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

The satisfaction that accompanies that the successful completion of any task would be incomplete without the mention of people whose ceaseless cooperation made it possible, whose constant guidance and encouragement crown all efforts with success.

We are grateful to our project guide Mrs. Kapila Pareek for the guidance, inspiration and constructive suggestions that helpful 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

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Contents

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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

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.

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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.

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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
• Windows 2000 Enterprise Edition • WAS Server • DB2 Server	• Windows 95/98/2000/NT • Microsoft Internet Explorer 6 & above

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.

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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.

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.

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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.

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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

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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

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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

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E-R Diagram

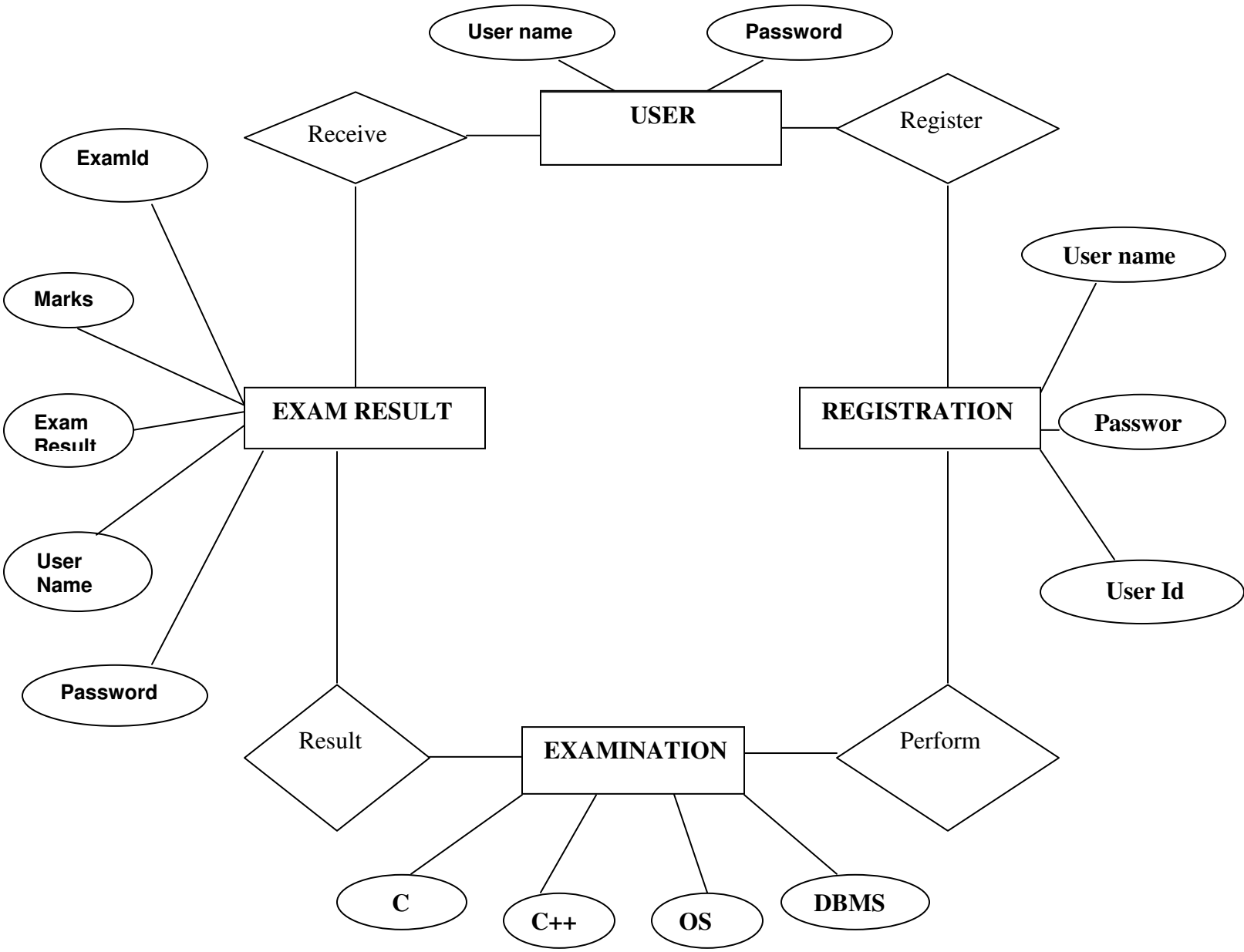

Figure: E-R Diagram

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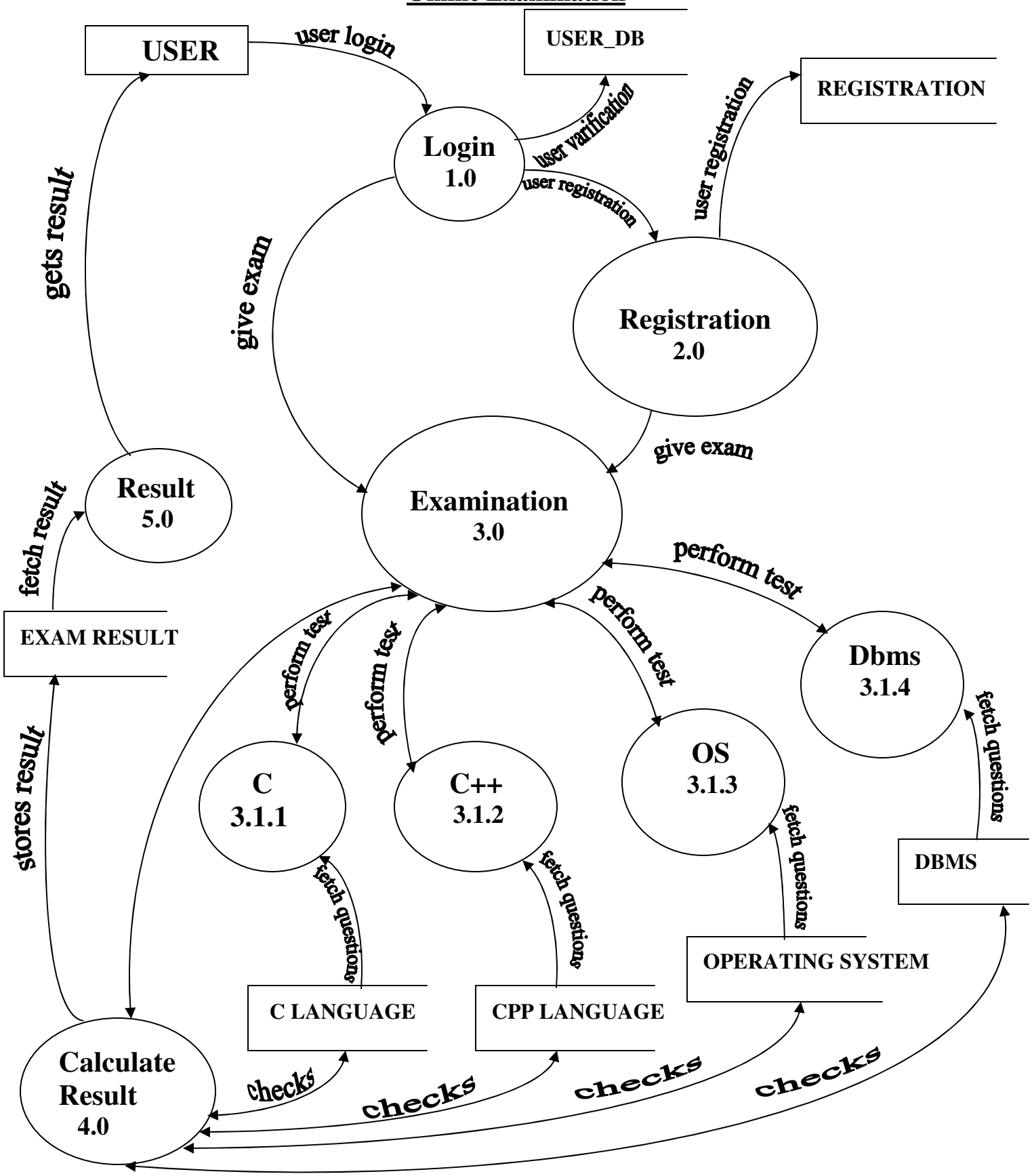

Figure: DFD

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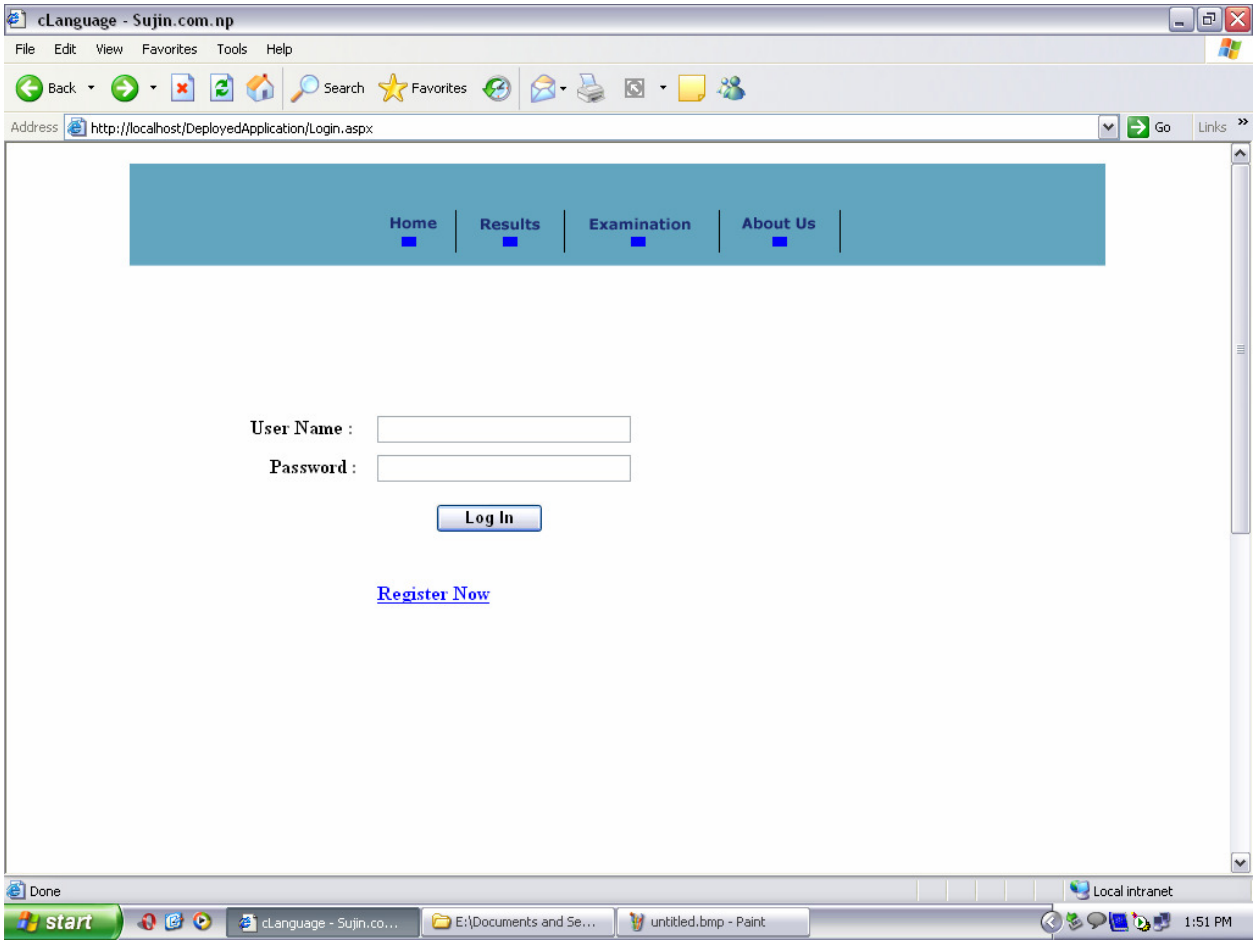
Input and Output Forms

