Gauge Your Knowledge

A Project Work
submitted in partial fulfillment of the
requirements for the degree of

Bachelor of Technology

in

Computer Science and Engineering

Submitted By
Sagar Raj

Under the supervision of

Dr.Raju Ranjan

GALGOTIAS UNIVERSITY

SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

GALGOTIAS UNIVERSITY, GREATER NOIDA – 201306

MAY 2020

CERTIFICATE

This is to certify that the project report entitled *"Gauge your knowledge"* **by Sagar Raj** of **Galgotias University (Greater Noida)** affiliated to **Deemed University** during the academic year 2020, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology (Computer Science and Engineering) is a bonafide record of the work carried out under our guidance and supervision at **Dr. Raju Ranjan**

.

ACKNOWLEDGEMENT

We feel immense pleasure and feel privileged in expressing our deepest and most sincere gratitude to our supervisor **Dr. Raju Ranjan** , for his excellent guidance throughout our project work. His kindness, dedication, hard work and attention to detail have been a great inspiration to us. Our heartfelt thanks to you ma'am for the unlimited support and patience shown to us. We would particularly like to thank him for all her help in patiently and carefully correcting all our manuscripts.

ABSTRACT

At a time when Covid-19 has created a panic situation worldwide, several countries are facing lockdown and classroom education is almost halted. E-Learning is an advance learning platform. There are various types of education platforms in the world and various institutions provides E-Learning platform. Our proposed E-Learning platform is based on software and it can access and store data of users. Here anyone can check the level of his/her knowledge using this platform. Also, one can set the level of examination. Result is shown using graphical method. In this E-Learning platform, we also provide study materials for practice. This learning platform can be accessed using internet on desktop, Laptop and smart phones. Admin can edit the details that have already been entered and delete if required. User should be able to view the available list of exams. Search option is also available with course name and technology. System will be able to provide marks to answered and not answered questions. System can also calculate the marks on the basis of rules. User can see the previous report also. System can also prepare user wise test report and present on the dashboard graph

Chapter 1

1.0 Introduction

- Providing the necessary inputs to the detailed requirements gathering phase and further on for the SDLC processes.

- This project also serves to establish the traceability between the Business Objectives and the requirements identified in the proposed solution and how they satisfy the stated objectives.

- This Project is about the generating question paper based on the user's selection of skillset and competency level.

- The purpose of this document is to systematically capture the requirements of the project and the system to be developed. The document also captures the Functional requirements and serves as an input for the scope of project.

- This project is about generating a question paper where the and user would login to ake the test and gauge his/her knowledge whereas admi would login to delete update and add questions based on skillset and competency level.

- Below are the objective that shall be fulfilled post the execution of this project:

- User registration & amp; credential authentication and admin login

- Test conduction where user / admin can take test to measure the depth of knowledge of subjects.

- Question generation based on course complexity.

- Graphical representation of knowledge based on marks of the test taken.

1.1 Purpose of this Project

Purpose of e-learning platform is to provide trainers, learners, and the others involved in education with information,

Tools and resources to support and enhance education delivery and management . one type of E-learning platform

is a learning management system (LMS). There are many E-learning companies out there that offer learning platforms.

Some of these platforms allow you to host and sell online courses. The purpose of successful E-learning platform is

That it creates a robust learning experience that feels like a classroom experience, offering the traditional classroom

Characteristics(like, instructor-student interaction , Question and answer ,discussion ,quizzes,etc.) but either online or through a device (e.g. a laptop, desktop, tablet or mobile.)

1.2 Project Overview

Creating an online Repository that can take es based on he skillset and competency level selected by the user and evaluation of the test.

An Interactive UI platform that allows the user to tale test and view his/her exam graphical representation of report.The user can also view his/her the details of all the previously attempted tests.

1.2.1 Objectives

Below are the objectives that shall be fulfilled post the execution of this project:

- User registration & credential authentication and admin login

- Test conduction where user/admin can take test to measure the depth of

- knowledge of subjects.

- Question generation based on course complexity.

- Graphical representation of knowledge based on marks of the test taken.

1.3 Intended Audience

- Interns/Project Team

- Mentors and SME's

1.3.1 Business Case

- The effectiveness of learning through testing knowledge on different skillsets and their compeency levels.

- The predominant objective is to enable the knowledge consumers with exams and provide them with effective graphical representation of he scores so that the user can keep track of his performance.

- An Interactive UI platform that allows the User to take test on a user friendly platform.

1.4 Technologies Recommended

Front End	Java (HTML5, CSS3, JavaScript,)
Middleware	Java (Spring, Spring MVC, Hibernate MVC, WEB API2)

1.5 Hardware and Software Requirements

Technology	Hardware	Software
Java	Desktop PC with 8GB RAM	1. Eclipse IDE for Java EE Developers (Neon) 2. Tomcat 9 3. MySQL Community Server 4. MySQL Workbench 8.0.14 6. Putty 7. WinSCP 5.9.4 8. Oracle 11g express version

1.6 Project Scope

Creating an online platform where questions are generated for test on the basis of skillset and comptency level selected by the user.

Every exam will have 10 questions and time limit.

