less number of staff.

## Online Examination

# Specification Report

### **System Interface**

Application would be a self-contained system. It will not access data of any other application nor will other application have access to its data.

### **User Interface**

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above. No user would be able to access any part of the application without logging on to the system.

### **Hardware Interface**

#### **For Server**

- Intel Pentium III or above with
- 512 MB RAM
- 4 GB hard disk
- Network Interface

#### **For Client**

- PC With
- 256 MB RAM
- Network Interface

### **Software Interface**

| For Server  | For Client  |
|---|---|
| <ul style="list-style-type: none"><li>• Windows 2000 Enterprise Edition</li><li>• WAS Server</li><li>• DB2 Server</li></ul> | <ul style="list-style-type: none"><li>• Windows 95/98/2000/NT</li><li>• Microsoft Internet Explorer 6 &amp; above</li></ul> |



## **Online Examination**

### **Communication Interface**

The system should be accessed over LAN or WAN. For Clients to access application server the network should be running TCP/IP protocol.

### **Operations**

#### **Client Side**

Interactive operations using options provided in the application, Example Data Entry generation and viewing of reports.

#### **Server Side**

Database backup should be taken every day. In case of data base crash, last backup should be restored.

### **User Characteristics**

The end user of the software can be divided into two categories

**Administrator:** Access to master forms for the purpose of data entry and generation of reports.

**Operator:** Access to his corresponding records and giving examination only.

## **Bottlenecks Identified in Existing System**

The first problem is that there are loads of hard copied documents being generated. This brings us to the age-old discussion of keeping information in the form databases versus keeping the same on sheets of paper. Keeping the information in the form of hard-copied documents leads to the following problems:

**i. Lack of space** – It becomes a problem in itself to find space to keep the sheets of paper being generated as a result of the ongoing discussion. The documents being generated are too important to be ill-treated.

**ii. Filing poses a problem** – Filing the documents categorically is a time consuming and tedious exercise.

**iii. Filtering is not easy** – It becomes hard to filter relevant documents for the irrelevant ones if the count of the same crosses a certain manageable number.

**iv. Reviewing becomes time-consuming** –

All the process done manually at the centers and all the records are maintained on the papers. So the maintenance of the record is very difficult in the departments and as well as it's very difficult for the workers to check the record. The Existing system is paper based, time consuming, monotonous, less flexible and provides a very hectic working schedule. The chance of loss of records is high and also record searching is difficult. Maintenance of the system is also very difficult and takes lot of time.

**v. Result Processing is slow** due to paper work and requirement of staff.

## **Online Examination**

### **Need for the New System**

To solve these problems they required a computerized system to handle all the works. They required a web based application that will provide a working environment that will be flexible and will provide ease of work and will reduce the time for report generation and other paper works.

#### **Aims and Objective**

The main purpose behind the proposed system is to provide a comprehensive computerized system, which can capture, collate and analyze the data from these wards and evaluate the impact of the program.

### **Constraints, Assumptions, Dependencies**

#### **Constraints**

As this system is based on client server technology, so for normal operation minimum of 64 MB RAM will be required on all clients.

#### **Assumptions**

In general it has been assumed that the user has complete knowledge of the system that means user is not a naïve user. Any data entered by him/her will be valid. To make the software as user friendly as possible but at the same time keeping in minds user requirements.

- Server OS should be Windows NT/2000/XP.
- Client PC should be Windows 9X/NT/WorkStation or Windows 2000 with latest service pack.

#### **Dependencies**

It depends that the one should follow the international standards for the generating the User ID & should fill the related information in the proper format.

## Online Examination

### Software System Attributes

□ **Usability:** The links are provided for each form. The user is facilitated to view and make entries in the forms. Validations are provided in each field to avoid inconsistent or invalid entry in the databases. Some forms consists Hyper Links, which provides further details. Reports screen contains text boxes and drop down lists, so that reports can be produced.