1. Log In Form



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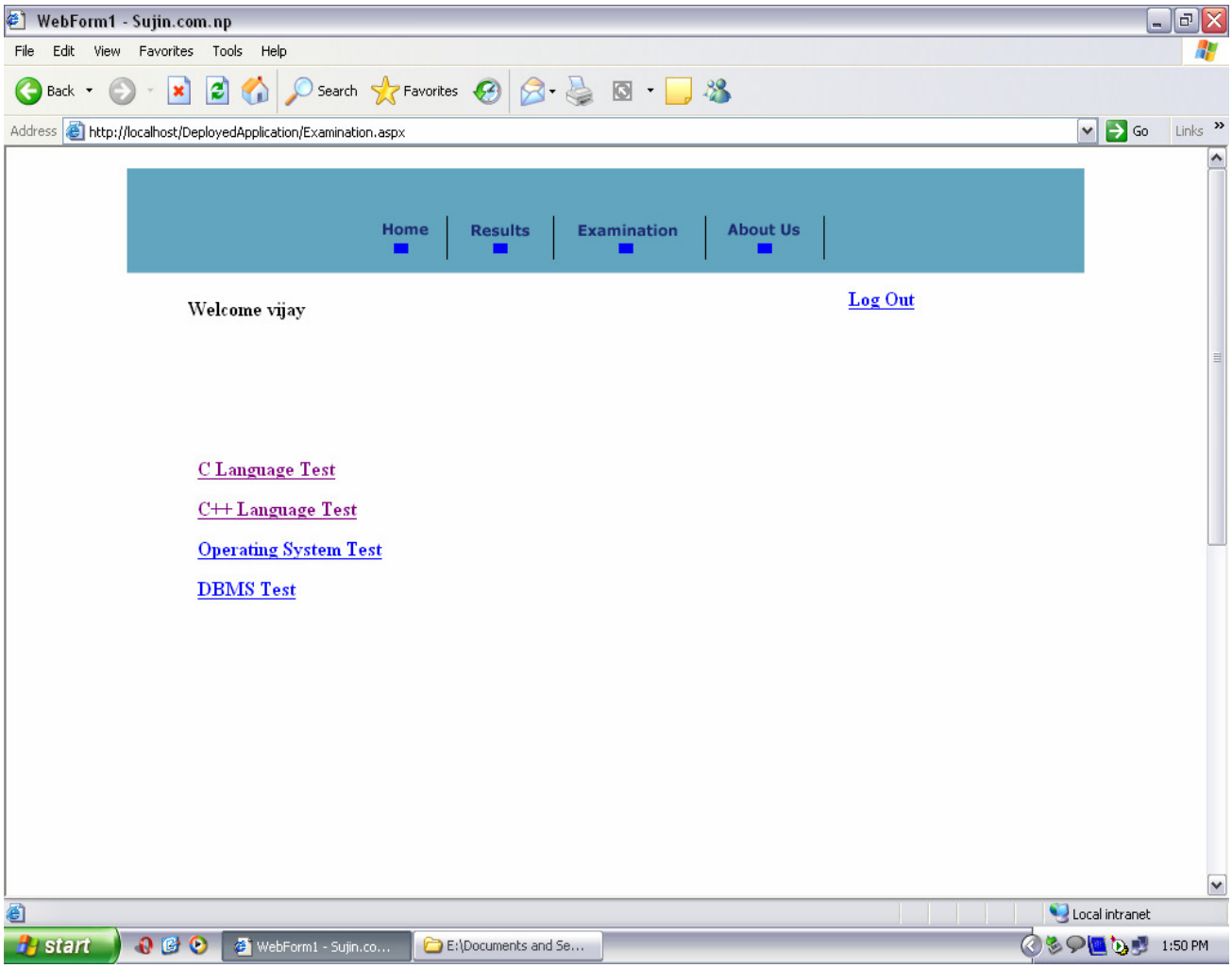
2. Examination Form



