Republic of Iraq
Ministry of Higher Education
and Scientific Research
University of Al-Qadisiyah
Faculty of Computer Science and
Information Technology
Department of Computer Science

جمهورية العراق
وزارة التعليم العالي
والبحث العلمي
جامعة القادسية
كلية علوم الحاسوب
وتكنلوجيا المعلومات
قسم علوم الحاسوب

Graduation Project Research

Design and Developing Computer Examination System

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University of Al-Qadisiyah

Faculty of Computer Science and Information Technology
Department of Computer Science

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Graduate Project Research submitted to the Computer Science Department under the title of

"Design and Developing Computer Examination System"

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Dhuha Rahim Tahir

بِسْمِ اللهِ الرَّحْمنِ الرَّحِيمِ

﴿ وَعَلَّمَكَ مَا لَمْ تَكُنْ تَعْلَمُ وَكَانَ فَضْلُ اللَّهِ عَلَيْكَ عَظِيماً ﴾

صدَقَ آللهُ العليُّ آلعظْيم

سورة النساء

اية ١١٣

Acknowledgments

We would like to sincerely thank Mr. Alaa Al-Zubaidi for his continued help in the programming part of project, beside his guidance when we start write the graduate project research. His detailed lectures in the first, second and last stage in Programming, cryptograph and information security courses gave us a solid foundation that allowed us to tackle this final project idea.

Abstract

The Aim of this project is to Design and Develop computer examination system, an open source software developed by Microsoft Visual Basic 6 and Microsoft Access Database system that provide the ability to make a practice of tests for difference computer science topics to improve the skills of students during his four years of study in college.

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Chapter One

Problem Definition
and
scope of project

1. Problem Definition and scope of project

1.1 Purpose

Today most of the education institute is using manual system for preparing question paper or they are using word processor like MS Word, spread sheet like MS Excel application to prepare question paper and taking exam *manually. In this proposed **Computer Based Testing System** it will run in* client server mode and user can add edit question master, prepare question papers, give test and view results. System will store question bank; user can prepare question paper for any subjects. The eExamination – Computer Examination System is used to overcome the entire problem which they are facing currently, and making complete atomization of manual or semi automatic process of examination process. This project of "Computer Based Testing System" of gives us the complete control of question paper and examination test process.

Throughout the project the focus has been on presenting information and comments in an easy and intelligible manner. eExamination - Computer Based Testing System is a very simple, flexible and user-friendly system specially for small and medium size educational institute. eExamination stores complete records of the subject, question, answers, tests and results. eExamination is a complete computer based examination solution make this complicated function look much easier. The software is user-friendly

1.2 Objective

Computer Based Testing System – eExamination is complete solution to cover all aspects of Computer Examination System.

The basic objective of developing this project is:

- Provides complete client server solution, including managing question bank, giving tests, storing of results.

- The eExamination system can automatically add the marks allocated in each question to determine the total mark for the test.

- Using this feature the questions can be selected from the question Bank, and also the appearance of questions in the random order.

- Additional to the already available questions in the question bank, the system user has the ability to add more questions as per the subject.

- System users also have the ability to modify the user-defined questions and not the already available questions in the question bank.

- Question paper can be saved or print for further use.

- Test result must save and can be retrieving later on.

- Question must provide answer type like multiple right answer selection and one right answer selection. Test screen must provide options accordingly.

- System must able to evaluate the examination and display the result instantly, student must view the correct answer after complete the test.

- System has powerful logical access management in place, each user must be identified by login id and strict password policy is applied to secure the system

1.3 Drawbacks of Present System

Some of the problems being faced in manual system are as follows:

1. Question paper are created manually; it takes lots of man effort. Fast question paper generation is not possible.

2. Reuse of old data is not possible.

3. Online test is not possible.

4. No central database can be created as information is not available in database

5. Manual error and human dependency.

1.4 Proposed System

Proposed system provides with following solutions:

1. It provides "better and efficient" question paper generation.

2. Reduce the workload of employee.

3. Faster retrieval of information about the test and results.

4. Provide facility for proper monitoring reduce paper work and provide data security.

5. All details will be available on a click

1.5 Project Scope

The eExamination System will permit to prepare question paper from question bank and give Computer examination and maintaining master information and generating various reports of test. The main users of the project are Student and system User.

1.5.1 Modules

M-1: Main Screen – It is the main MDI screen for the application. All menu options are available in this screen.

M-2: Login – Users of eExamination application need to login to access this system. Based on user rights system will permit user to perform actions.

M-3: Users – System administrator can create new users, mange user rights.

M-4: Examinations – Add, edit examination/ subject name. Only system user can add edit

M-5: Start Test – User can give a test by selecting examination, system will show results after completing the test.

M-6: Change Password – Users can change his password from this screen. user must type his old password to change the password with new password.

CM-7: Question Paper – User can generate question paper from this screen, user select examination name, no of question. System generates and save question paper in MS Word formats.

CM-8: View Results – Admin user can view all results however user can view results only his test.

CM-9: Question Answer – Admin user can set the question paper from this screen. Admin user can add, edit and delete question and answers.

1.6 Technologies

1.6.1 Operating Environment

OE-1: The eExamination application will operate with the following OS: Microsoft Windows 98, XP, 7

OE-2: The eExamination application will operate on a OS having VB6 run time and MS Office installed.

OE-3: The eExamination application shall permit user access from LAN connection

OE-4: Operating System: Windows 2000, XP, 7

OE-5: Software requirements: MS Access, VB 6 Run Time.

OE-6: Languages used are VB6.

OE-7: Hardware Requirements: 256(minimum)/512(recommended) MB RAM

OE-8: Hard disc- nGB depending upon the requirement to store data minimum of 25GB.

1.6.2 Deployment Environnent

DE-1 : Database Server
        OS – Win 2003 Enterprise Server
        MS Access 2003
        HDD – Min 10 GB, Recommended 25 GB
        RAM – Min 2 GB, Recommended 4 GB
        Processor - Pentium Dual Xenon Processor

DE-2 : Application Server
        OS – Win 2003 Enterprise Server
        HDD – Min 5 GB, Recommended 10 GB
        RAM – Min 2 GB, Recommended 4 GB
        Processor - Pentium Dual Xenon Processor

DE-3: The eExamination web application will operate with the following OS:
        Microsoft Windows version 98, XP and 7.

Data Base Server   **Application Server**

Workstation 1   **Workstation 2**   **Workstation 3**   **Workstation N**
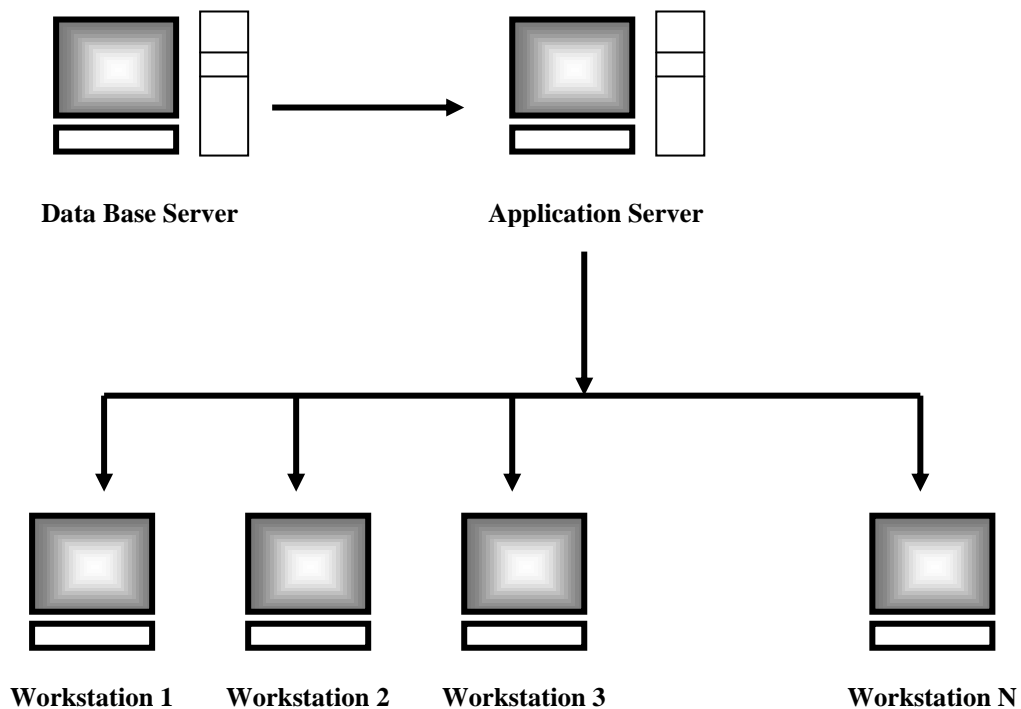
[eExamination System Architecture]

1.6.3 Development Tools and Technologies

DT-1: VB6

VB6 is built on the Windows Server System to take major advantage of the OS and which comes with a host of different servers which allows for building, deploying, managing and maintaining Windows Based solutions. The Windows Server System is designed with performance as priority and it provides scalability, reliability.