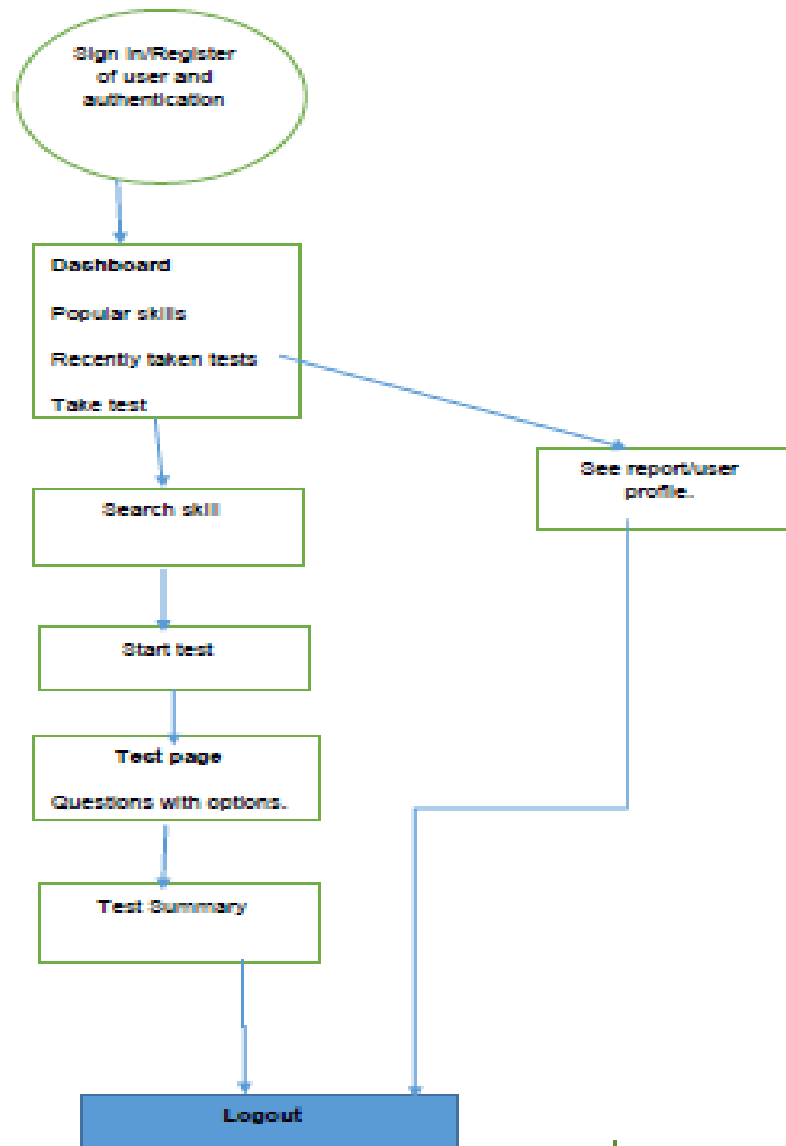An Interactive UI platform that allows the user to give exams interactively.

After exam given by the user ,the result will also be generated.

The result will be shown in percentage and show the numbers of question answered correctly out of given question.

Here we can check our previous attempts and you can also re-attempts questions.

Chapter 2

2.0 Process Architecture

```
        ┌─────────────────────┐
        │   Sign In/Register  │
        │    of user and      │
        │   authentication    │
        └─────────────────────┘
                   │
                   ▼
   ┌──────────────────────────┐
   │ Dashboard                │
   │                          │
   │ Popular skills           │──────────────┐
   │                          │              │
   │ Recently taken tests     │              │
   │                          │              ▼
   │ Take test                │    ┌──────────────────────┐
   └──────────────────────────┘    │  See report/user     │
                   │                │      profile.        │
                   ▼                └──────────────────────┘
   ┌──────────────────────────┐              │
   │      Search skill        │              │
   └──────────────────────────┘              │
                   │                          │
                   ▼                          │
   ┌──────────────────────────┐              │
   │       Start test         │              │
   └──────────────────────────┘              │
                   │                          │
                   ▼                          │
   ┌──────────────────────────┐              │
   │      Test page           │              │
   │  Questions with options. │              │
   └──────────────────────────┘              │
                   │                          │
                   ▼                          │
   ┌──────────────────────────┐              │
   │      Test Summary        │              │
   └──────────────────────────┘              │
                   │                          │
                   ▼                          ▼
        ┌──────────────────────────────────────┐
        │              Logout                  │
        └──────────────────────────────────────┘
```

Chapter 3

3.0 High Level Business Requirements

S.No.	Business Requirement ID	Short Description	Description in detail	Interacting Business Processes
1	REQ_1	User Registration	Ability of the system to procure the fundamental details of the user	
2	REQ_2	User/admin Authentication	Ability of the system to authenticate the user credentials of the registered user/admin	
3	REQ_3	Exam Details	Ability of the system to procure the exam details	
4	REQ_4	Update Questions	Ability of the system to update Questions and Answers for the competency and difficulty level.	
5	REQ_5	Test conduction	Ability of the system to generate questions based on subject chosen and complexity.	
6	REQ_6	Report generation	Ability of the system to calculate marks according to marking scheme of the test and questions. Ability of the system to show user their reports of the test	
7	REQ_7	Graphical representation	Ability of the syatem to show the knowledge level based on marks. Also the popular skills and top performers will be graphically represented.	
8	REQ_8	Logoff	Ability of User / Admin to log off	

