Kingdom of Saudi Arabia
Majmaah University
Ministry of Higher
Education
College of Science Al
Zulfi

المملكة العربية السعودية
وزارة التعليم العالي
جامعة المجمعة
كلية العلوم
قسم الحاسب اآللي

# Website to Help High
# School Students Pass the Proficiency Test

Student Affairs System
For College of science Al Zulfi
Department of Computer Science and Information

## Graduation Project

Submitted in partial fulfillment of the requirements for the
award of
Bachelor degree of the Majmaah University

(November 2018)

Submitted by:

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Under the supervision of:
D. Maria Altaib

# ABSTRACT

A measurement test is defined as a choice that measures student's analytical and deductive skills. It focuses on testing the student's ability to learn in general regardless of any specific skill in a particular topic or subject.

The project aims to help students pass a measurement test by focusing primarily on understanding the test and achieving a high degree of proficiency by providing all the requirements they need to pass the test.

It also aims to help many students and their students introduce and understand the way to test questions and know them more clearly by collecting pre-test questions and doing short tests to help understand.

This project will be implemented using UML, PHP programming language and MySQL databases to implement the system.

The expected results of this project are the success of the site, the passing of a large number of students and the realization of their dream, God willing, to enter the university and the department they wish

## ACKNOWLEDGMENTS

# Certificate by student

This is to certify that the project titled "Website to Help High School Students Pass the Proficiency Test " submitted by me

(Sara alhammadi,351205394) under the supervision of T. Maria Altaib  for award of

Bachelor degree of the Majmaah University carried out during the Semester 1, 2018-19 embodies my orginal work.

Signature in full: -------------------------------

Name in block letters:

Student ID: 351205394

Date:

**Table of Contents**

# List of Figures

# List of Tables

**Chapter one**

**Introduction**

# Chapter 1: Introduction

## 1.1 Overview:

Today the Internet is the most powerful tool in the world. The Internet is a collection of various services and resources. However, like every single innovation in science and technology, Internet has its own advantages and disadvantages.Internet has played an important part in our daily life, and in fact, it brings us lots of advantages, and the first I want to mention is communication. The foremost target of Internet has always been the communication Technology is the technical means people use to improve their surroundings. It is also knowledge of using tools and machines to do tasks efficiently. We use technology to control the world in which we live. Technology is people using knowledge, tools, and systems to make their lives easier and better. Test Measurement This test measures the student's analytical and deductive skills. It focuses on testing the student's ability to learn in general regardless of any specific skill in a particular subject or topic.

## 1.2 Problem definition:

1. Students do not understand the questions test measurement.

2. The measurement exam is generally difficult

3. The student was not able to determine sufficient amount of information about the questions required in the measurement exam, which leads to students failing to pass

## 1.2.1 Goals:

Facilitate and simplify the possibility of passing so that the Saudi student can choose the university in which he wishes to register.

## 1.2.2 Objectives:

1. Ability to understand readability.

2. The ability to recognize logical relationships.

3. The ability to resolve issues based on the basic mathematical concepts.

4. The ability to conclude. 5. Ability to measure

## 1.2.3 Critical success factors:

Mobile website works and puts all that is important for testing and ease of use and a reference to benefit many students to help the success of the project.

## 1.3 Organization chart and responsibilities:

An organizational chart is a diagram that outlines the internal structure of a company. An organizational chart is the most common visual depiction of how an organization is structured. [1]
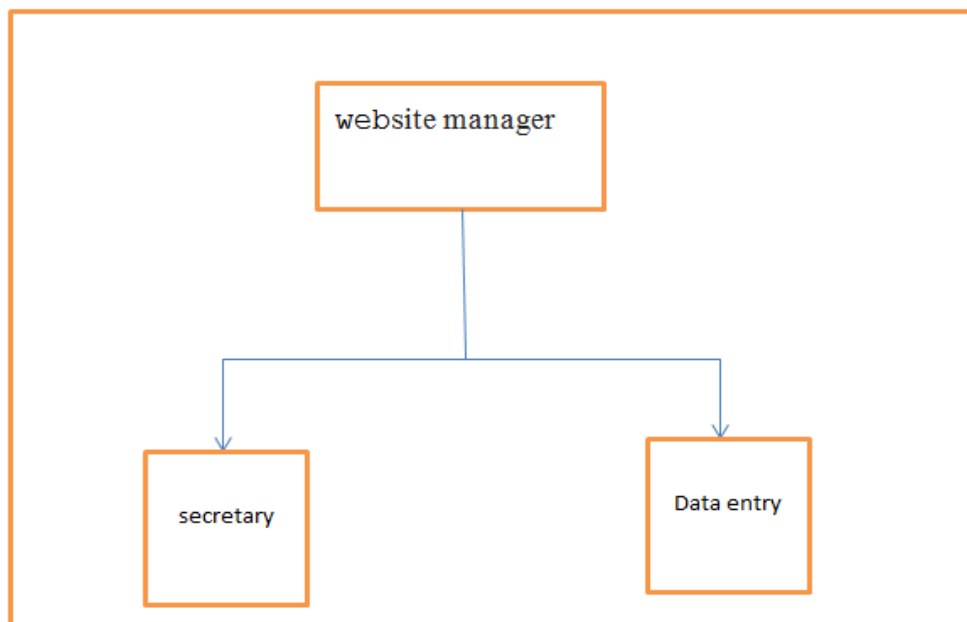