□ **Security:** Application will allow only valid users to access the system. Access to any application resource will depend upon user's designation. There are two types of users namely Administrator and Student. Security is based upon the individual user ID and Password.

□ **Maintainability:** The installation and operation manual of examination management system will be provided to the user.

□ **Availability:** System will be available around the clock except for the time required for the back up of data.

□ **Portability:** The application is developed in ASP.NET. It would be portable to other operating system provided .NET Framework is available for the OS. As the database is made in DB2, porting the database to another database server would require some development effort.

### Acceptance Criteria

The software should meet the functional requirement and perform the functionality effectively and efficiently.

- A user-friendly interface with proper menus.
- Data transfer should be accurate and with in a reasonable amount of time keeping in mind the network traffic.
- The system should not allow entry of duplicate key values.
- System should have the ability to generate transactional Logs to avoid any accidental loss of data.
- Log file should also be generated.

## Online Examination

### Data Tables

#### 1. cLanguage

| Name           | Data Type | Description     |
|----------------|-----------|-----------------|
| Ques_no.       | Number    | Question Number |
| Question       | Text      | Question        |
| Answer1        | Text      | First Choice    |
| Answer2        | Text      | Second Choice   |
| Answer3        | Text      | Third Choice    |
| Answer4        | Text      | Fourth Choice   |
| Correct_Answer | Text      | Correct Answer  |

#### 2. cppLanguage

| Name           | Data Type | Description     |
|----------------|-----------|-----------------|
| Ques_no.       | Number    | Question Number |
| Question       | Text      | Question        |
| Answer1        | Text      | First Choice    |
| Answer2        | Text      | Second Choice   |
| Answer3        | Text      | Third Choice    |
| Answer4        | Text      | Fourth Choice   |
| Correct_Answer | Text      | Correct Answer  |

#### 3. Operating System

| Name           | Data Type | Description     |
|----------------|-----------|-----------------|
| Ques_no.       | Number    | Question Number |
| Question       | Text      | Question        |
| Answer1        | Text      | First Choice    |
| Answer2        | Text      | Second Choice   |
| Answer3        | Text      | Third Choice    |
| Answer4        | Text      | Fourth Choice   |
| Correct_Answer | Text      | Correct Answer  |

## Online Examination

### 4. DBMS

| Name           | Data Type | Description     |
|----------------|-----------|-----------------|
| Ques_no.       | Number    | Question Number |
| Question       | Text      | Question        |
| Answer1        | Text      | First Choice    |
| Answer2        | Text      | Second Choice   |
| Answer3        | Text      | Third Choice    |
| Answer4        | Text      | Fourth Choice   |
| Correct_Answer | Text      | Correct Answer  |

### 5. Users

| Name     | Data Type | Description      |
|----------|-----------|------------------|
| UserName | Text      | Name of The User |
| Password | Text      | Password         |

### 6. Results

| Name       | Data Type | Description           |
|------------|-----------|-----------------------|
| ExamId     | Number    | Unique Examination Id |
| TestName   | Text      | Name of The Exam      |
| Marks      | Number    | Marks Obtained        |
| ExamResult | Text      | Result of the Exam    |
| UserName   | Text      | Name of the User      |
| Password   | Text      | Password of a User    |

## Online Examination

### 7. PassResult

| Name     | Data Type | Description           |
|----------|-----------|-----------------------|
| ExamId   | Number    | Unique Examination Id |
| ExamName | Text      | Name of The Exam      |
| Name     | Text      | Student Name          |
| Marks    | Text      | Marks Obtained        |

### 8. MeritResult

| Name     | Data Type | Description           |
|----------|-----------|-----------------------|
| ExamId   | Number    | Unique Examination Id |
| ExamName | Text      | Name of The Exam      |
| Name     | Text      | Student Name          |
| Marks    | Text      | Marks Obtained        |

### 9. FailResult

| Name     | Data Type | Description           |
|----------|-----------|-----------------------|
| ExamId   | Number    | Unique Examination Id |
| ExamName | Text      | Name of The Exam      |
| Name     | Text      | Student Name          |
| Marks    | Text      | Marks Obtained        |