3.1 Detailed Business Requirements

3.1.1 Functional Requirements

The functional requirements are projected below, for each of the high level requirements called out in the earlier section

Req. #	Rationale Categorization	Business Requirement	Req. Type *	Priority **	Originator ***	BR Traced to Business Requirement / Use case ID	Remarks
Req_1.1	User Registration	When the user clicks on the registration link, it should re-direct to registration form.	UI	Critical	NA	Req_1	
Req_1.2	User Registration	User needs to fill some of the basic attributes/fields as mentioned below in requirement: Emp ID, First Name, Last name, Email, Password	UI	Critical	NA	Req_1	Please refer to Table 1.0 under References
Req_1.3	User Registration	Clicking 'Submit' should validate the datatype constraints for each field	F	Critical	NA	Req_1	
Req_1.4	User Registration	User failing to provide information on the mandatory fields be provided with an alert message – 'Please update the highlighted mandatory field(s).' Also, highlight the missed out field in red	E	Medium	NA	Req_1	
Req_1.5	User Registration	Post-successful field level validation, save the information in the database	F	Critical	NA	Req_1	
Req_1.6	User Registration	Upon saving the information in the database, display the message 'Your details are submitted successfully'.	E	Medium	NA	Req_1	
Req_2.1	Credential Authentication	A registered user – is able click 'Login' link, after keying in 'UserID' & 'Password' field and get his credentials authenticated with the existing database entry.	F	Critical	NA	Req_2	Please refer to Table 1.0 under References
Req_3.1	Exam Details	Admin should be able to add the exam details and the competency.	F	Critical	NA	Req_3	Please refer to Table 2.0 under References

This requirement is out of scope for this project, and has been included here for a possible future release.

Req. #	Rationale Categorization	Business Requirement	Req. Type *	Priority **	Originator ***	BR Traced to Business Requirement / Use case ID	Remarks
Req_3.2	Exam Details	Admin should be able to edit the details already entered and delete if required.	F	Critical	NA	Req_3	
Req_3.3	Exam Details	Admin failing to provide information on the mandatory fields be provided with an alert message – 'Please update the highlighted mandatory field(s).' Also, highlight the missed out field in red	F	Critical	NA	Req_3	
Req_3.4	Exam Details	Post-successful field level validation, save the information in the database	E	Medium	NA	Req_3	
Req_3.5	Exam Details	User should be able to view the available list of exams. Search option should also be available. With course code, technology	F	Critical	NA	Req_3	
Req_4.1	Update Questions	Admin should be able to upload questions based on the Skills and Competency	F	Critical	NA	Req_4	
Req_4.2	Update Questions	Admin should have option for admin to edit options , questions, marks alloted to that question and correct Answers	F	Critical	NA	Req_4	
Req_4.3	Update Questions	Admin should be able to provide an option to delete questions and options .	F	Critical	NA	Req_4	
Req_5.1	Test Conduction	System should be able to pick some random question from the question pool based on the subject and difficulty level	F	Critical	NA	Req_5	Please refer to Table 3.0 under References
Req_5.2	Test Conduction	System should be able to mark the answered and unanswered questions.	F	Critical	NA	Req_5	
Req_5.3	Test Conduction	System should be able calculate marks on the basis of marking scheme.	F	Critical	NA	Req_5	
Req_5.4	Test Conduction	System should be able to have a timer so that test will end irrespective of completion of the test.	F,UI	High	NA	Req_5	
Req_6.1	Report Generation	User should be to see his previous test report.		Medium	NA	Req_6	
Req_6.2	Report Generation	User should be able to see answered and unanswered questions of a particular test taken by him/her.	UI	Medium	NA	Req_6	
Req_6.3	Report Generation	User should be able to report an issue if he/she feels that the generated report has something incorrect.	F	Medium	NA	Req_6	
Req_7.1	Graphical Representation	Sytem should be able to graphically represent the the knowledge of the users according to test taken	UI	Medium	NA	Req_7	Please refer to Table 4.0 under References

Req_7.2	Graphical Representation	Sytem should be able to graphically represent the most popular skills or the skills on which most people are taking test.	UI	Medium	NA	Req_7	

Req. #	Rationale Categorization	Business Requirement	Req. Type *	Priority **	Originator ***	BR Traced to Business Requirement / Use case ID	Remarks
Req_7.3	Graphical Representation	Sytem should be able to graphically represent the hierarchy of the topics included in a particular skill and also represent that how the skills are interconnected i.e. for learning a skills what all skill you should already posses and learning this skill you will be ready to learn more skills.	UI	Medium	NA	Req_7	
Req_8.1	Log off	System should be able to log off	F	High	NA	Req_8	