The advantage of VB.NET includes
- Rapid Application Development (RAD) Support.
- Powerful Windows-based Applications
- Simplified Deployment
- Powerful, Flexible, Simplified Data Access
- Improved Coding
- Direct Access to the OS Platform
- Object-Oriented Constructs
- COM Interoperability

DT-2: MS Access

MS Access Database provides efficient, reliable, secure data management for high-end applications such as high-volume on-line transaction processing (OLTP) environments, query-intensive data warehouses, and demanding Internet applications. MS Access also offers several additional optional database products that enhance the capabilities of MS Access Database for specific application requirements

1. Automatic Segment Free Space Management - Reduce segment header contention and wasted space within blocks by switching from using Free Lists to Automatic Segment Free Space Management.

2. Automatic Undo Management - Replace you existing rollback segments with self-tuning undo segments.

3. Character Semantics and Globalization - Prevent storage problems associated with Multi-byte character sets by using character semantics when defining table columns.

4. Flashback Query - Get a consistent view of the data at a previous point in time.

5. High Availability Enhancements in MS Access - Reduce downtime for users by using the new high availability features of Oracle9i.

6. Index Skip Scanning - See how MS Access uses composite indexes even when the leading edge is not referenced.

1.6.4 Development Environment

1.   Visual Basic 6.0
2.   MS Access 2003

Chapter Two

Overall Description

2. Overall Description

2.1 User Characteristics

2.1.1 System User

Able to login, give test, view results, generate question paper.

2.1.2 Administrator

Administrator will have all the access rights. Administrator can create new examination, edit examination details, maintain the question bank, view the user and test results.

2. 2. Assumptions

1) System User and Administrator communicate with each other via emails.

Chapter Third

System Features

3. System Features

3. 1. System Features

3.1.1. Description:

eExamination application which will use to generate question paper, give test and view results. Proposed eExamination application system is end to end solution for question paper generation process includes user registration, selection of examination, give examination, view results, configuring examinations, maintain question bank, and generation of question paper for offline test.

3.1 .2. Constraints

Linking and integration with academic and institution system. Upload questions into system in different formats. Connecting to third-party OLAP applications for generating reports. Etc.

3.1.3 Action/result

Action	Result
New User	After validation, user details are saved.
User/Admin Logins via Login page	According to the access rights menu options are displayed.
Manage Question Bank (Admin)	Redirected to question and answer screen for add, edit question and answer.
Start new examination (User)	Opens Start Examination screen.
View Results (User)	Redirected to view results screen and saved results displayed partnering to logged user
View Test Results (Admin)	Display result of all users

Chapter Fourth

Requirement Analysis

4. Requirement Analysis

The requirement analysis outlines the approach the development team will take to meet the goals of the project and provides the basis for proceeding to the planning phase. After identifying the business problem and defining the vision and scope, the team creates the solution concept that explains in general terms how the team intends to meet the requirements of the project.
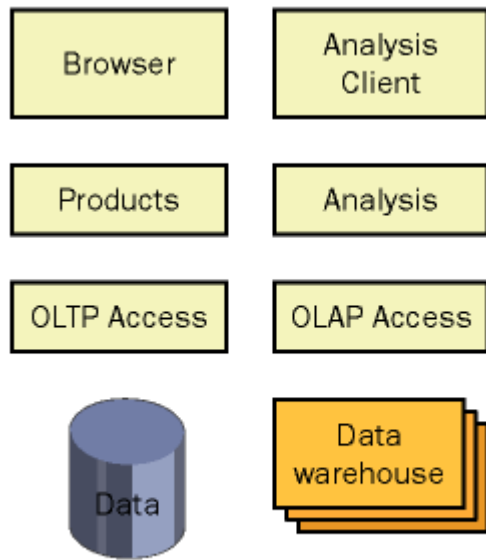
[Solution concept of eQuestion]

For a project to be successful, it is essential that we correctly identify the goals of the project. Project goals can be categorized as follows:

- Business goals
- Design goals

4.1 Business goals

Business goals represent what the organization wants to achieve with the solution. Business goals form the basis for determining the success criteria of the solution. The purpose of defining business goals is to clearly articulate the objectives for the project and to ensure that your solution supports those business requirements. The team needs to determine the best method for identifying the goals and agreeing on them.

Throughout the life of the project, the team makes tradeoffs among resources, schedule, and features. It is important that business goals are prioritized in a way that will allow the team to have a clear understanding about which ones

the customer believes are most important, in case some of the goals cannot be achieved.

For this eExamination project, business goals might include the following:

- Generate accurate question paper without manual intervention.
- Shorten the time to conduct examination and result process
- More transparent process of taking the examination and question paper generation.
- No additional and specific system requirement to operate the eExamination application.
- It must be secure.
- Easy to use and no addition knowledge require to operate the system.
- Reliable and accurate and them should not be any manual intervention in the process.
- No requirement of examiner and examination center.

4.2 Design goals

Design goals are similar to business goals in many ways. The difference is that design goals focus more on the attributes of the solution and less on what the solution will accomplish for the business. Design goals address not only what the team wants to accomplish but also what the team is not trying to accomplish with the solution. As with business goals, you need to prioritize design goals so that the team knows which goals must be accomplished, in case the project cannot achieve all of them.

Consider the case of this application. Some of the design goals for the eExamination system include:

- Use drop down list to select the value from master.
- Limit dependency on connectivity with the server.
- Reduce the time and level of effort required for a user to complete the test and question generation process.

- The service and all supporting applications must be localized for users worldwide.
- The service must have an availability of 99.99 percent.
- The service cannot lose data.
- The service must permit access only by authorized users.

4.3 Feasibility Study

4.3.1 Economic Feasibility

Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly knows as cost/benefit analysis the procedure is to determine the benefit and saving that are expected from a system and compare them with costs, decisions is made to design and implement the system. This part of feasibility study gives the top management the economic justification for the new system. This is an important input to the management the management, because very often the top management does not like to get confounded by the various technicalities that bound to be associated with a project of this kind. A simple economic analysis that gives the actual comparison of costs and benefits is much more meaningful in such cases. In the system, the organization is most satisfied by economic feasibility. Because, if the organization implements this system, it need not require any additional hardware resources as well as it will be saving lot of time.

4.3.2 Technical Feasibility

Technical feasibility centres on the existing manual system of the test management process and to what extent it can support the system. According to feasibility analysis procedure the technical feasibility of the system is analyzed and the technical requirements such as software facilities, procedure, inputs are identified. It is also one of the important phases of the system development activities. The system offers greater levels of user friendliness combined with greater processing speed. Therefore, the cost of maintenance can be reduced. Since, processing speed is very high and the work is reduced in the maintenance point of view management convince that the project is operationally feasible.

4.3.3 Behavioural Feasibility

People are inherently resistant to change and computer has been known to facilitate changes. An estimate should be made of how strong the user is likely to move towards the development of computerized system. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

4.4 Business Requirements

The following preliminary lists are based on initial interviews and study of existing manual system,

The business goal for the application is to support an increase the security, speed, accuracy and complete automation of existing manual or semi automatic question paper generation process. Business requirements are discussed in the Scope section, with the following additional detail:

- Improve the examination search facility and system user should get all the information in a second.

- System should able to save the results and test details.

- Admin user must able to monitor all the activities.

- The Administrator should be able to enter or update examination details and question bank from interface only

- System Administrator must able to control the access rights by each user as per requirement.

- The application should support the capability to use multi user environment.

- The Admin user should able to generate all type of reports as and when required by the management.

- No restriction that examiner has to be present when the candidate takes the test.