**Figure (1.1) organization chart and responsibilities**

## 1.4 Literature review:

## 1.4.1 Platform Non:

NON platform has been launched to provide its services in the training of capacity testing and achievement measurement in a new and innovative manner. [2]
The Nun platform demonstrates that it seeks to innovate and harness the latest technologies and the most intelligent practices to build effective and exciting learning experiences through artificial intelligence, interactive videos, interactive sketches, direct commentary, and the layout of electronic games in a robust educational system.

٣

Through modern education techniques, NON platform is the first smart, social, and fun platform to help students pass the competency test offered by the National Measurement Center in Saudi Arabia.

The Nun platform confirmed that it had helped and contributed, thank God, to training more than 750,000 students to pass measurement tests so far.



Figure (1.2) Platform Non

## 1.4.2 Education.com:

The concept of "Education.com" is a pioneering idea in the Arab world, aiming to pave the way for an interactive, interactive and interactive electronic learning environment in all areas of education for everyone, so that the user of the Arab Internet wherever he can find what he is looking for easily, Seeks to use education as a means to profitability online.[3]
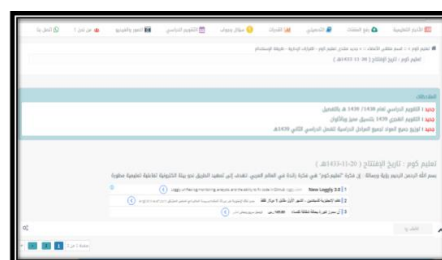


Figure (1.3) Education.com

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| Comparative face | Our system | Education.com | Platform NON |
| --- | --- | --- | --- |
| Interfaces in Arabic and English | Arabic language and English | Arabic language only | Arabic language only |
| Ease of use | √ | √ | X |
| Review previous tests | √ | X | √ |
| Link the site with social networking accounts | √ | X | X |
| Short test | √ | X | √ |
| Get results | √ | X | √ |
| free entry | √ | √ | X |
| Provide a question bank | √ | √ | √ |

Table 1.1(Literature Review)

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# Chapter two
# System Analysis

# Chapter 2: System Analysis.

## 2.1Introduction:

The fundamental four-phase model (planning, analysis, design, and implementation) is common to all information systems development projects.4

It describes the evolution of system development methodologies and discusses the roles and skills required of a systems analyst. This chapter shows the basic characteristics of objectoriented systems and the fundamentals of object-oriented systems analysis and design and closes with a description of the Unified Process and its extensions and the Unified Modeling Language.

## 2.1.1 Objectives:

- Understand the fundamental systems development life cycle and its four phases
- Understand the evolution of systems development methodologies
- Be familiar with the different roles played by and the skills of a systems analyst
- Be familiar with the basic characteristics of object-oriented systems
- Be familiar with the fundamental principles of object-oriented systems analysis and design
- Be familiar with the Unified Process, its extensions, and the Unified Modeling Language.

## 2.2 Description of Data Flow Diagram (DFD)

Systems analysts use many graphical techniques to describe an information system. One popular method is to draw a set of data flow diagrams.5 A data flow diagram (DFD) uses various symbols to show how the system transforms input data into useful information. Other graphical tools include object models, which are (Object Modeling), and entity-relationship diagrams. DFDs use four basic symbols that represent processes, data flows, data stores, and entities. Several different versions of DFD symbols exist, but they all serve the same purpose.

### 2.2.1 Elements of Data Flow Diagrams:

Process is an activity or a function that is performed for some specific business reason.

Data Flow is a single piece of data.

Data Store A data store is a collection of data that is stored in some way (which is determined later when creating the physical model).

External Entity An external entity is a person, organization, organization unit, or system that is external to the system, but interacts with it (e.g., customer, clearing- house, government organization, accounting system).

### 2.2.2 Context diagram

A system context diagram (SCD) in engineering is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it.[2] This diagram is a high level view of a system. It is similar to a block
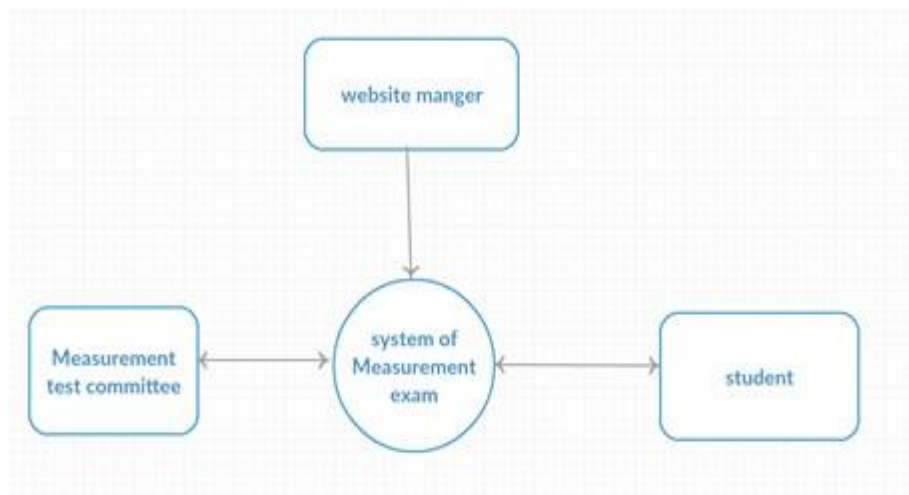
**Figure Context diagram (2.1)**