3.2 References

3.2.1 Table 1.0(User/Admin)

Field Name	Field Type	Data Type	Mandatory	Possible Values
First Name	Text(50)	Alphabetic	Yes	
Last Name	Text(50)	Alphabetic	Yes	
Email	Text(50)	Alphabetic	Yes	
UserId	Text(10)	Alphanumeric	Yes	Emp ID
Password	Text(15)	Alphanumeric	Yes	
Emp Type	Text(1)	Alphabetic	Yes	A – Admin U - User

3.2.2 Table 2.0(Exam)

Field Name	Field Type	Data Type	Mandatory	Possible Values
Exam ID	Text(20)	Alphabetic	Yes	
Exam Description	Text(100)	Alphabetic	Yes	
Skill set	Text(20)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level - 3

3.2.3 Table (Question)

Field Name	Field Type	Data Type	Mandatory	Possible Values
Question ID	AlphaNumeric(10)	Numeric	Yes	System Generated
Question creator	Text(15)	Alphanumeric	Yes	Admin User id
Question	Text(500)	Alphabetic	Yes	
Choice 1	Text(500)	Alphabetic	Yes	
Choice 2	Text(500)	Alphabetic	Yes	
Choice 3	Text(500)	Alphabetic	No	
Choice 4	Text(500)	Alphabetic	No	
Selection	Text(1)	Alphabetic	Yes	R – Radio button C – Check box
Skill set	Text(20)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level – 3
Mark	Numeric(2)	Numeric	Yes	

3.2.4 Table (Assessment)

Field Name	Field Type	Data Type	Mandatory	Possible Values
User ID	Text(10)	Alphanumeric	Yes	
Assesessment id	Number	numeric	yes	
Exam ID	Text(20)	Alphabetic	Yes	
Exam Description	Text(100)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level - 3
Score	Number(3)	numeric	yes	
Start time	Time	Time	yes	
End time	Time	Time	yes	

3.2   Use case 'User Registration'

3.2.1 Use case attributes

Use Case Description:

This use case deals with the capture of user details. The 'user' here shall be the operator of the system and will be keying in the user details.

Scope:

- User registration

Actors:

- User – the operator

Trigger:

Click 'Register' button in the 'User Registration' page

Pre-Condition:

User being able to access the homepage & get redirected to the 'User Registration' page upon click of 'Register' link on the login page.

Post Condition:

User is in the registration page & submit details

Flow of Events:

User at homepage → Clicks at Register → User at registration page → User details are submitted and added onto the database → Click login link → User is in the login page

Primary Scenario:

A new user – is able to click 'Register' link and able to provide his details and get registered in the system.

3.3.2 Business Rules

Business rules should be defined using the following attributes: -

- When the user clicks on the register link, it should re-direct to registration form.
- User needs to fill some of the basic attributes/fields as mentioned below in requirement: First Name, Last Name, E-Mail, Password, User Id Employee type;
- Clicking 'Register' should validate the datatype constraints for each field
- Post-successful field level validation, save the information in the database
- Upon saving the information in the database, display the message 'Your have successfully registered'.

3.3.3 UI Requirements

Here is a prototype on how the homepage should look like.

Here is a prototype on how the 'New User Registration Form' page should look like.
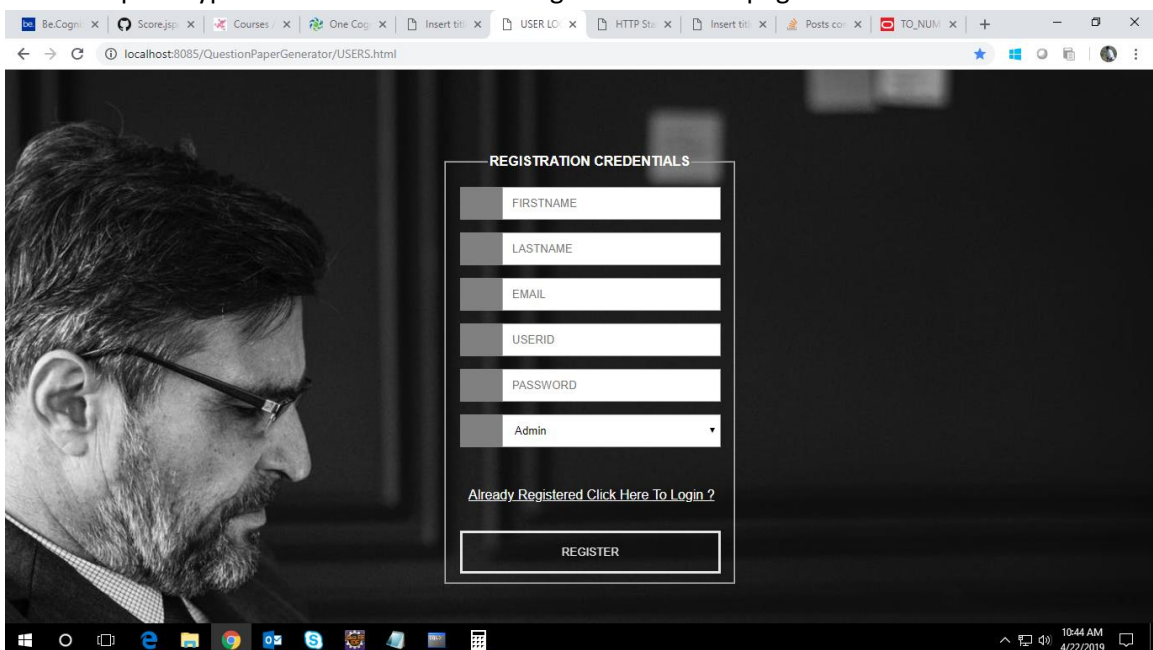
3.3.4 UI Field Validations

Please refer to the below requirements for field level validations:

- All fields are mandatory.
- The Email ID format must be checked.
- First Name, Last Name should contain only alphabets.
- Employee Type must be selected from the drop-down list.