- The following question types are essential:

  o **Multiple Choice**
  This question type allows the user to select ONE correct answer
  - Options can be randomized
  - More than one option can be correct but the user can only select ONE option
  - Score can be set per option

- No limitation on number of options
- If there are a number of Options, these can be presented in a column(s).

o   **Multiple Response**
This question type allows the user to select more than ONE correct answer
- Options can be randomized.
- Score can be set per option.
- No limitation on number of options.
- If there are a number of Options, these can be presented in a column(s).
- The number of responses students enter can be limited.

- Students can access tests they have completed.

- Question paper must be randomized order of question must be randomized no two students must not get same question in same order.

The system users want to improve their current ability to analyze student. In particular, they want to focus on identifying their best student. To enable them to accomplish this goal, they want to extract meaningful data that easily answers the following questions:

- What are the early warning signs of problems?

- Who is my best student?

- What are my student's issues as groups?

- What type of examination are my student wanted?

4.5 User Requirements

User requirements are categorized by user type.

4.5.1 System User
- Able to login into application

- Able to select the examination and give test.

- Able to view result after completing the test.

- Able to view right and wrong answers after completing the test.

- Able to view previous results.

- Able to generate question paper

4.5.2 Administration

- Administrator must able to add new examination details.
- Must able to maintain the question bank.
- Generate Reports as per requirement.

Chapter Five

Project Management

5. Project Management

The methodology is basically your approach to solve the problem. This deals with the process model used. A process model for software engineering is chosen based on the nature of project and application, the methods and tools to be used, and the controls and deliverables that are required. Hence looking at the objectives and goals of the system, we have chosen spiral model for it.

5.1 Spiral Model:

The spiral model is a <u>software development process</u> combining elements of both <u>design</u> and <u>prototyping</u>-in-stages, in an effort to combine advantages of <u>top-down and bottom-up</u> concepts. Also known as the spiral lifecycle model (or spiral development), it is a system's development method (SDM) used in <u>information technology</u> (IT). This model of development combines the features of the prototyping model and the <u>waterfall model</u>. The spiral model is intended for large, expensive and complicated projects.
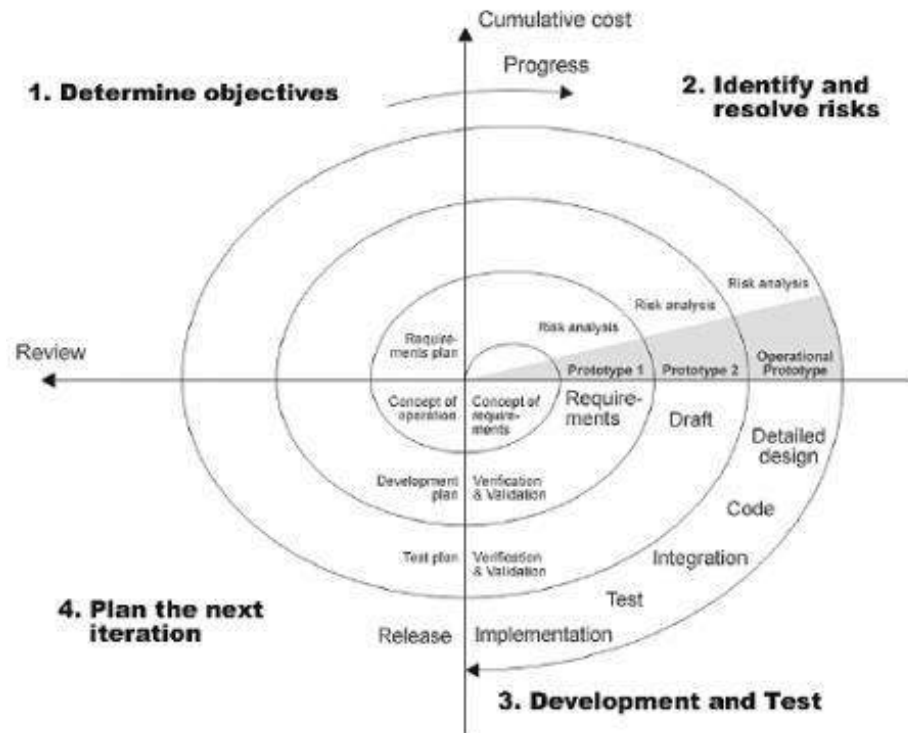
➢ **ADVANTAGES:**

1. Estimates (i.e. budget, schedule, etc.) become more realistic as work progresses, because important issues are discovered earlier.
2. It is abler to cope with the (nearly inevitable) changes that software development generally entails.
3. Software engineers (who can get restless with protracted design processes) can get their hands in and start working on a project earlier.

➢ **DISADVANTAGES:**

1. Highly customized limiting re-usability
2. Applied differently for each application
3. Risk of not meeting budget or schedule

This model includes the following steps in the course of software development:

Cumulative cost

Progress

1. Determine objectives

2. Identify and resolve risks

Review

Require-ments plan

Risk analysis

Risk analysis

Risk analysis

Prototype 1

Prototype 2

Operational Prototype

Concept of operation

Concept of require-ments

Require-ments

Draft

Detailed design

Development plan

Verification & Validation

Code

Test plan

Verification & Validation

Integration

Test

4. Plan the next iteration

Release

Implementation

3. Development and Test

[SPIRAL MODEL]

5.2 Phases of Spiral Model:

5.2.1 Planning Phase:
- The planning phase establishes a bird's eye view of the intended software product and uses this to establish the basic project structure, evaluate feasibility and risks associated with the project, and describe appropriate management and technical approaches. The outputs of the project planning phase are the configuration management plan, the quality assurance plan, and the project plan and schedule, with a detailed listing of scheduled activities for the upcoming Requirements stage, and high-level estimates of effort for the out stages

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- The requirements gathering process takes as its input the goals identified in the high-level requirements section of the project plan. Each goal will be refined into a set of one or more requirements. These requirements define the major functions of the intended application, define operational data areas and reference data areas, and define the initial data entities.

  Major functions include critical processes to be managed, as well as mission critical inputs, outputs and reports. A user class hierarchy is developed and associated with these major functions, data areas, and data entities. Each of these definitions is termed a Requirement. Requirements are identified by unique requirement identifiers and, at minimum, contain a requirement title and textual description.

5.2.2 Risk Analysis Phase:

This phase is the most important part of "Spiral Model". In this phase all possible (and available) alternatives, which can help in developing a cost effective project are analyzed and strategies are decided to use them. This phase has been added specially in order to identify and resolve all the possible risks in the project development. If risks indicate any kind of uncertainty in requirements, prototyping may be used to proceed with the available data and find out possible solution in order to deal with the potential changes in the requirements.

5.2.3 Engineering Phase:

This phase which includes development stage takes as its primary input the design elements described in the approved design document. For each design element, a set of one or more software artifacts will be produced. Software artifacts include but are not limited to menus, dialogs, data management forms, data reporting formats, and specialized procedures and functions. Appropriate test cases will be developed for each set of functionally related

software artifacts, and a help system will be developed to guide users in their interactions with the software.

5.2.4 Customer Evaluation Phase:

- During the construction phase the software artifacts, help, and test data are migrated from the development environment to a separate test environment. At this point, all test cases are run to verify the correctness and completeness of the software. Successful execution of the test suite confirms a robust and complete migration capability. During this stage, reference data is finalized for production use and production users are identified and linked to their appropriate roles. The final reference data (or links to reference data source files) and production user list are compiled into the Production Initiation Plan.

- During the deployment phase, the software artifacts, help, and initial production data are loaded onto the production server. At this point, all test cases are run to verify the correctness and completeness of the software. Successful execution of the test suite is a prerequisite to acceptance of the software by the customer. After customer personnel have verified that the initial production data load is correct and the test suite has been executed with satisfactory results, the customer formally accepts the delivery of the software.

- The customer evaluation phase - to obtain customer feedback based on the evaluation of the software representation created during the engineering stage and implemented during the install stage. This can help in identifying and resolving potential problems/errors in the software developed. This phase is very much similar to testing phase.