## 2.2.3 Overview diagram (level 0)

In the same way that the context diagram deliberately hides som of the system's complexity, so, too, does the level 0 DFD.

The level 0 DFD shows only how the major high-level processes in the system interact. Each process on the level 0 DFD can be decomposed into a more explicit DFD, called a level 1 diagram or level 1 DFD.7
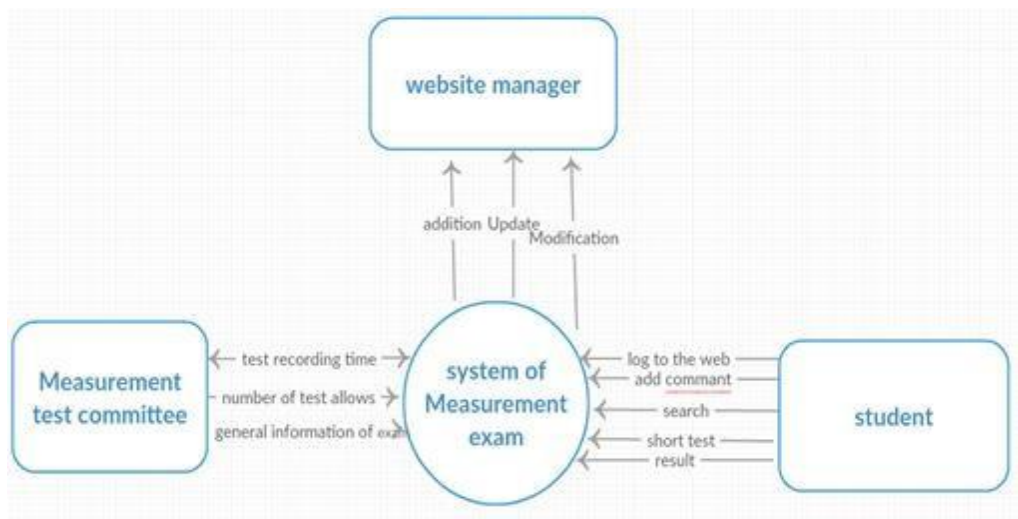


**Figure (2.2) Zero Level DFD**

## 2.3 Entity Relationship Diagram (ERD)

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how "entities" such as people, objects or concepts relate to each other within a system.8

ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes. They mirror grammatical structure, with entities as nouns and relationships as verbs.

### 2.3.1Uses of entity relationship diagrams

ER diagrams are used to model and design relational databases, in terms of logic and business rules (in a logical data model) and in terms of the specific technology to be implemented (in a physical data model.) In software engineering, an ER diagram is often an initial step in determining requirements for an information systems project. It's also later used to model a particular database or databases. A relational database has an equivalent relational table and can potentially be expressed that way as needed.

Database troubleshooting: ER diagrams are used to analyze existing databases to find and resolve problems in logic or deployment.

### 2.3.2 Description of entities

A definable thing such as a person, object, concept or event that can have data stored about it. Think of entities as nouns. Examples: a customer, student, car or product. .Typically it is shown as a rectangle

Entity type: A group of definable things, such as students or athletes, whereas the entity would be the specific student or athlete. Other examples: customers, cars or .products

Entity set: Same as an entity type, but defined at a particular point in time, such as students enrolled in a class on the first day. Other examples: Customers who purchased last month, cars currently registered in Florida. A related term is instance, .in which the specific person or car would be an instance of the entity set

Entity categories: Entities are categorized as strong, weak or associative. A strong entity can be defined solely by its own attributes, while a weak entity cannot. An .associative entity associates entities (or elements) within an entity set

Entity keys: Refers to an attribute that uniquely defines an entity in an entity set

## 2.3.3 Description of relations

Relation is sometimes used to refer to a table in a relational database but is more commonly used to describe the relationships that can be created between those tables in a relational database.

In relational databases, a relationship exists between two tables when one of them has a foreign key that references the primary key of the other table. This single fact allows relational databases to split and store data in different tables, yet still link the disparate data items together. It is one of the features that make relational databases such powerful and efficient stores of information.

The ability to define relationships is so fundamental and so important that this is what differentiates relational databases from other types of databases, such as flat-file databases. Relation, therefore, is the defining feature of relational databases. Relation may also be known as relationship.