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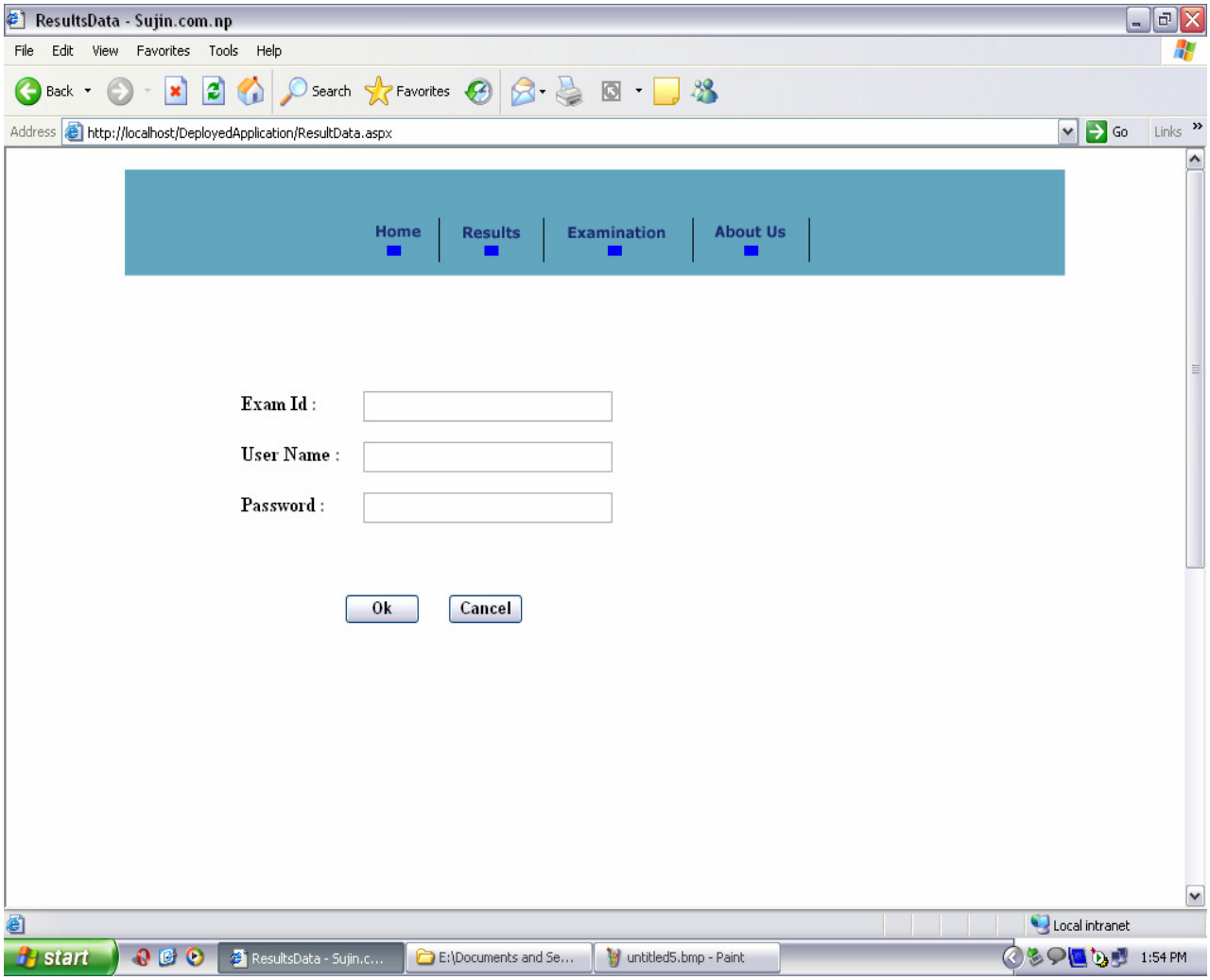
3. Result Form