5.3 Nature of Spiral Model:

There are four phases in the "Spiral Model" as discussed above. These four phases are iteratively followed one after other in order to eliminate all the problems, which were faced in "The Waterfall Model". Iterating the phases helps in understanding the problems associated with a phase and dealing with those problems when the same phase is repeated next time, planning and developing strategies to be followed while iterating through the phases. The process progresses in spiral sense to indicate iterative path followed, progressively more complete software is built as we go on iterating through all four phases. The first iteration in this model is considered to be most important, as in the first iteration almost all possible risk factors, constraints, requirements are identified

5.4 Estimation

5.4. 1 Basic COCOMO

The COnstructive COst MOdel (COCOMO) is an algorithmic Software Cost Estimation Model developed by Barry Boehm. The model uses a basic regression formula, with parameters that are derived from historical project data and current project characteristics. Constructive Cost Model: It is a hierarchy of estimation models that address: Application composition model: Used during the early stage of software engineering, when prototyping of user interfaces, consideration of software and system interaction, assessment of performance, and evaluation of technology maturity are paramount.

COCOMO consists of a hierarchy of three increasingly detailed and accurate forms. The first level, Basic COCOMO is good for quick, early, rough order of magnitude estimates of software costs, but its accuracy is limited due to its lack of factors to account for difference in project attributes

The basic COCOMO equations take the form

Effort Applied = a_b(KLOC)b^b [man-months]

Development Time = c_b(Effort Applied)d^b [months]

People required = Effort Applied / Development Time [count]

The coefficients a_b, b_b, c_b and d_b are given in the following table.

Software Project	a	b	c	d
Organic	2.4	1.05	2.5	0.38
Semi – Detached	3.0	1.12	2.5	0.35
Embedded	3.6	1.2	2.5	0.32

E =3.0(KLOC)1.12
= 3.0(5000)^1.12
= 18 person months

D = 2.5E0.35
= 2.5(22)0. 35
= 6.8 months

Therefore No. of persons required =18/6.8=3persons.

Chapter Sixth

Snap Shot

6. Snap Shot

The project was designed using the visual basic 6.0 language because it is powerful and supports the development of the program and is simplified publishing as well as flexible and access to data in a simplified and improve the code and also have direct access to the operating system.

University of Al-Qadisiyah
Faculty of Computer Science and Information Technology
Department of Computer Science

Final Year Graduation Project 2016-2017
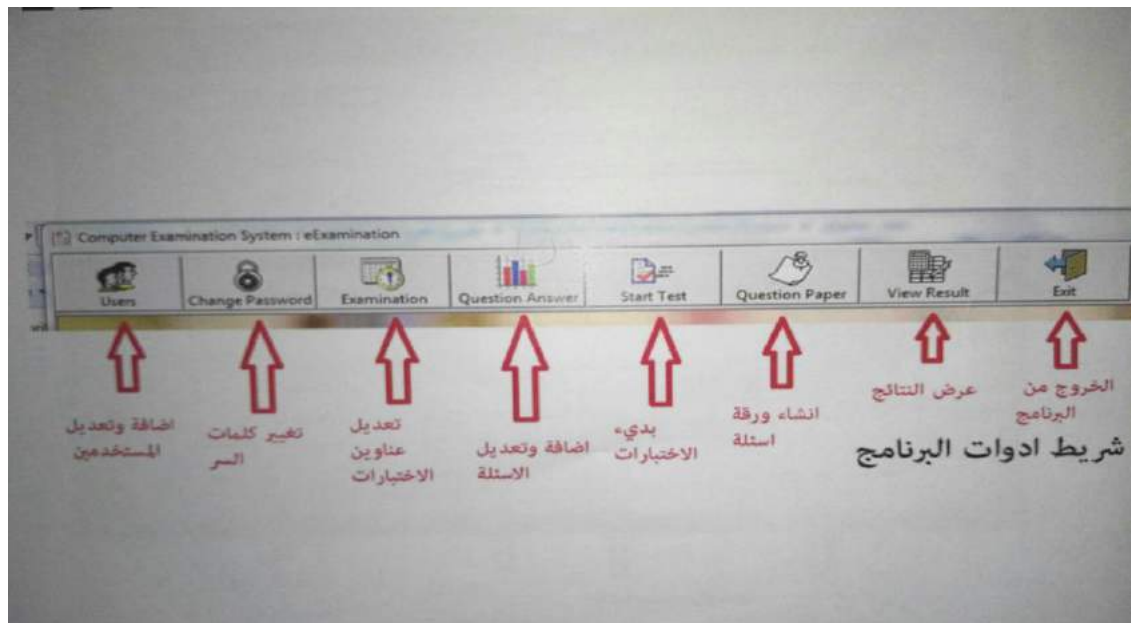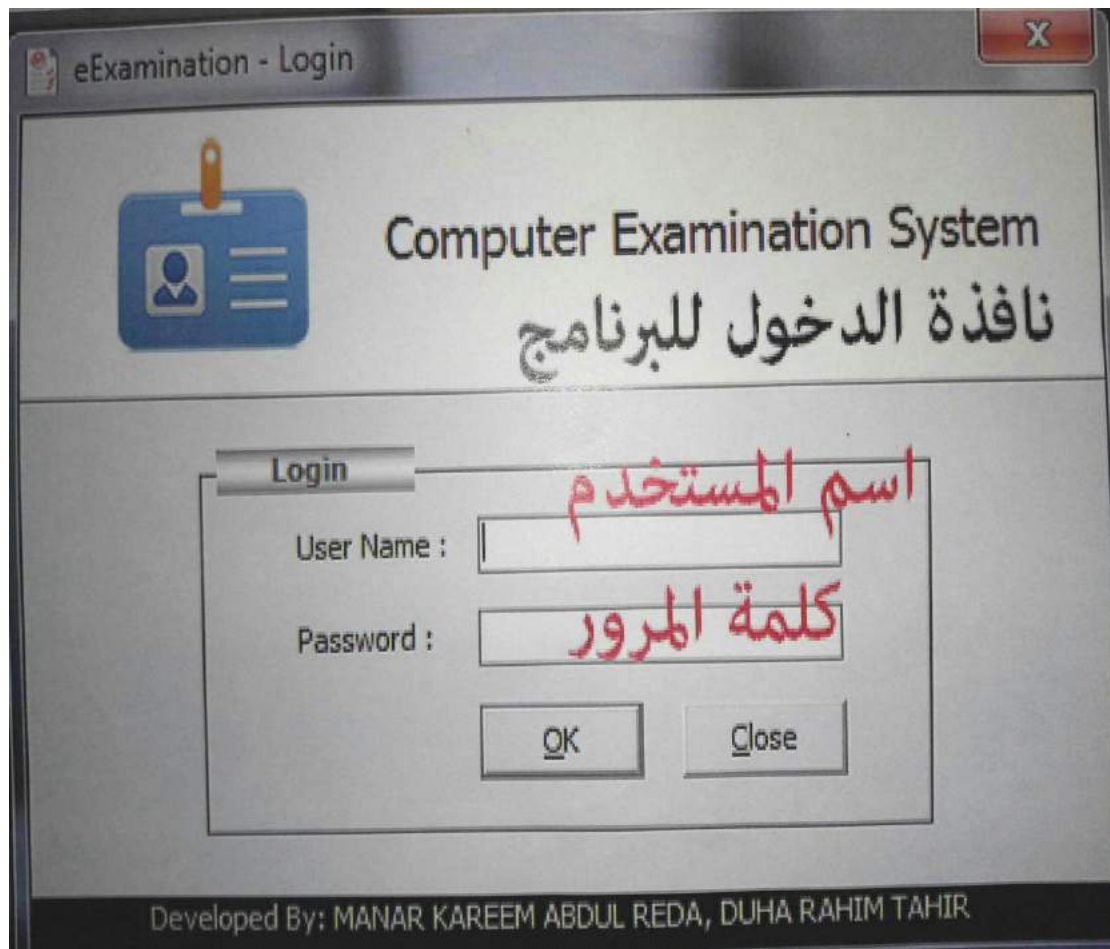Design and Developing Computer Examination System

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SUPERVISED BY
ASSISTAN LECTURER MR. ALAA ABD AL-MUHSIN HUSSEIN AL-ZUBAIDI

STUDENTS BY

MANAR KAREEM ABDUL REDA   DUHA RAHIM TAHIR

Computer Examination System

نافذة الدخول للبرنامج

Login

User Name :   اسم المستخدم

Password :   كلمة المرور

OK   Close

Developed By: MANAR KAREEM ABDUL REDA, DUHA RAHIM TAHIR

Computer Examination System : eExamination

Users	Change Password	Examination	Question Answer	Start Test	Question Paper	View Result	Exit