## Online Examination

### E-R Diagram

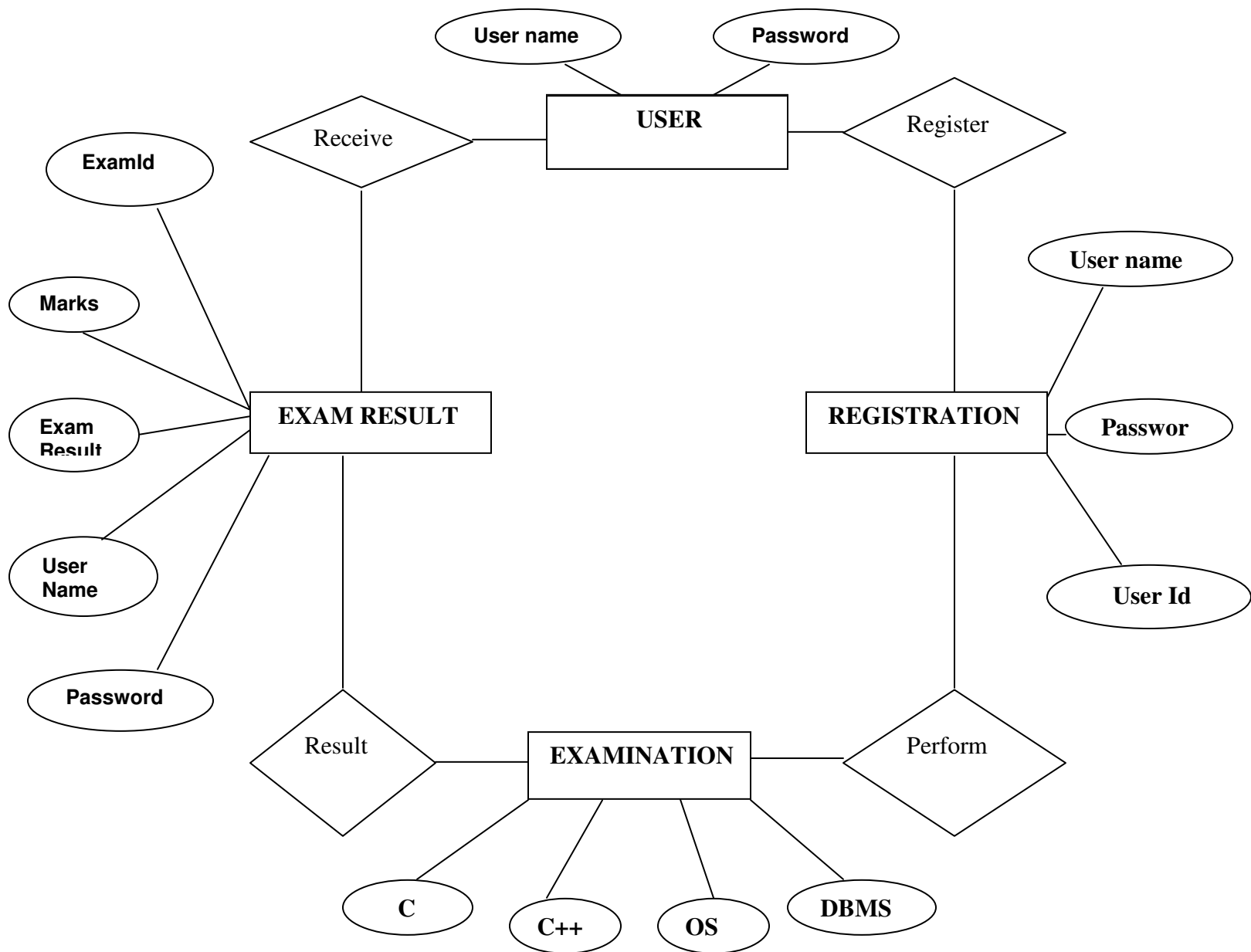