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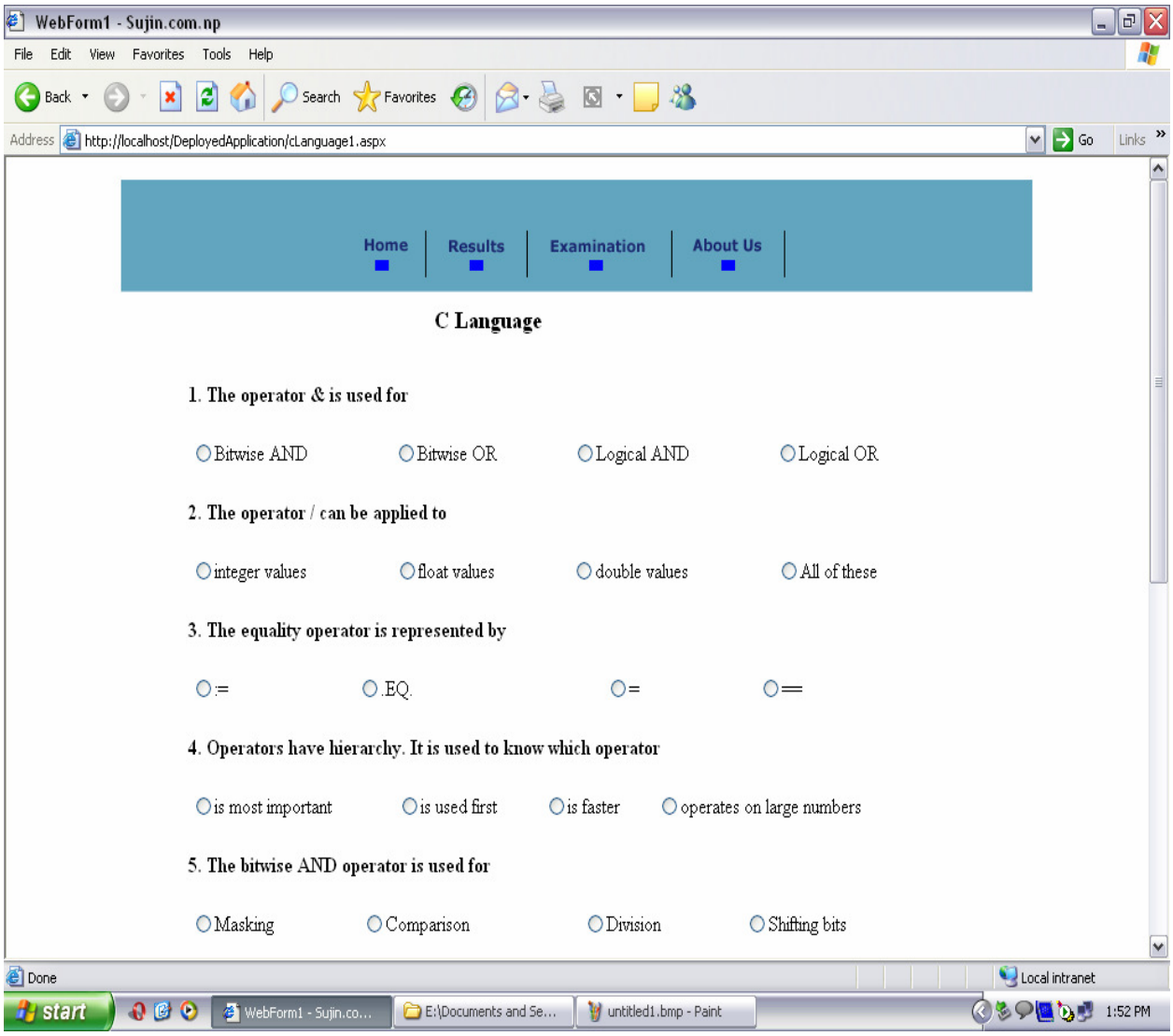
4. C language Exam Form



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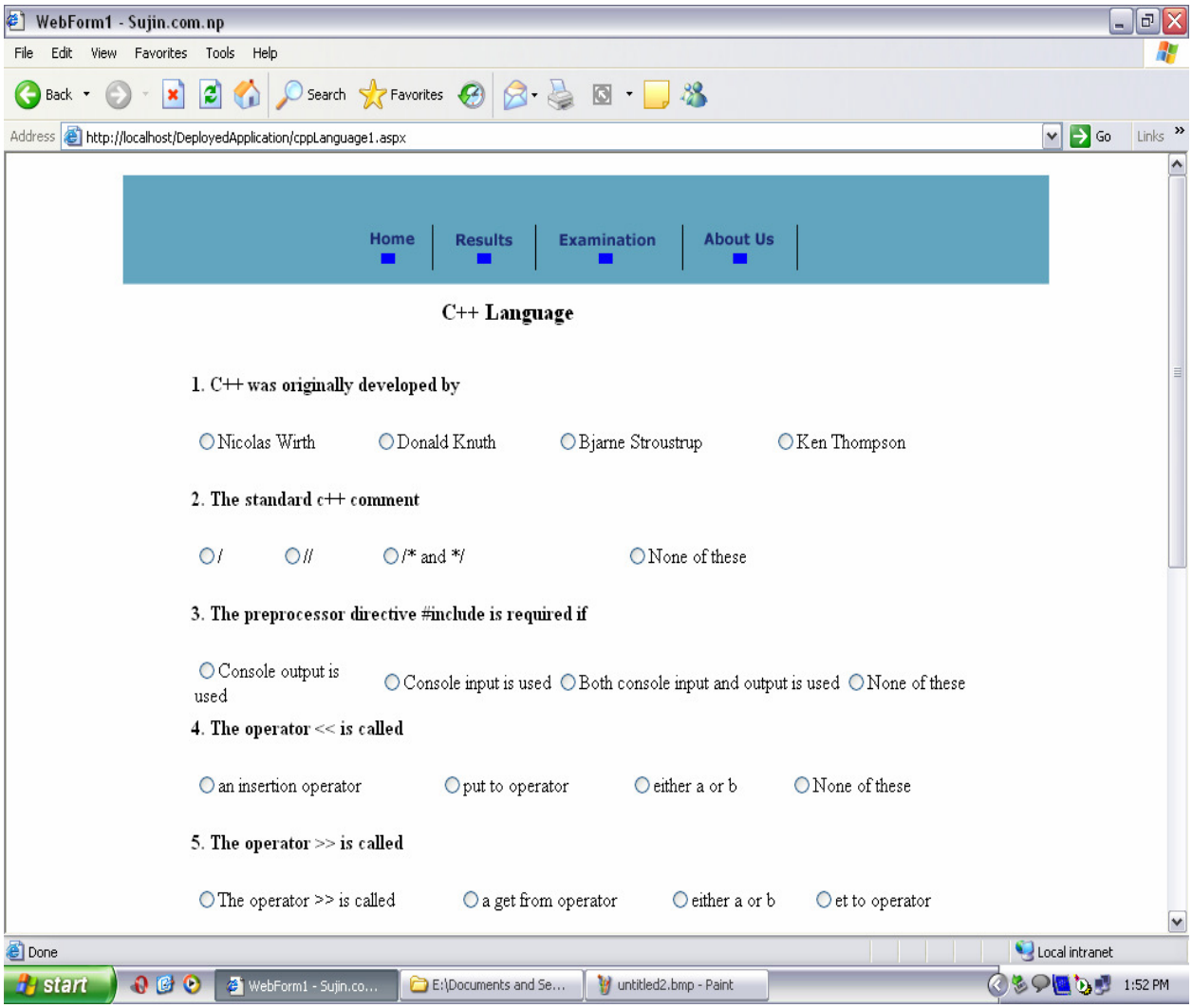
5. C++ Language Exam Form