اضافة وتعديل المستخدمين — تغيير كلمات السر — تعديل عناوين الاختبارات — اضافة وتعديل الاسئلة — بدي الاختبارات — انشاء ورقة اسئلة — عرض النتائج — الخروج من البرنامج

شريط ادوات البرنامج

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User Master

User ID :	1	☑ Active User
User Name :	ADMIN	اسم المستخدم
User Type :	ADMIN ▼	نوع المستخدم
Department :	IT	القسم العلمي
Desgination :	ADMIN	رتبة المستخدم
Date of Birth :	1 / 1 / 1970	تاريخ الميلاد
Address :	Iraq-Diwaniyah	عنوان السكن
Contact No :	252521111	رقم الاتصال
Email ID :	admin@qad.edu.iq	البريد الالكتروني

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الانتقال بين المستخدمين   اضافة مستخدم جديد   تعديل مستخدم   حذف مستخدم
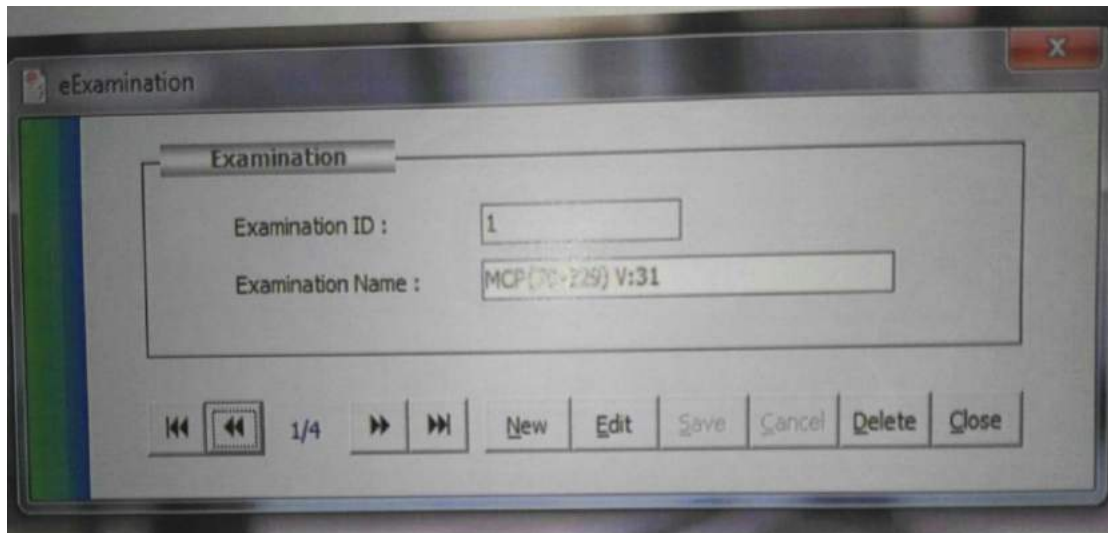

eExamination

Change Password

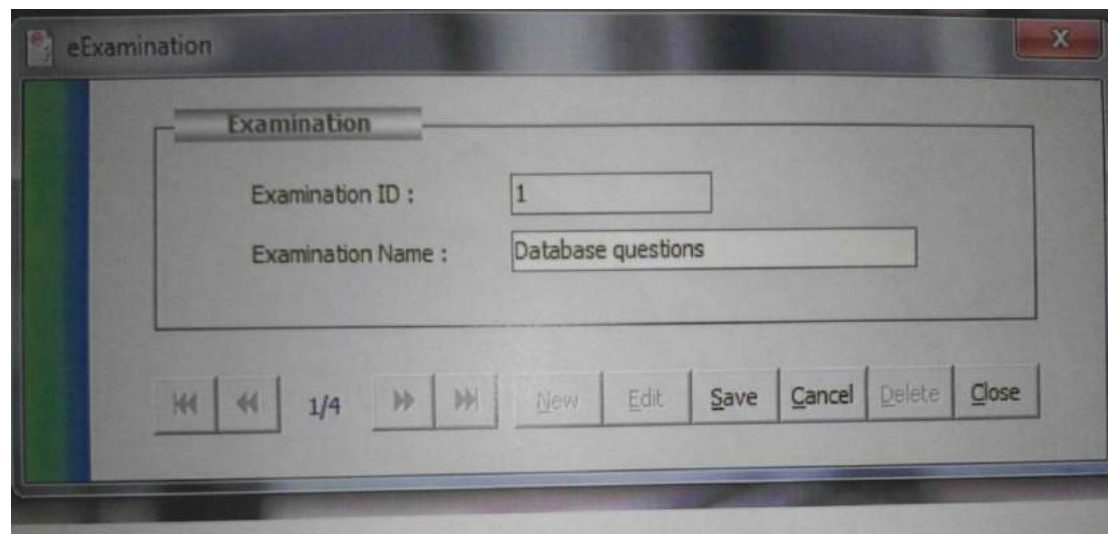|	
Old Password :	الباسوورد الحالي
New Password :	الباسوورد الجديد
Confirm Password :	اعادة كتابة الباسوورد الجديد