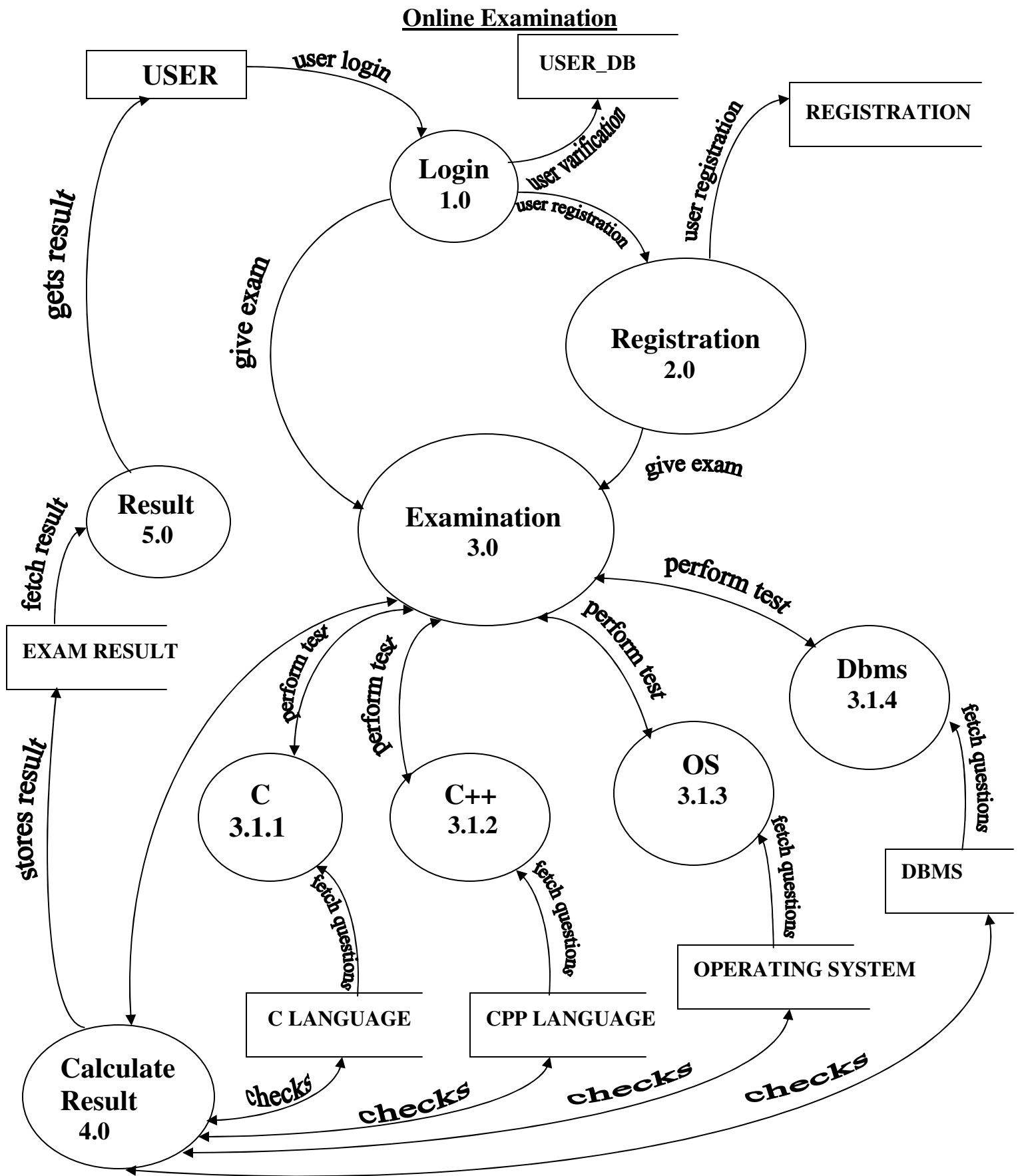