## 2.3.4 Drawing ERD

Human Resource Management System entities and their attributes:

student: Attributes of student are student_id,student_number,student_name,student_email,student_username,student_pa ssw ord,student_phone.

User: Attributes of user are user_id,user_number,user_name,user_email,user_phone.

Test: Attributes of test are test_id,test_name,test_number,test_date,test_duration of test. Result of test: Attributes of result of test are id,result number,test data,result.

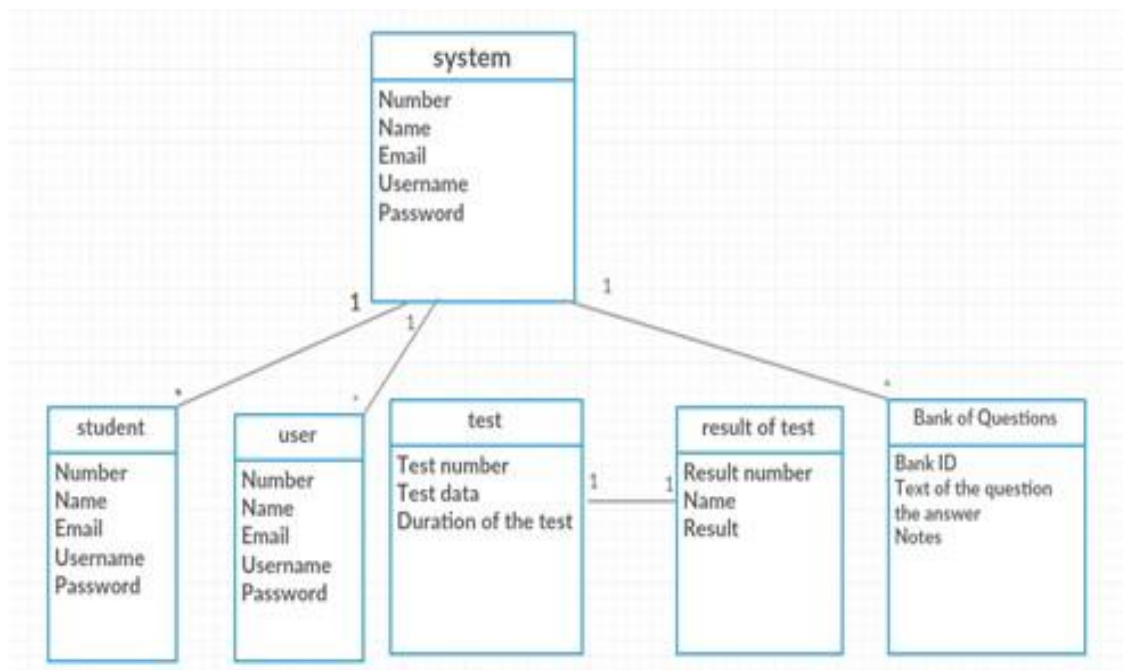Bank of questions: Attributes of Bank of questions are bankid,text of the qutions,the answer,note.


Figure (2.3) ER diagram

## 2.4 Use case Diagrams:

use cases are used to explain and document the interaction that is required between the user and the system to accomplish the user's task. Use cases are created to help the development team understand more fully the steps that are involved in accomplishing the user's goals. Once created, use cases often can be used to derive more detailed functional requirements for the new system.9

## 2.4.1 Use case for admin

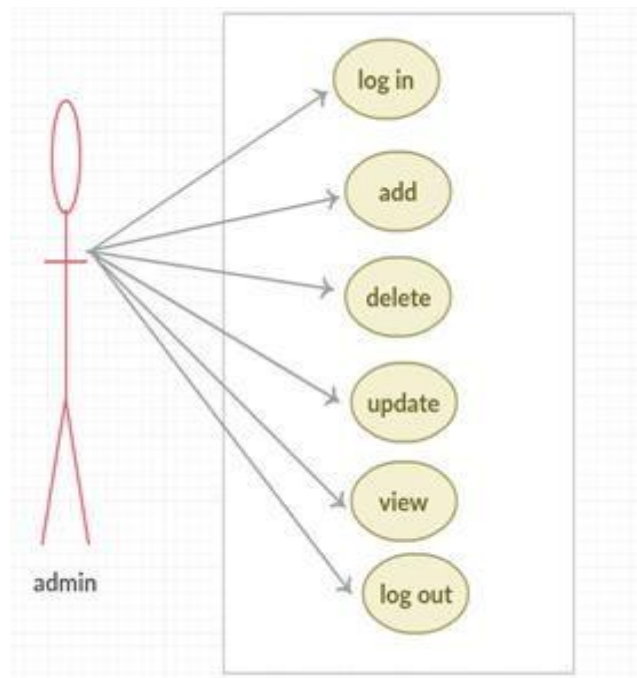As shown in figure (2.5) use case diagram (admin) has all the authority to add , delete , ,update and view.