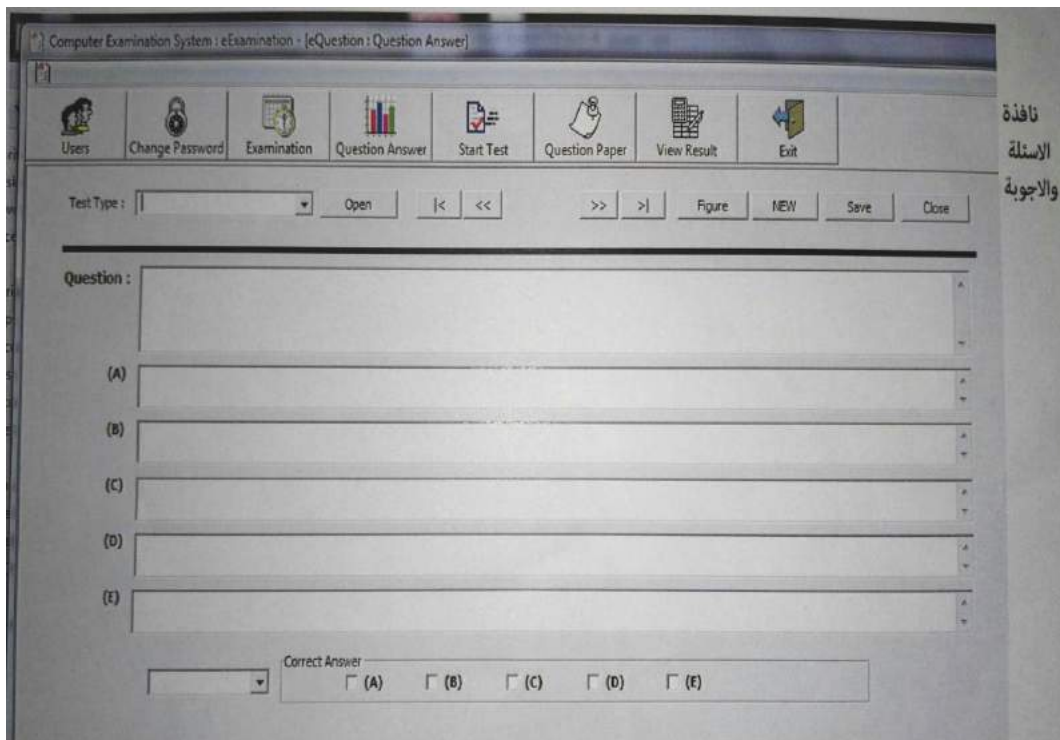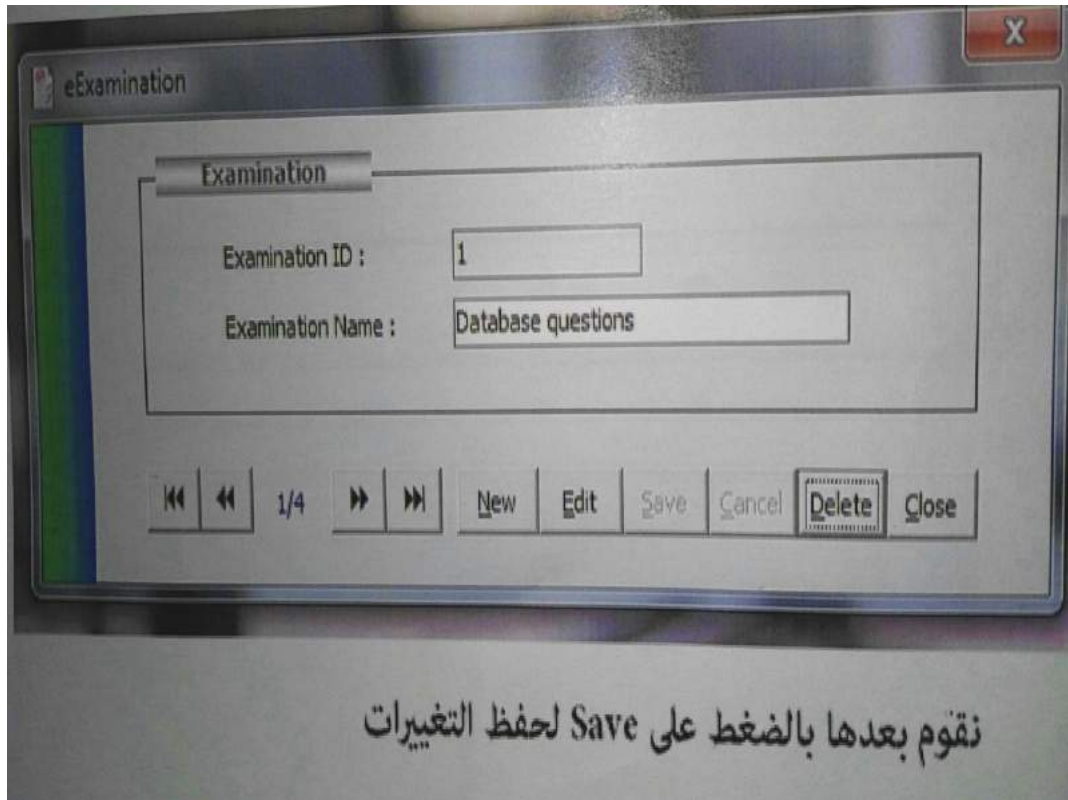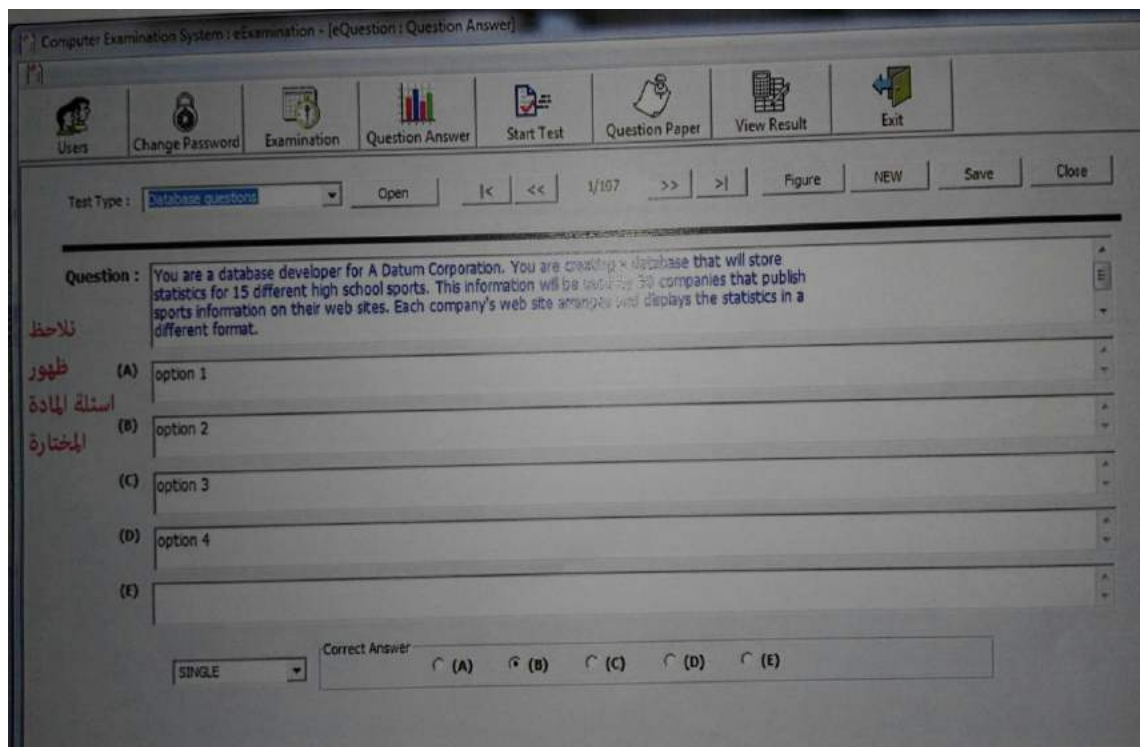OK   Cancel

نافذة تغيير باسوورد المستخدم
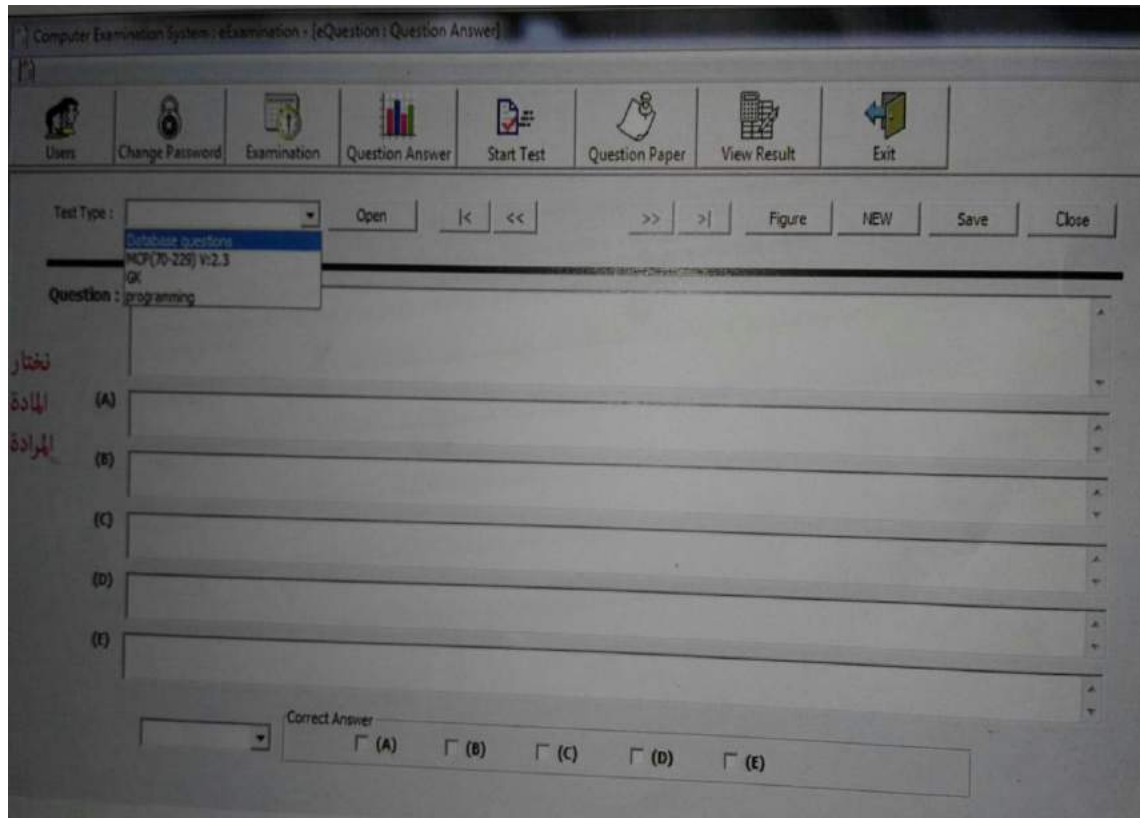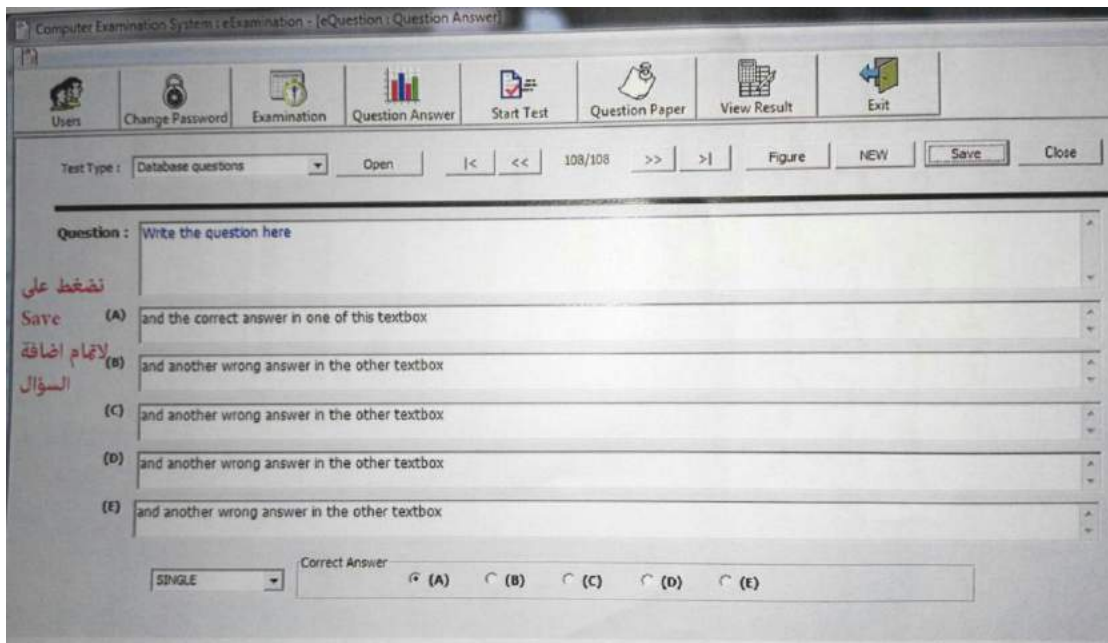
نافذة اضافة مادة جديد الى قاعدة البيانات او تغيير عنوانها او حذفها