3.2 Use case 'User Login Credential Authentication'

3.4.1 Use case attributes

Use Case Description:

This use case deals with the authentication of the user credentials. The 'user' here shall be the operator of the system and will be keying in the user information into the system.

Scope:
- User credentials authentication

Actors:
User – the operator

Trigger:

Click 'Login' link, after keying in 'Email' & 'Password' field.

Pre-Condition:

User being able to access the login page.

Post Condition:

User is in the Question Paper Generator.

Flow of Events:

User at homepage → Click login → User in Login Page →Key in 'Email' & 'Password' field → User credentials are validated → User on Dashboard page.

Primary Scenario:

A registered user – is able to click 'Login' after keying in 'Email' & 'Password' field and get his credentials authenticated with the existing database entry.

Alternative Scenario:

A registered user – is able to click 'Login' link, after keying in 'Email' & 'Password' field and unable to get his credentials authenticated. The user is presented with relevant error messages: Invalid Email or password.

3.4.2 Business Rules

Business rules should be defined using the following attributes:-

- A registered user – is able click 'Login' link, after keying in 'Email'' & 'Password' field and get his credentials authenticated with the existing database entry.

3.4.3 UI Requirements

Here is a prototype on how the Login should look like
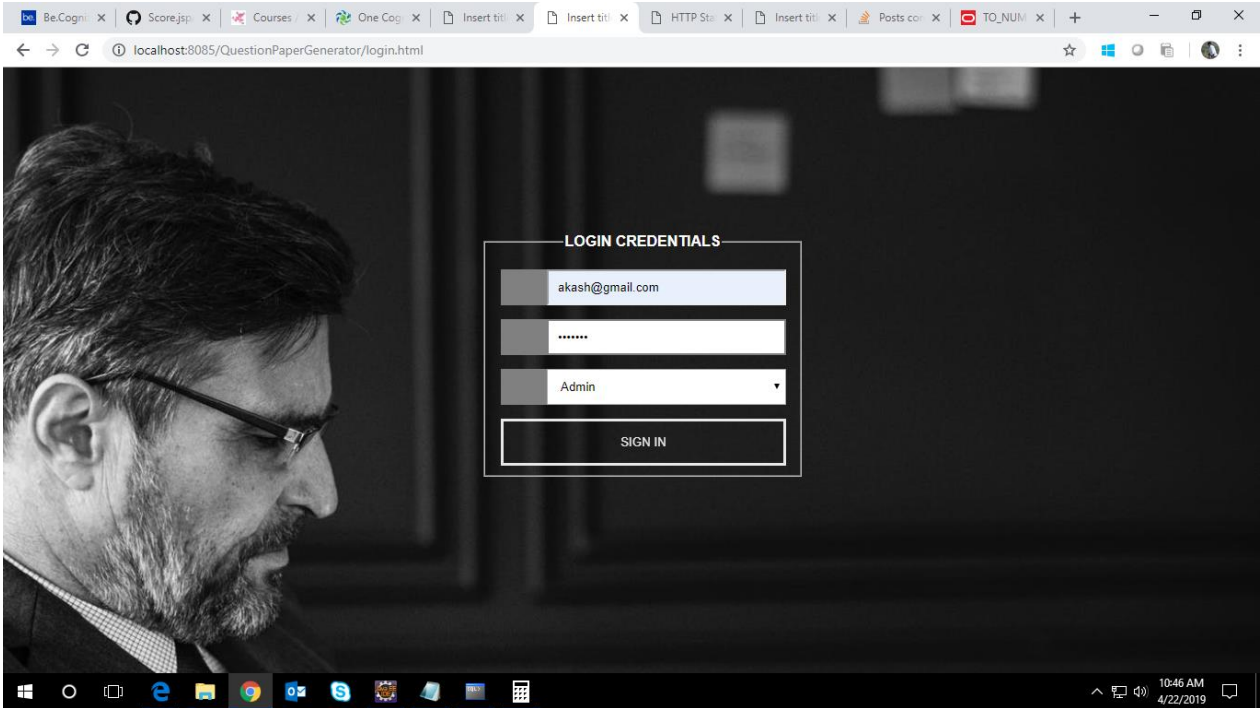
Here is a prototype on how the DashBoard should look like.
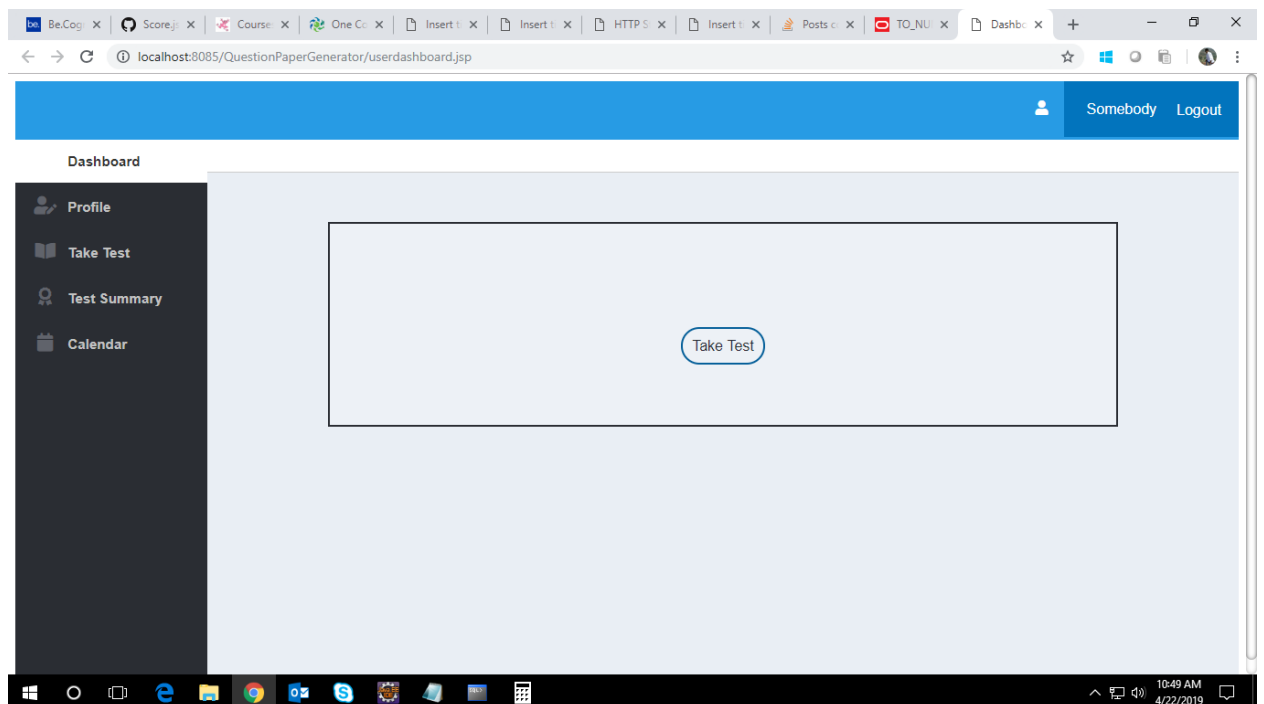
3.5 Use case 'Admin Registration'