Figure (2.4) Use case diagram for Admin
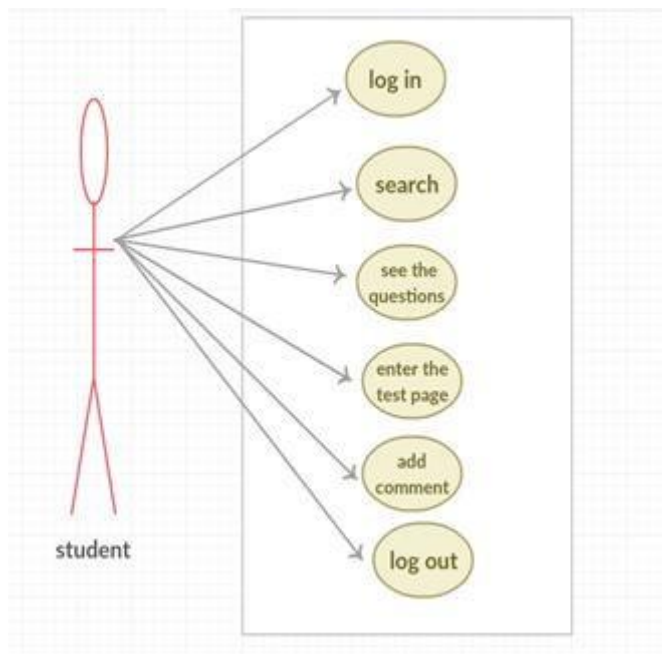
## 2.4.2 Use case for student



Figure (2.4) Use case diagram for student

## 2.5 Sequence diagram

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.10 Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios
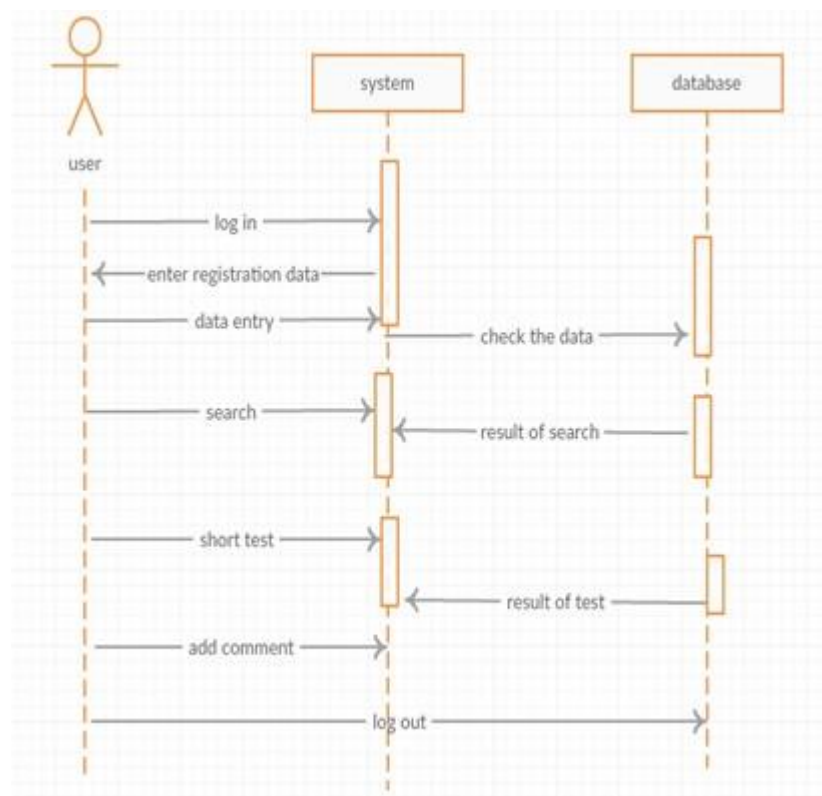