Figure: E-R Diagram





**Figure: DFD**

## Online Examination

# Input and Output Forms

### 1. Log In Form

The screenshot displays a web browser window with the title 'cLanguage - Sujin.com.np'. The address bar shows the URL 'http://localhost/DeployedApplication/Login.aspx'. The browser's menu bar includes 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. The toolbar contains icons for 'Back', 'Forward', 'Stop', 'Home', 'Search', 'Favorites', 'Print', 'Mail', 'Run', 'Find', and 'Links'. The main content area features a blue navigation bar with links for 'Home', 'Results', 'Examination', and 'About Us'. Below this, the login form consists of two input fields labeled 'User Name :' and 'Password :', followed by a 'Log In' button. A blue link labeled 'Register Now' is positioned below the login button. The Windows taskbar at the bottom shows the 'start' button, several open applications including 'cLanguage - Sujin.co...', 'E:\Documents and Se...', and 'untitled.bmp - Paint', and the system clock indicating '1:51 PM'.

cLanguage - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Print Mail Run Find Links

Address http://localhost/DeployedApplication/Login.aspx Go Links

Home Results Examination About Us

User Name :

Password :

Log In

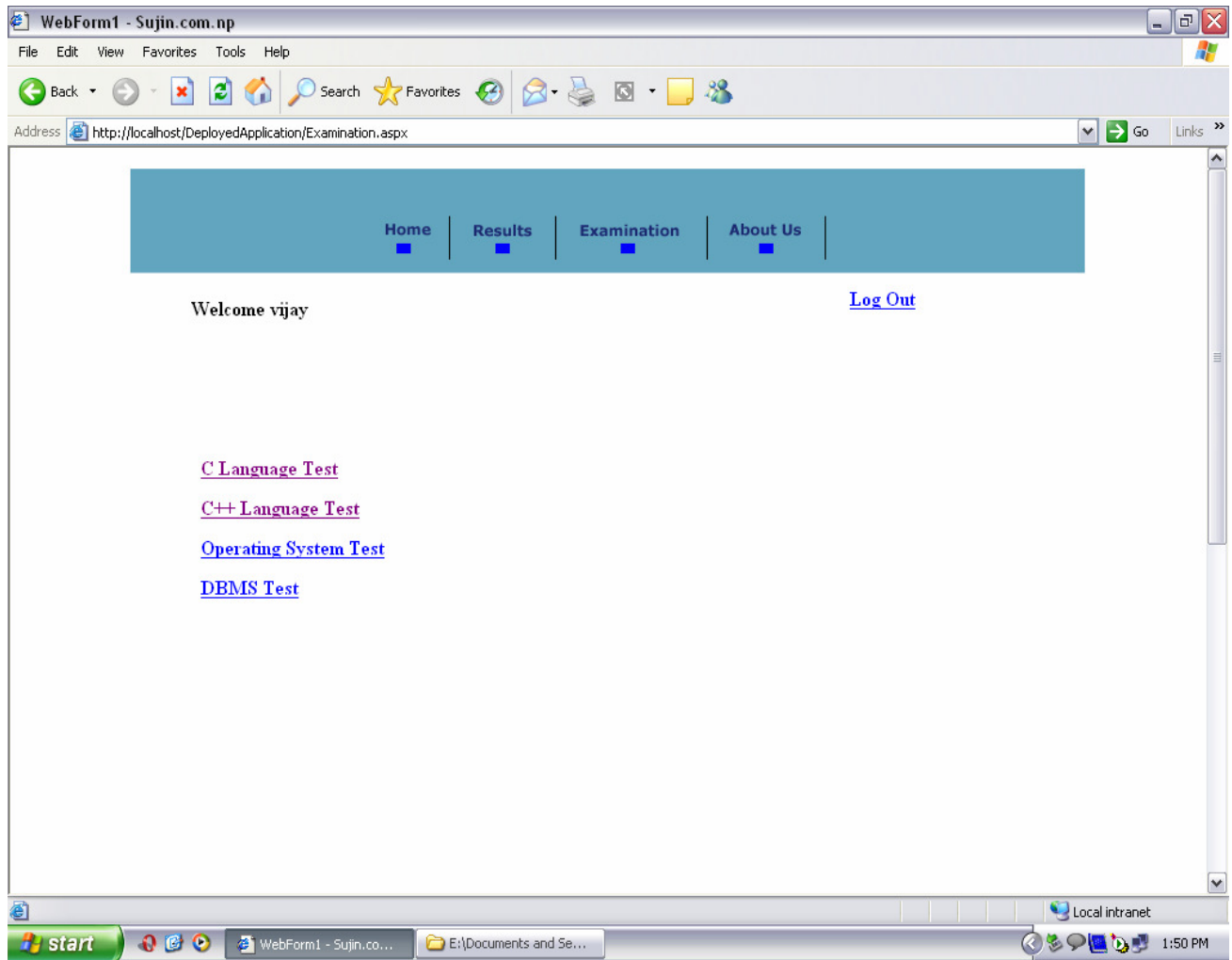
[Register Now](#)