بعد الضغط على Edit نقوم بتعديل عنوان مادة الامتحان كما في الصورة
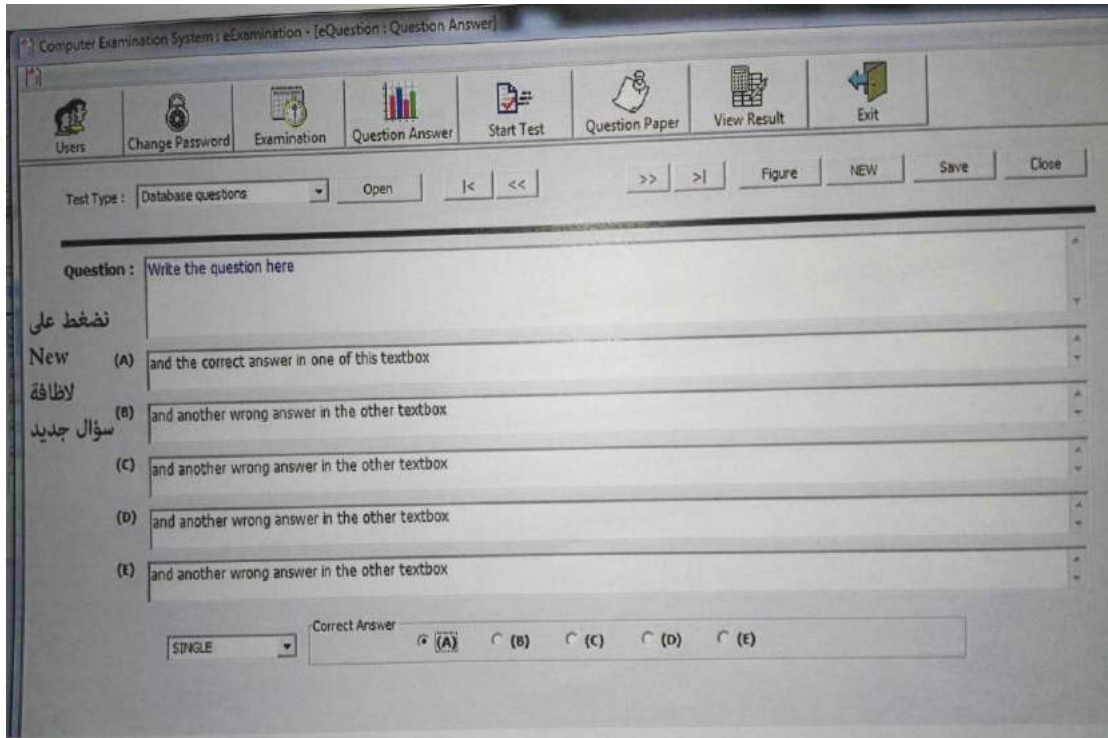
نقوم بعدها بالضغط على Save لحفظ التغييرات

نافذة
الاسئلة
والاجوبة

نختار
المادة
المرادة

نلاحظ
ظهور
اسئلة المادة
المختارة

نافذة البدء بالامتحان نقوم باختيار المادة المرادة وبعدها نختار عدد الاسئلة المراد الامتحان بها من Test Question ومن ثم نختار اذا اردنا جعل الاسئلة فقط متعددة الاجوبة من خيار Multuple choice only ام لا ومن ثم نختار Start

نافذة انشاء ورقة الاسئلة بعد اختيار المادة المرادة واختيار عدد الاسئلة نقوم بالضغط على Generate Paper
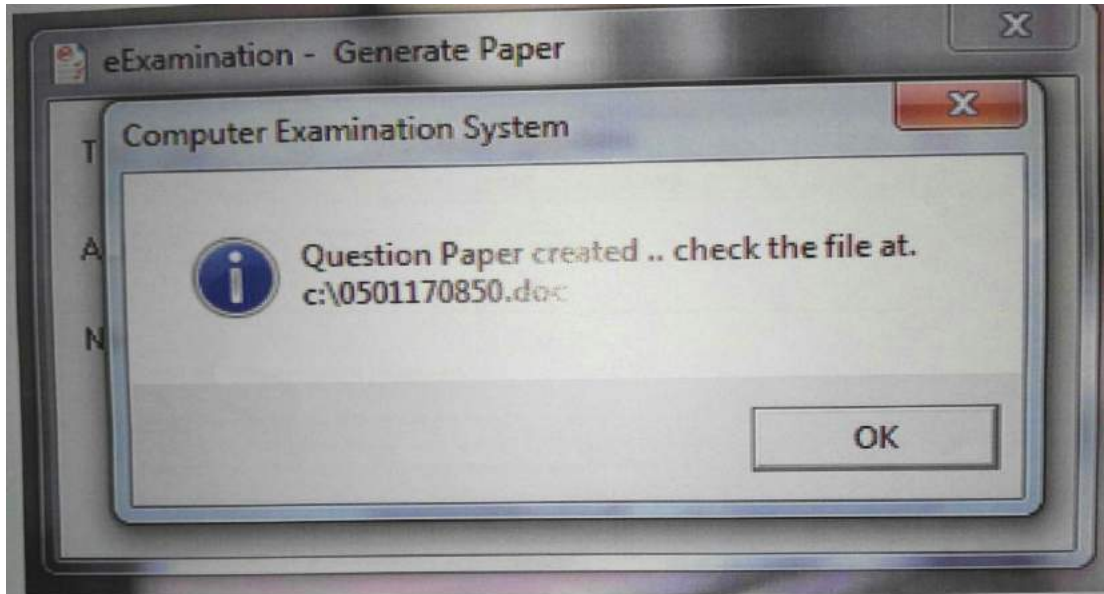
رسالة تظهر مكان الملف الحاوي على الاسئلة بعد انشاء
ورقة الاسئلة بنجاح
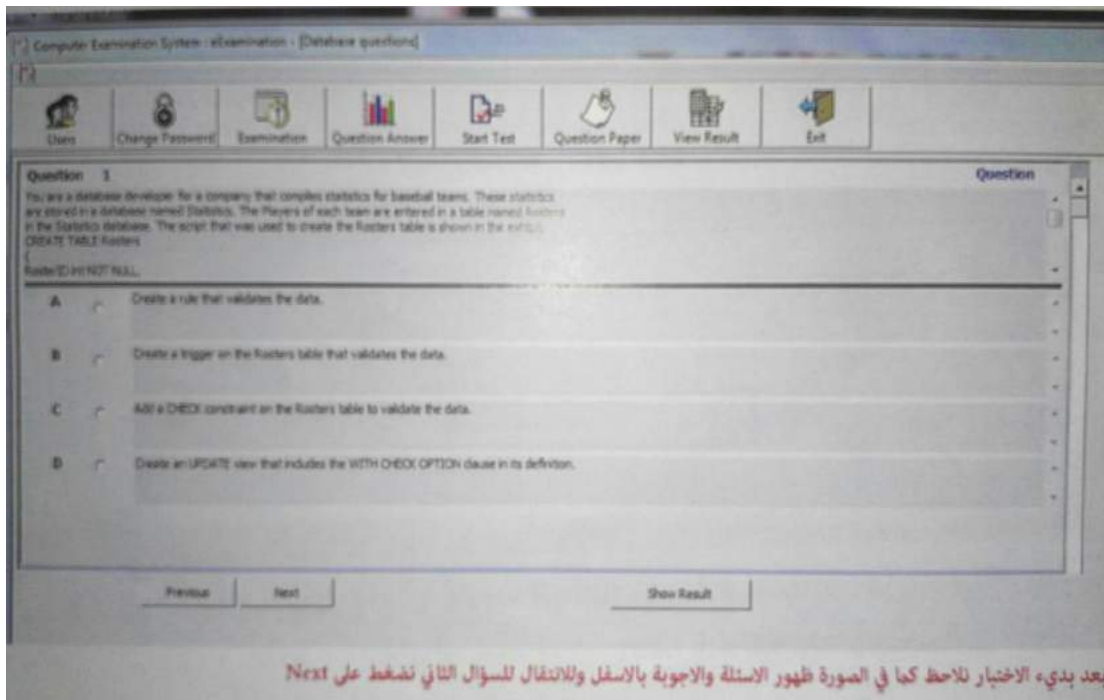
بعد بدء الاختبار نلاحظ كما في الصورة ظهور الاسئلة والاجوبة بالاسفل وللانتقال للسؤال الثاني نضغط على Next