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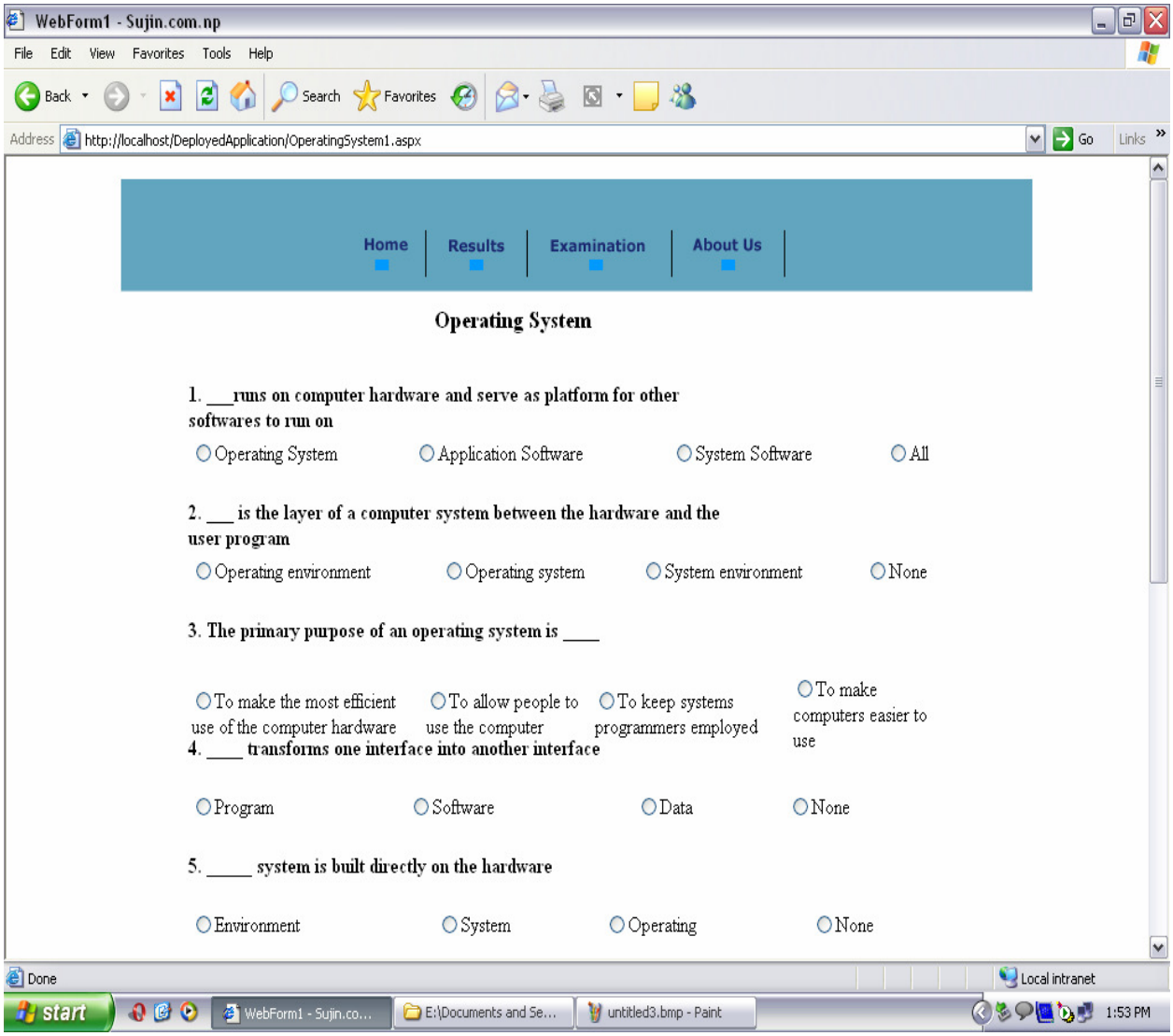
6. Operating System Exam Form