Done Local intranet

start cLanguage - Sujin.co... E:\Documents and Se... untitled.bmp - Paint 1:51 PM

# Online Examination

## 2. Examination Form



# Online Examination

## 3. Result Form

ResultsData - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Stop Links

Address http://localhost/DeployedApplication/ResultData.aspx Go Links

Home Results Examination About Us

Exam Id :

User Name :

Password :

Ok Cancel

start ResultsData - Sujin.c... E:\Documents and Se... untitled5.bmp - Paint Local intranet 1:54 PM

# Online Examination

## 4. C language Exam Form

The screenshot shows a web browser window titled "WebForm1 - Sujin.com.np". The address bar displays "http://localhost/DeployedApplication/cLanguage1.aspx". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains icons for "Back", "Forward", "Stop", "Home", "Search", "Favorites", "Print", "Mail", "Run", "Find", and "Links".

The main content area features a blue navigation bar with links: "Home", "Results", "Examination", and "About Us". Below this, the title "C Language" is centered. The examination form consists of five questions, each with four radio button options:

1. The operator & is used for  
☐ Bitwise AND    ☐ Bitwise OR    ☐ Logical AND    ☐ Logical OR
2. The operator / can be applied to  
☐ integer values    ☐ float values    ☐ double values    ☐ All of these
3. The equality operator is represented by  
☐ . =    ☐ .EQ.    ☐ =    ☐ ==
4. Operators have hierarchy. It is used to know which operator  
☐ is most important    ☐ is used first    ☐ is faster    ☐ operates on large numbers
5. The bitwise AND operator is used for  
☐ Masking    ☐ Comparison    ☐ Division    ☐ Shifting bits

The Windows taskbar at the bottom shows the "start" button, several open applications (including "WebForm1 - Sujin.co...", "E:\Documents and Se...", and "untitled1.bmp - Paint"), and the system clock displaying "1:52 PM".

# Online Examination

## 5. C++ Language Exam Form

WebForm1 - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Stop Links

Address http://localhost/DeployedApplication/cppLanguage1.aspx Go Links

Home Results Examination About Us

**C++ Language**

1. C++ was originally developed by

☐ Nicolas Wirth ☐ Donald Knuth ☐ Bjarne Stroustrup ☐ Ken Thompson

2. The standard c++ comment

☐ / ☐ // ☐ /\* and \*/ ☐ None of these

3. The preprocessor directive #include is required if

☐ Console output is used ☐ Console input is used ☐ Both console input and output is used ☐ None of these

4. The operator << is called

☐ an insertion operator ☐ put to operator ☐ either a or b ☐ None of these

5. The operator >> is called

☐ The operator >> is called ☐ a get from operator ☐ either a or b ☐ et to operator