3.5.1 Use case attributes

Use Case Description:

This use case deals with the capture of admin details. The 'admin' here shall be the operator of the system and will be keying in the admin details.

Scope:

- Admin Registration

Actors:

- Admin – the operator

Trigger:

Admin should get redirected to the 'Admin Registration' page upon clicking on the 'Admin Registration'

Pre-Condition:

Admin should be able to get redirected to the 'Admin Registration' page upon clicking the Registration→admin on the registration page.

Post Condition:

Admin is in the registration page and after registration it can delete, update or add a question.

Flow of Events:

User at homepage →(Registered) User at login page → Click 'Login' button → details are submitted and added onto the database

Primary Scenario:

Admin – is able to click 'Admin Registration' and able to provide admin details and get admin registered into the system.

Here is a prototype on how the Admin Registration should look like.
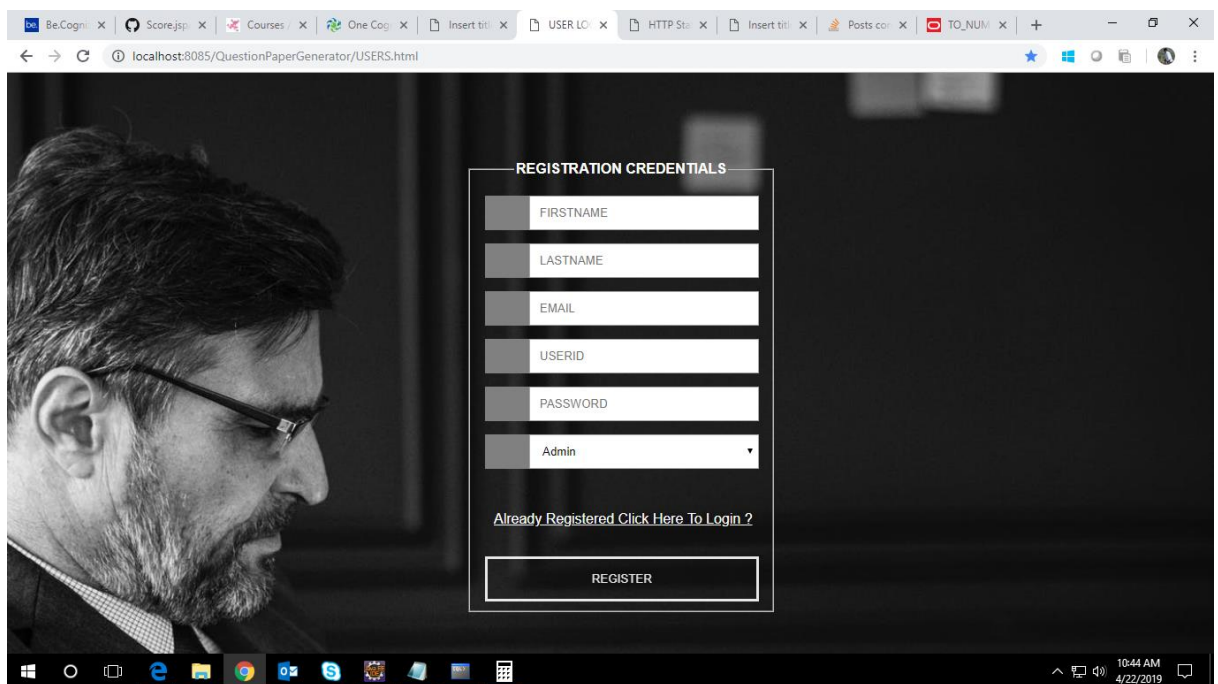
3.5.2. Business Rules