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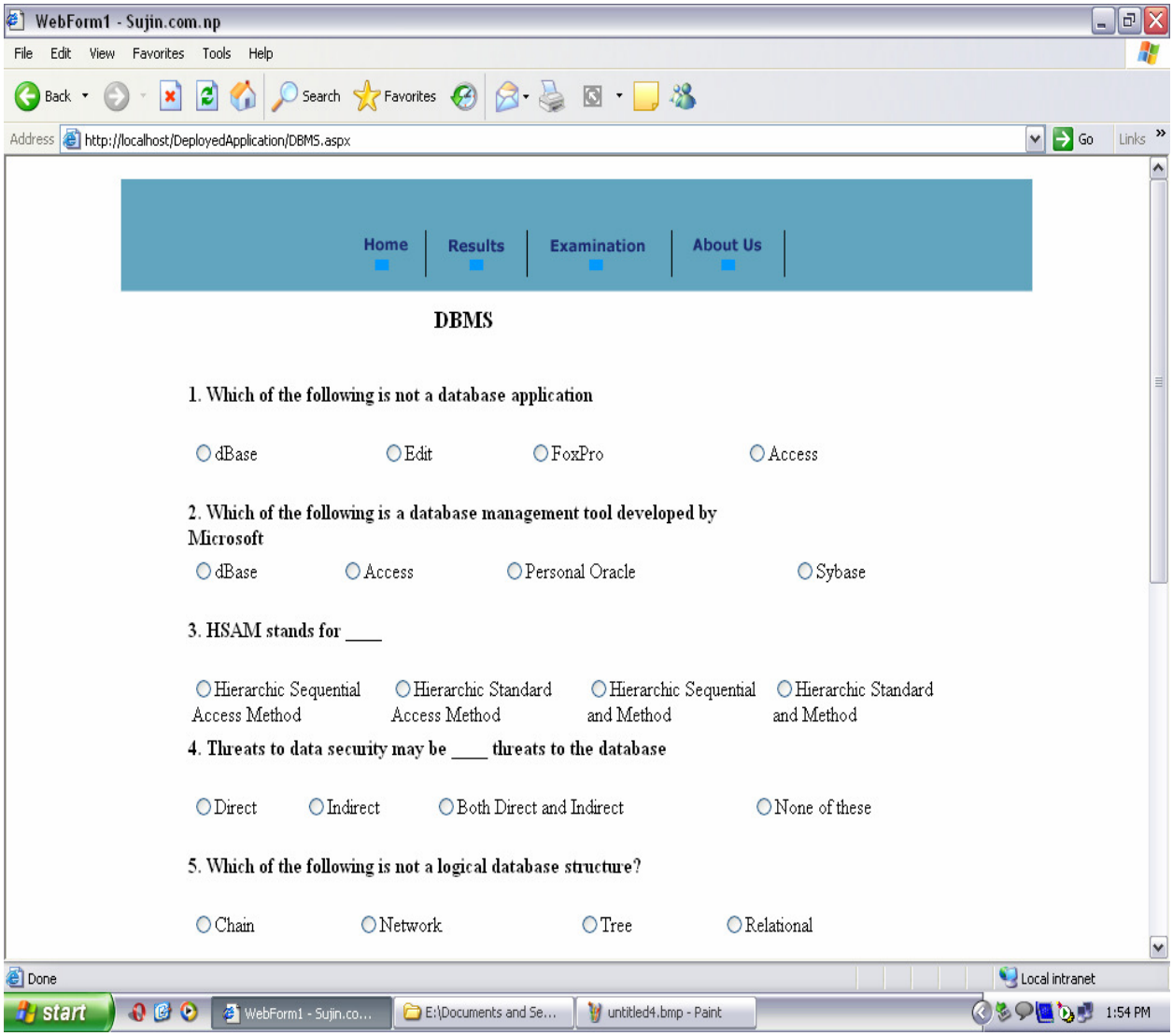
7. DBMS Exam Form



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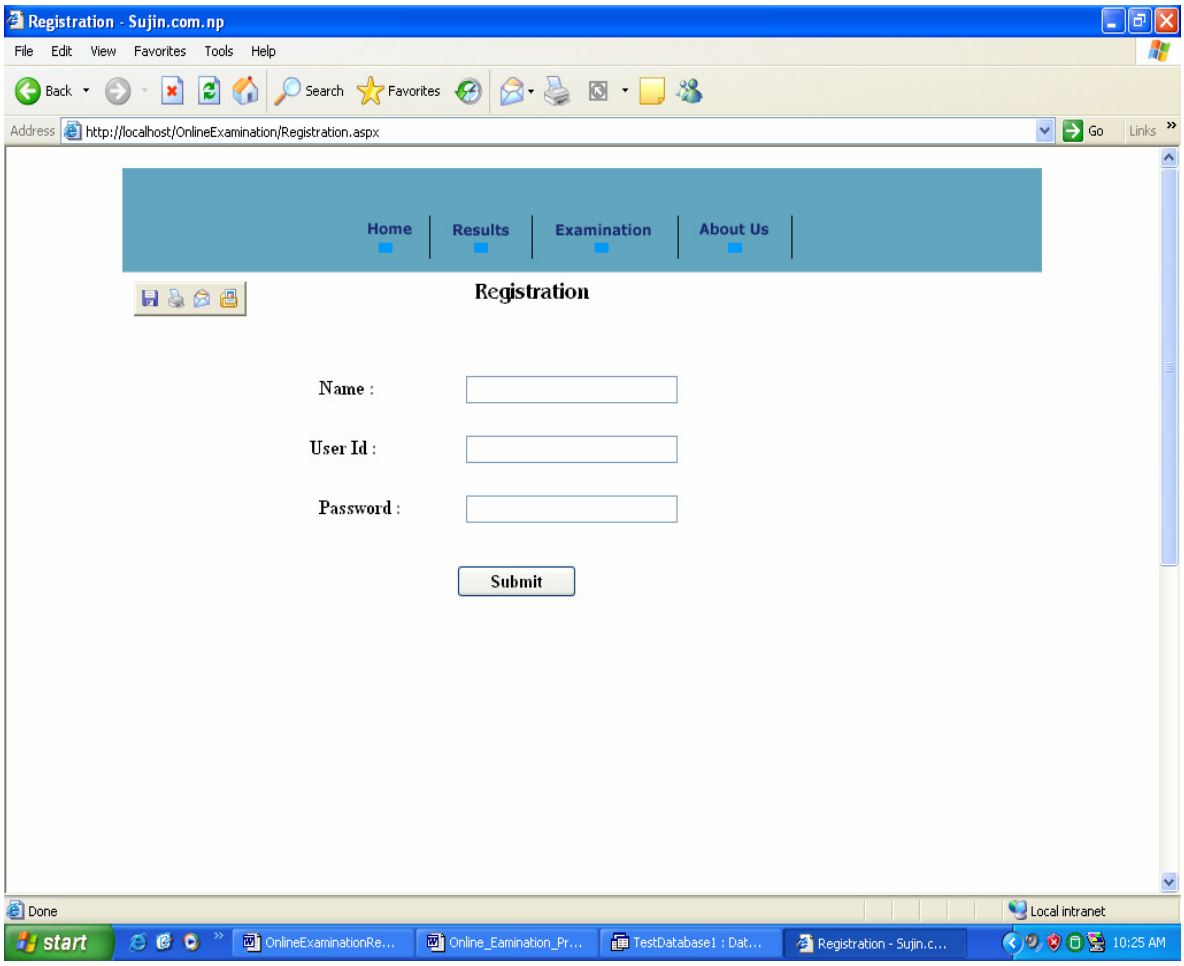
8. Registration Form