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Results : Database questions

You Got : 10/100

View   Answers

بعد الانتهاء من الاجوبة نضغط على View Result لاضهار النتيجة النهائية ولمعرفة
الاجابات الصحيحة من الخاطئة نختار View Answers

Computer Examination System : eExamination - [View Answers]

| Users | Change Password | Examination | Question Answer | Start Test | Question Paper | View Result | Exit |

Question   1

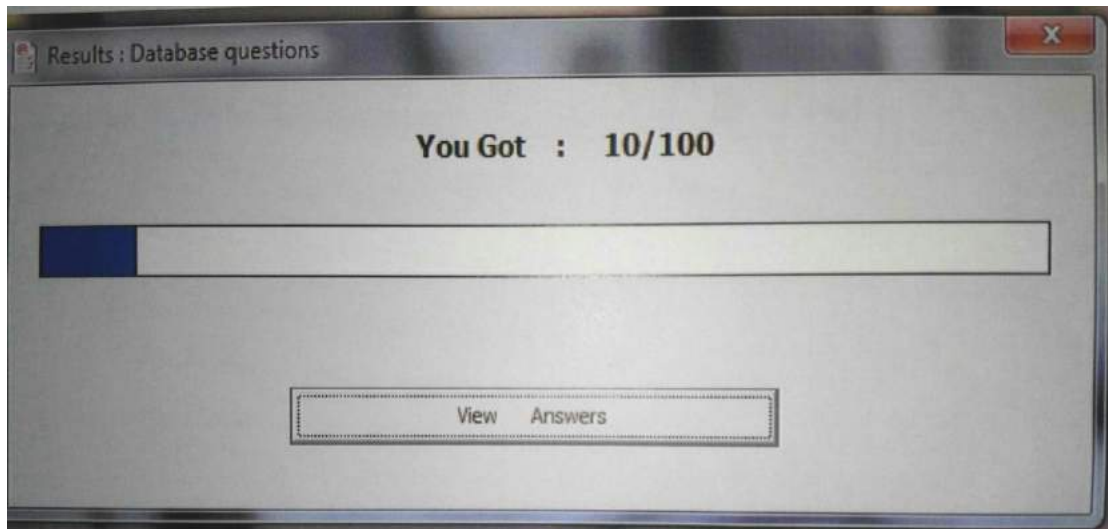You are a database developer for a company that compiles statistics for baseball teams. These statistics are stored in a database named Statistics. The Players of each team are entered in a table named Rosters in the Statistics database. The script that was used to create the Rosters table is shown in the exhibit.
CREATE TABLE Rosters
{

A ○ Create a rule that validates the data.

B ○ Create a trigger on the Rosters table that validates the data.

C ○ Add a CHECK constraint on the Rosters table to validate the data.

D ○ Create an UPDATE view that includes the WITH CHECK OPTION clause in its definition.

Previous   Next   Show Result

نافذة معرفة الاجوبة الصحيحة لكل سؤال وللانتقال بعد الاستئلة نضغط اما Next او Previous
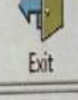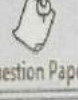
33

Computer Examination System : eExamination - [eQuestion : View Results]

| Users | Change Password | Examination | Question Answer | Start Test | Question Paper | View Result | Exit |

ID	ExamName	Candidate	Result	TotalQst	Percentage	AnsRight	AnsWrong
2	Database questions	ADMIN	Fail	5	0	0	
3	Database questions	ADMIN	Fail	9	0	0	
4	Database questions	ADMIN	Fail	5	40	2	
5	Database questions	ADMIN	Fail	10	0	0	
6	Database questions	ADMIN	First Class	5	80	4	
7	Database questions	ADMIN	First Class	5	80	4	
8	Database questions	ADMIN	Fail	10	20	2	
9	Database questions	ADMIN	Fail	5	20	1	
10	Database questions	ADMIN	Fail	19	0	0	
11	Database questions	ADMIN	Fail	9	33.33	3	
12	GK	MANAR	Fail	2	0	0	
13	Database questions	MANAR	Fail	10	0	0	
14	Database questions	ADMIN	Fail	4	25	1	
15	Database questions	ADMIN	Fail	10	10	1	
16	Database questions	ADMIN	Fail	10	10	1	

نافذة اظهار نتائج الاختبار للمستخدمين

Conclusions and Recommendations

Conclusions:

We can to deduce from this project this proposed **Computer Based Testing System** *it will run in* client server mode and user can add edit question master, prepare question papers, give test and view results. System will store question bank; user can prepare question paper for any subjects. And Computer Based Testing System – e Examination is complete solution to cover all aspects of Computer Examination System .The basic objective of developing this project is Provides complete client server solution, including managing question bank, giving tests, storing of results .The e Examination system can automatically add the marks allocated in each question to determine the total mark for the test .Using this feature the questions can be selected from the question Bank, Additional to the already available questions in the question bank, the system user has the ability to add more questions as per the subject .System users also have the ability to modify the user-defined questions and not the already available questions in the question bank .Question paper can be saved or print for further use .Test result must save and can be retrieving later on .Question must provide answer type like multiple right answer selection and one right answer selection. Test screen must provide options accordingly .System must able to evaluate the examination and display the result instantly, student must view the correct answer after complete the test .System has powerful logical access management in place, each user must be identified by login id and strict password policy is applied to secure the system. All details will be available on a click . and Faster retrieval of information about the test and results . and as well Provide facility for proper monitoring reduce paper work and provide data security.

Recommendations:

Future Enhancement

This project was developed to fulfill user requirement; however, there are lots of scope to improve the performance of the e Examination Application in the area of user interface, database performance, and query processing time. Etc.

So there are many things for future enhancement of this project. The future enhancements that are possible in the project are as follows.

- Linking and integration of other educational application.
- Integration with university database through Web Services
- Connection to third-party OLAP applications
- In the area of data security and system security.
- Provide more tips and help.
- To optimize the query which is embedded in the system.

The References

Websites:

Following websites are referring to create this project reports.

- http://www.google.com

- http://www.microsoft.com

- http://www.programmer2programmer.net

- http://www.codeproject.com

- http://www.asp.net

- http://www.asp123.com

- http://www.wikipedia.org

Books:

Following books and e book are used to complete this project reports.

- Mastering Visual Basic (Paperback)

- SQL Server Bible (Paperback)

- Visual Basic Black Book (Paperback)

- Professional Visual Studio, 2nd Edition (Paperback)