Done Local intranet

start WebForm1 - Sujin.co... E:\Documents and Se... untitled2.bmp - Paint 1:52 PM

# Online Examination

## 6. Operating System Exam Form

WebForm1 - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Link

Address http://localhost/DeployedApplication/OperatingSystem1.aspx Go Links

Home Results Examination About Us

**Operating System**

1. \_\_\_\_ runs on computer hardware and serve as platform for other softwares to run on

☐ Operating System ☐ Application Software ☐ System Software ☐ All

2. \_\_\_\_ is the layer of a computer system between the hardware and the user program

☐ Operating environment ☐ Operating system ☐ System environment ☐ None

3. The primary purpose of an operating system is \_\_\_\_

☐ To make the most efficient use of the computer hardware ☐ To allow people to use the computer ☐ To keep systems programmers employed ☐ To make computers easier to use

4. \_\_\_\_ transforms one interface into another interface

☐ Program ☐ Software ☐ Data ☐ None

5. \_\_\_\_ system is built directly on the hardware

☐ Environment ☐ System ☐ Operating ☐ None

Done Local intranet 1:53 PM

start WebForm1 - Sujin.co... E:\Documents and Se... untitled3.bmp - Paint

# Online Examination

## 7. DBMS Exam Form

WebForm1 - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Link

Address <http://localhost/DeployedApplication/DBMS.aspx> Go Links

[Home](#) [Results](#) [Examination](#) [About Us](#)

**DBMS**

1. Which of the following is not a database application

☐ dBase ☐ Edit ☐ FoxPro ☐ Access

2. Which of the following is a database management tool developed by Microsoft

☐ dBase ☐ Access ☐ Personal Oracle ☐ Sybase

3. HSAM stands for \_\_\_\_

☐ Hierarchic Sequential Access Method ☐ Hierarchic Standard Access Method ☐ Hierarchic Sequential and Method ☐ Hierarchic Standard and Method

4. Threats to data security may be \_\_\_\_ threats to the database

☐ Direct ☐ Indirect ☐ Both Direct and Indirect ☐ None of these

5. Which of the following is not a logical database structure?

☐ Chain ☐ Network ☐ Tree ☐ Relational

Done Local intranet

start WebForm1 - Sujin.co... E:\Documents and Se... untitled4.bmp - Paint 1:54 PM



# Online Examination

## 8. Registration Form

The screenshot shows a web browser window titled "Registration - Sujin.com.np". The address bar displays "http://localhost/OnlineExamination/Registration.aspx". The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help) and a toolbar with navigation buttons (Back, Forward, Stop, Home, Search, Favorites, Reload, Print, Mail, Run, Stop, Home, Links). The main content area features a blue navigation bar with links: Home, Results, Examination, and About Us. Below this, the title "Registration" is centered. The form contains three input fields: "Name :", "User Id :", and "Password :". A "Submit" button is located below the password field. The Windows taskbar at the bottom shows the Start button, several open applications (OnlineExaminationRe..., Online\_Examination\_Pr..., TestDatabase1 : Dat..., Registration - Sujin.c...), and the system clock (10:25 AM).

Registration - Sujin.com.np

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Reload Print Mail Run Stop Home Links

Address http://localhost/OnlineExamination/Registration.aspx Go Links

Home Results Examination About Us

Registration

Name :

User Id :

Password :