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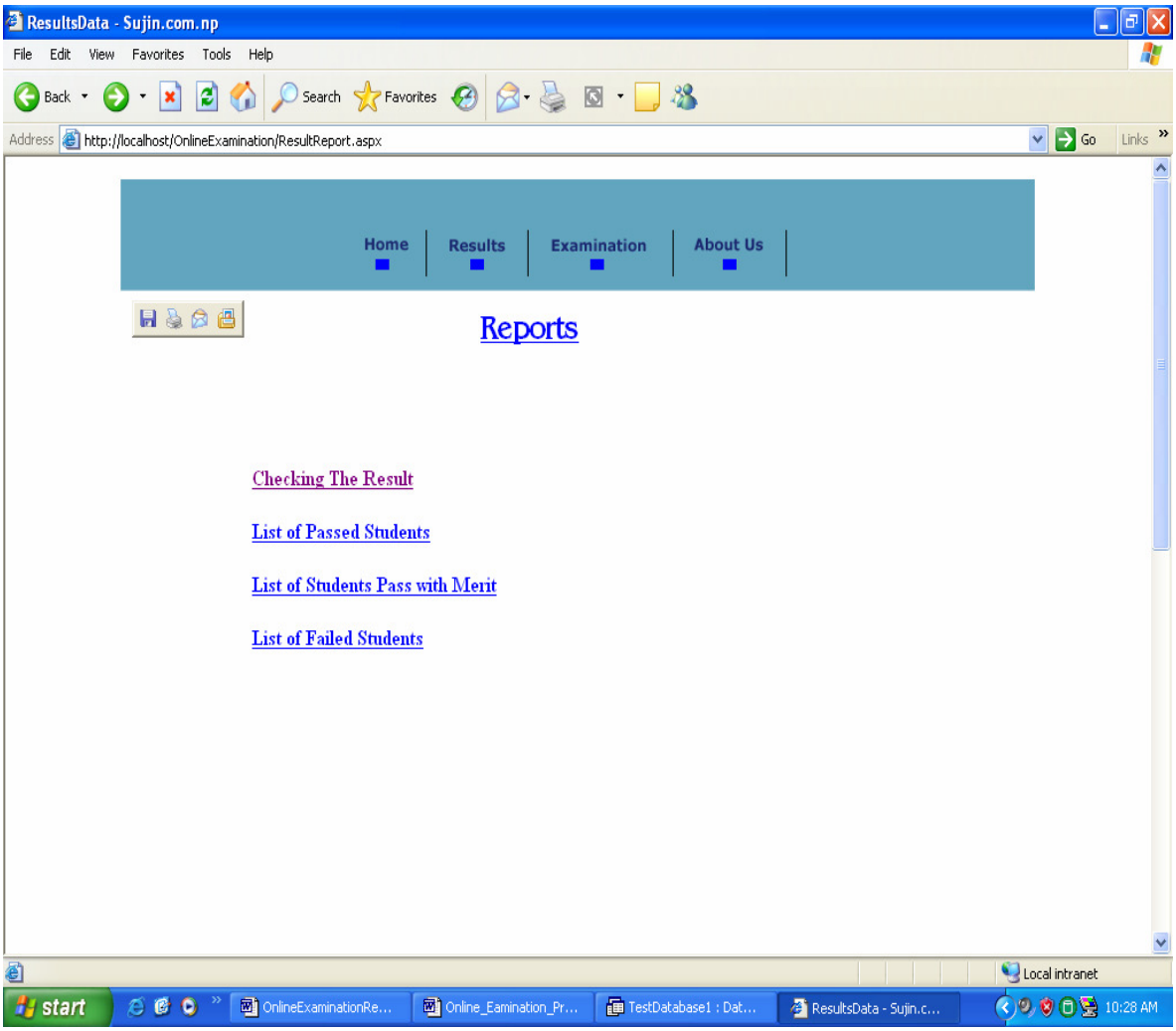
9. Reports Form



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.

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