Business rules should be defined using the following attributes: -

- When the admin clicks on the Admin registration link, it should re-direct to admin registration form.
- User needs to fill some of the basic attributes namely first name, last name,email,,password and select employee type as 'A';
- Clicking 'Register' should validate the datatype constraints for each field
- Post-successful field level validation, save the information in the database
- Upon saving the information in the database, display the message 'Your have successfully registered'.

3.5.3 UI Requirements

Here is a prototype on how the admin registration page should look like.

3.6 Use case 'Take Test'

3.6.1 Use case attributes

Use Case Description:

This use case deals with the ability to take test pertaining to two categories that are skillset and competency level. The 'user' here shall be the operator of the system and will be keying in the answers.

Scope:

- Take Test

Actors:

- User – the operator

Trigger:

Click 'Next' and 'Previous' button in the Test page and 'Finish' button at the end of the test.

Pre-Condition:

User being able to access the 'Test' page. User being able to reach 'Test' page by selecting skillset and competency level on dashboard and then by clicking on 'Take Test' button. Then the user will be directed to test page where user can give test. User can answer question by clicking on radio button or checkboxes depending on the pattern of the test, User can click 'next' button to go to the next question and 'Prev' button to go the previous question and user must click 'Finish' button in order to submit the test. Once the user will submit the test he will be redirected to the result page.

Post Condition:

User is displayed a popup displaying the message "Test Submitted" and is redirected to the 'Result' page.

Flow of Events:

User at homepage → User at login page → Click 'Login' button → Click 'Take Test' button on dashboard ->User at test page → User key in the answers→ User click on 'finish' button to submit test. → Test details are submitted to database -> User redirected to 'Result' page.

Primary Scenario:

A user is able to mark one answer or multiple answers as the requirement of the question and submit the test by clicking on 'finish' button.

3.6.2 Business Rules

Business rules should be defined using the following attributes: -

- When the user clicks Take Test button on dashboard, it is redirected to the 'Test' page where the user is provided with question and four options for each question.
- User needs to answer the question by clicking on radio button for single answer and checkboxes for multiple answers.
- User can also click on 'previous' and 'next' button to go the previous and next question respectively.
- User must click on the 'finish' button to submit the test or else the test will be automatically submitted according to the timer in the test.
- After the test gets submitted user is displayed a popup displaying the message Test Submitted".

3.6.3 UI Requirements

Here is a prototype on how the 'Test" page should look like.
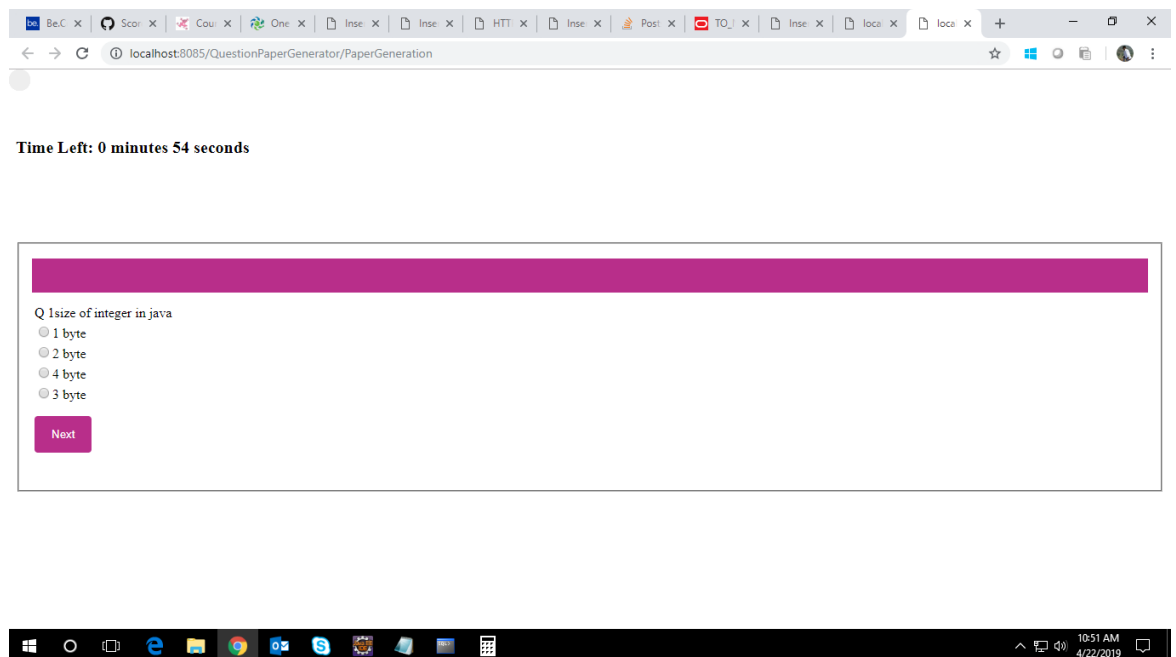
3.6.4 UI Field Validations