Figure (2.7) Sequence diagram

## 2.6 Class diagram:

The class diagram is a static model that supports the static view of the evolving system. [1]11It shows the classes and the relationships among the classes that remain constant in the system.
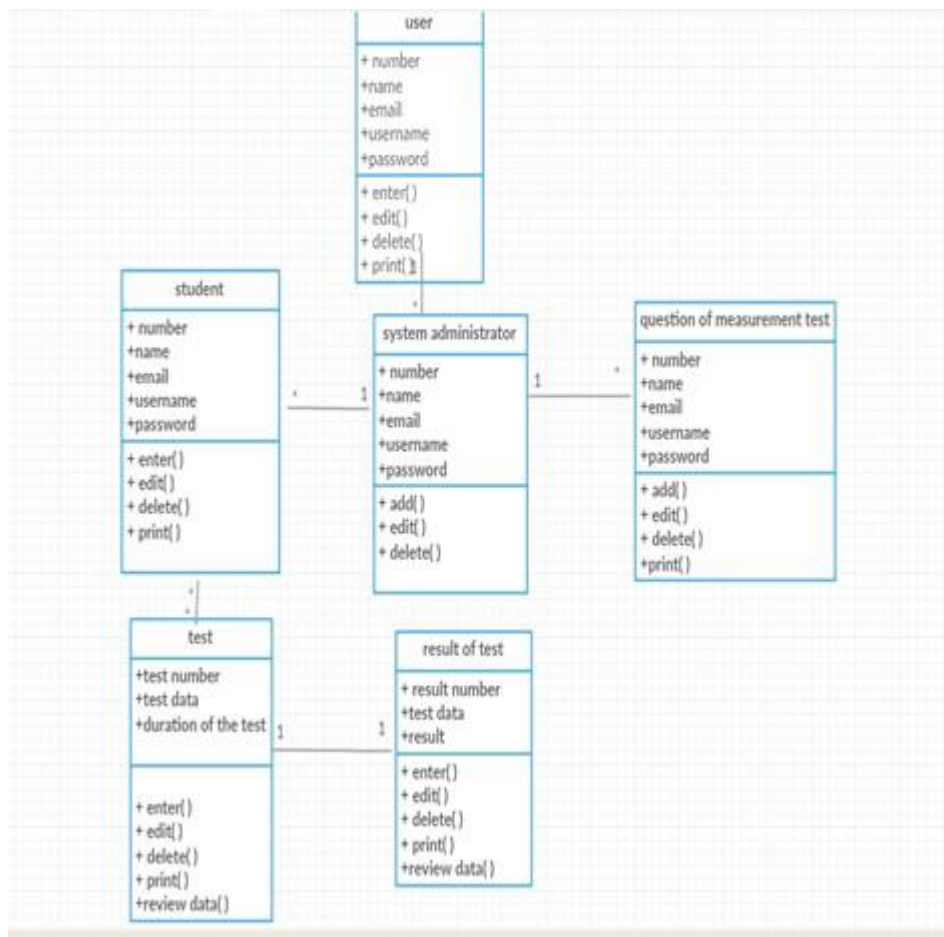


Figure (2.8) Class diagram

## 2.7 Activity diagram:

In Unified Modeling Language (UML), an activity diagram is a graphical representation of an executed set of procedural system activities and considered a state chart diagram variation. Activity diagrams describe parallel and conditional activities, use cases and system functions at a detailed level.12
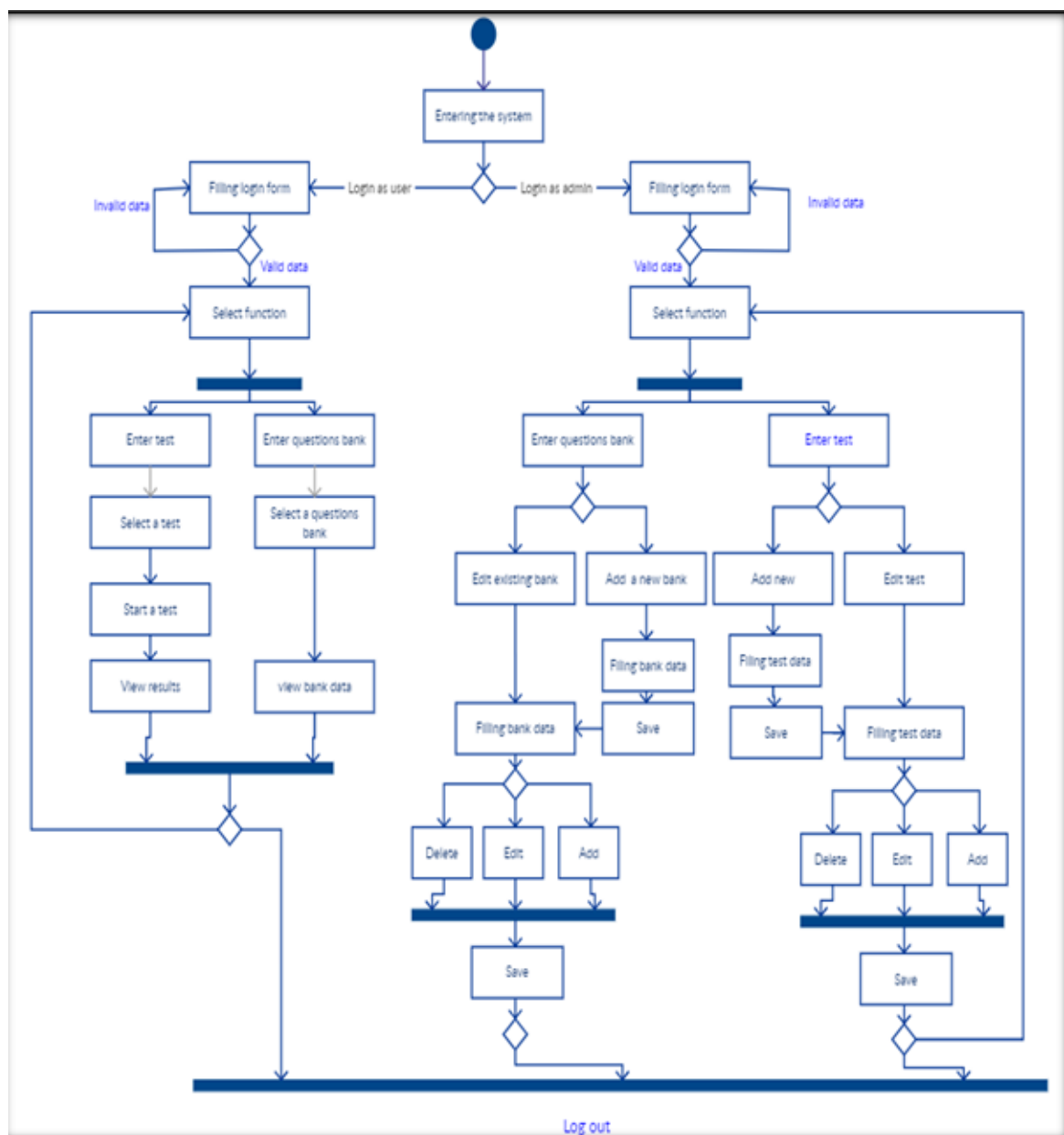