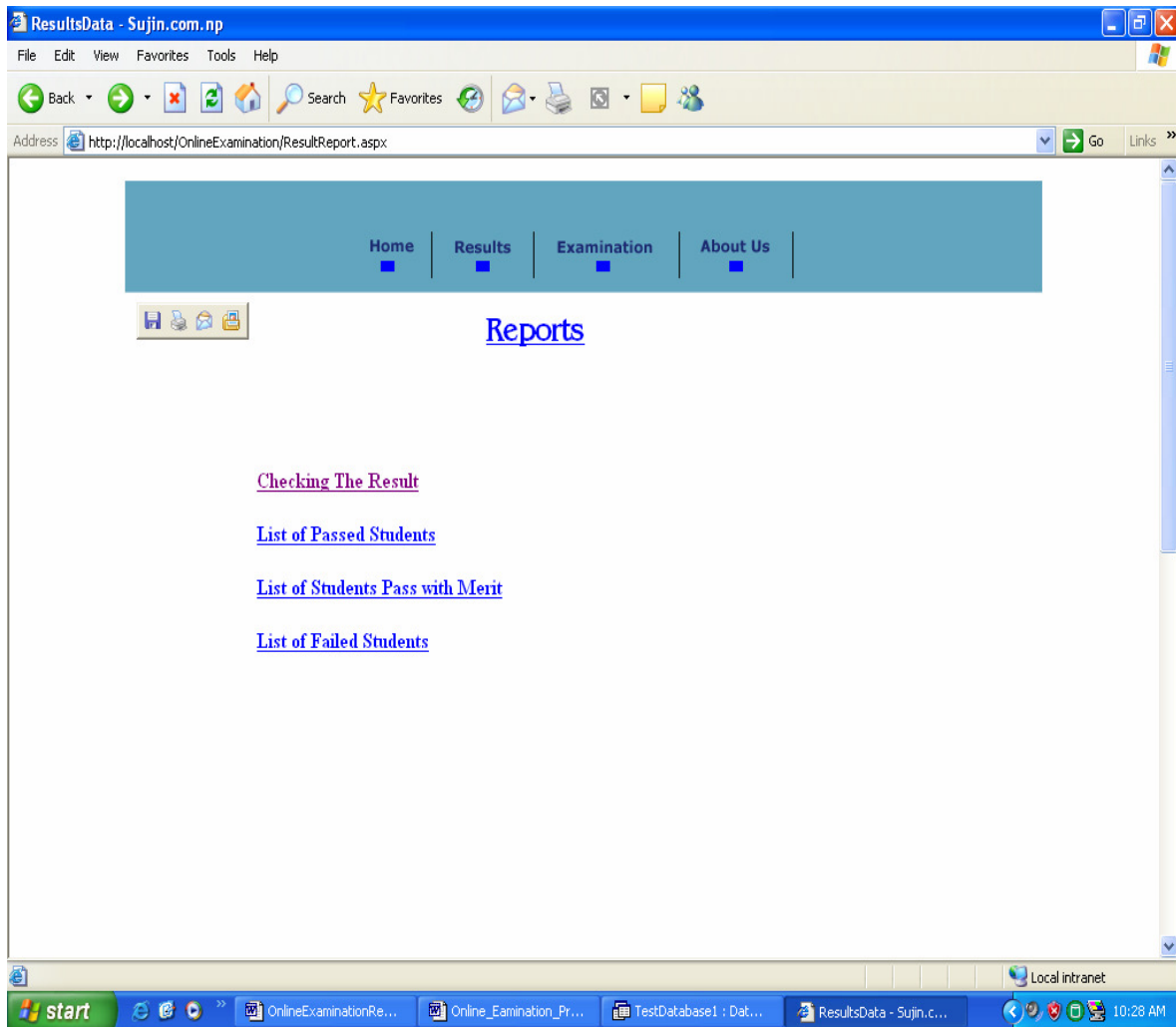
Submit

Done Local intranet

start OnlineExaminationRe... Online\_Examination\_Pr... TestDatabase1 : Dat... Registration - Sujin.c... 10:25 AM

# Online Examination

## 9. Reports Form



## **Online Examination**

### **Conclusion**

This Web Application provides facility to conduct online examination world wide. It saves time as it allows number of students to give the exam at a time and displays the results as the test gets over, so no need to wait for the result. It is automatically generated by the server.

Administrator has a privilege to create, modify and delete the test papers and its particular questions. User can register, login and give the test with his specific id, and can see the results as well.

## **Online Examination**

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