Figure (2.9) Activity diagram

# Chapter three

# System design

# Chapter3: System design

## 3.1 Description of procedures and function

## 3.1.1 Log in:

```php
<?php
  session_start();

        $conn = new mysqli('localhost', 'root', '', 'qiyas');
        if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);}

        $sql = "SELECT * FROM members WHERE m_email= '".$_POST['uemail']."'";
        $result = $conn->query($sql);

  if (!$result) {
  trigger_error('Invalid query: ' . $conn->error);
        echo"<center><h3>خطأ في معلومات الدخول</h3></center>";
        }
        else{

  if ($result->num_rows > 0){

   echo "<script>alert('Loged in Successfully');</script>";
  // output data of each row
  while($row = $result->fetch_assoc()) {
        if ($row["m_pass"] == $_POST['psw'] ){
                echo"<h1>Hi</h1>";
                $_SESSION['userid'] = $_POST['uemail'];
         $_SESSION['usernmae'] = $row["m_name"];
                header("Location: Home AR.html");
                echo "<script> location.href='Home AR.html'; </script>";
                exit;
        }
         else echo"<center><h3>Password Dosen't Match</h3></center>";
}
        }
        }
```

## 3.2 Relation Database Schema:

A relational database schema is the tables, columns and relationships that make up  a

relational database.

| Other User | | | |
|---|---|---|---|
| **Field name** | **ta typeDa** | **Measure** | **Note** |
| Number | Number | 10 | Primary key |
| Name | Text | 50 | |
| Email | Text | 30 | |
| Username | Text | 25 | |
| Password | Number | 20 | |

Table 1.2(other user)

| Result of test | | | |
|---|---|---|---|
| **Field name** | **Data type** | **Measure** | **Note** |
| **Result number** | Number | 20 | primary key |
| **Name** | Text | | |
| **sultRe** | Number | 4 | |

Table 1.3(result of test)

| Test | | | |
|---|---|---|---|
| **Field name** | **Data type** | **Measure** | **Note** |
| **Test number** | Number | 10 | primary key |
| **Test data** | Data | | |
| **Duration of the test** | Time | | |

Table 1.4(test)

## 3.3 Hardware and software requirements

## 3.3.1 Hardware requirements:

server

### 3.3.2  Software requirements:

1.Apache

2.Windows server

3.Dreamweaver

# Chapter for

# Implementation and Testing

# Chapter4: Implementation and Testing

## 4.1 Introduction

This chapter focuses on procedures, reports, layouts and report layouts.

## 4.2 Procedures .

I would like to mention that the website contains many important functions associated

with each other, but here I chose the most important functions of the project from my

point

of view and frequent most of the application because of its importance



## 4.3 Reports:

This Report takes form database SQL server Xampp

## 4.3.1 User of database:



## 4.3.2 Mark of database:



## 4.4 Layouts .



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# تعلم

اختبار قياس Qiyas (التقييم المدرسي اختبارات قياس قدرات طلاب المرحلة الثانوية والجامعية ) هي مجموعة اختبارات القبول للكلية في الجامعات السعودية ويقدمها الطلاب السعوديون في المرحلة الثانوية وقبل الالتحاق بالكلية وبعض الاختبارات بعد التخرج من الجامعة. وهو أحد اختبارات المركز الوطني للقياس والتقويم. الاختبارات متعددة منها اختبار القدرات الطلاب في الرياضيات واللغة العربية واختبار التحصيلي يقيس الطلاب في المواد العلمية للأولاد واختبار القبول واختبار القبول يقيس الطالبات في المواد العلمية وهناك اختبار الكفايات في اللغة الإنجليزية وهو اختبار محلي للغة الإنجليزية تقريبي للتوفل واختبار اللغة العربية وهو اختبار محلي للغة العربية لغير الناطقين بها هذه الاختبارات البعض إجباري والبعض اختياري للقبول في الجامعات والكليات وكل جامعة تشترط درجة محدده من أي اختبار قياس. [1]

[1] جميع اختبارات قياس مملوكة ومقدم ومنشور من قبل مجلس التعليم العالي وهي منظمة غير بحية في السعودية التي وضعت وطورت المركز الوطني للقياس والتقويم المشرفة على الأختبار

المؤيد بقرار مجلس الوزراء السعودي. من خلال موقعنا يمكننا مساعدة الطلاب في المرحلة الثانوية حيث انه يشتمل العديد من الاسئلة والاختبارات السابقه ومراجع كتب تساعد ع الفهم بشكل اكبر وحيث انه يوجد اختبار تجريبي للطلاب.

جدول اختبارات قياس

### اختبار القدرات العامة

| الفترة | نوع الاختبار | اللغة | الجنس | فترة التسجيل المبكر | فترة الاختبار |
|---|---|---|---|---|---|

**تعلم**

تسجيل الدخول | تسجيل جديد

| الرئيسية | قياس | الخدمات | تواصل معنا |

تعريف اختبار قياس

أقسام الاختبار

---

**تعلم**

تسجيل الدخول | تسجيل جديد

| الرئيسية | قياس | الخدمات | تواصل معنا |

. مراجع

. اختبار تجريبي

. أسئلة مختارة

. أخرى

. درجاتي

---

| الرئيسية | قياس | الخدمات | تواصل معنا |

الوقت المتبقي 01:58 دقيقة!

## اختبار تجريبي

1. تَكَتَّم:

| ا- اكتمل |
|---|
| ب- تخفى وتستر |
| ج- ضل عن الطريق |
| د- جمد |

2. وَضَمَة

| ا- بصمة |
|---|
| ب- الضوء الخافت |

تسجيل الدخول | تسجيل جديد

تعلم

الرئيسية | قياس | الخدمات | تواصل معنا

خدمات أخرى

منصة زون

موقع قياس

حسابات مساعده في تويتر: @qiyasonline , amalqhtani@

برامج تحميل من الجوال: القدرات, اختبار القدرات, qiyasscom,,قياس القدرات

وضع مواعيد الاختبارات للطلاب:

طريقة تسجيل للاختبار:



أسئلة مختارة للتدريب عليها

اختاري الإجابة الصحيحة

1- إذا كان يصرف تكاليف تسويق ما متوسطه ربع ريال على الوردة الواحدة, فكم يجب أن يبيع ليربح (1000)ريال في اليوم الواحد؟

1000 .1

2500 .2

4000 .3

5000 .4

الاجابه كميه البنزين = 4800 ÷ 96 = 50 لتر الخسارة = 6 × 50 = 300 هلله = 3 ريال

2- اذا كان سعر لتر بنزين من محطة داخل المدينة ب 90 هللة وخارج المدينة ب96 هللة كم ريال خسر الرجل عندما ملأ سيارته خارج المدينة ب48 ريال

2 .1

3 .2

4 .3

5 .4

الاجابه الصحيحه هي 4000 ورده



تسجيل الدخول | تسجيل جديد

تعلم

الرئيسية | قياس | الخدمات | تواصل معنا

| رقم الاختبار | اختيار السؤال الأول | الجواب | اختيار السؤال الثاني | الجواب | اختيار السؤال الثالث | الجواب | اختيار السؤال الرابع | الجواب | الدرجة |
|---|---|---|---|---|---|---|---|---|---|
| 0721 2018 | A | false | A | false | A | false | A | false | 0 |

## 4.5 Report Layouts:

show us the information we should write it to create account the name of user, eimail and password after the user write this information, will see this "statement "Account successfully added.



Once logged in, they can view the test page

Sign in to  admin view student results:

# تعلم

الرئيسية | قياس | الخدمات | تواصل معنا |

| اسم الطالب | رقم الاختبار | اختيار السؤال الأول | الجواب | اختيار السؤال الثاني | الجواب | اختيار السؤال الثالث | الجواب | اختيار السؤال الرابع | الجواب | الدرجة |
|---|---|---|---|---|---|---|---|---|---|---|
| fsae | 0721 2018 | A | false | A | false | A | false | A | false | 0 |
| saraa | 0123 2018 | C | false | B | true | B | true | B | false | 2 |
| sarah | 0807 2018 | C | false | B | false | C | false | C | true | 1 |
| امل | 0153 2018 | A | false | D | false | D | false | D | false | 0 |
| مها | 0202 2018 | B | true | B | true | A | false | C | false | 2 |

**Chapter five**

**Conclusion and Future Work**

# Chapter 5: Conclusion and Future Work

## 5.1Conclusion:

Our project is one of the most important systems that help students to obtain and share the forms of questions and tests among students and help them to understand it, which facilitates passing the exam.  Our project is designed to accommodate future upgrading and development without the need for building a new system to fit with the growing needs and demands of the system. Having this system hosted online means the ability of students to learn and understand test questions at any time beyond the boundaries and walls of college which add one more advantage to replacing the paper-based style.

## 5.2Future Work:

I suggest you continue to update and add items to the database. Sometimes we can add another trial test and a link in the database. Update the questions and learn all the new. Develop the site to become more effective.

Regardless of the fact that the basic objectives of the work have been met, there is still room for further improvement better and easier website. The solutions proffer by this application can be extended to other forms of our project. It is therefore recommended that further research be carried out on this work to improve it functionality and increase its features.

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