User must click on the 'finish' button to submit the test.

3.7 Use case 'Test Summary'

3.7.1 Use case attributes

Use Case Description: Previous test details.

Scope: Test Summary.

Actors:

- User – the operator

Trigger:

Click on previous test on the dashboard.

Pre-Condition:

User must have given at least one test to view previous test details.

Post Condition:

User is in the 'Previous test details' page where all the details corresponding to the previous test attempted by the user.

Flow of Events:

User at homepage → Click login → User at login page → Click 'Login' button ->User at dashboard→ Click on 'Test Summary' → User is in the test summary page.

Primary Scenario:

A user – is able to click previous test button and is able to see all the details of the previous tests attempted by the user.

3.7.2 Business Rules

Business rules should be defined using the following attributes: -

- When the user clicks on the test summary button, it should re-direct to the page with the details of the previous test.
- User can view the details of all the previous tests and test status and is not authorized to change any details.
- Clicking 'view' against any test should display the details of the corresponding test against the user.

3.7.3 UI Requirements

User need to click on the test summary button on the dashboard that appears after login.
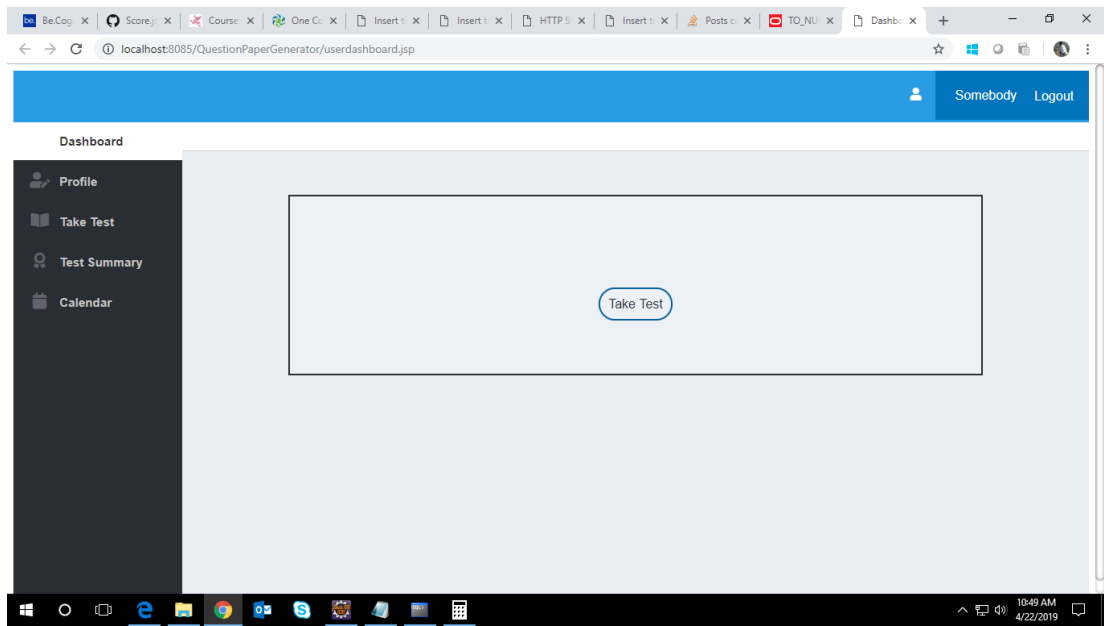
3.8 Use case 'Profile'

3.8.1 Use case attributes

Use Case Description:

This use case deals with the ability of the user to view the user profile. The 'user' here shall be the operator of the system and can view the profile by clicking on 'Profile' button.

Scope: Profile

Actors:

- User – the operator

Trigger:

Click 'Profile' button in the dashboard.

Pre-Condition:

User being able to view his basic details after clicking on profile button on the dashboard.

Post Condition:

User can view his details/
Flow of Events:

User at homepage → clicks in registration →
→ Click 'Login' button→User at login page→ Click on dashboard→ Clicks on Profile on the dashboard->User at his profile.

Primary Scenario:

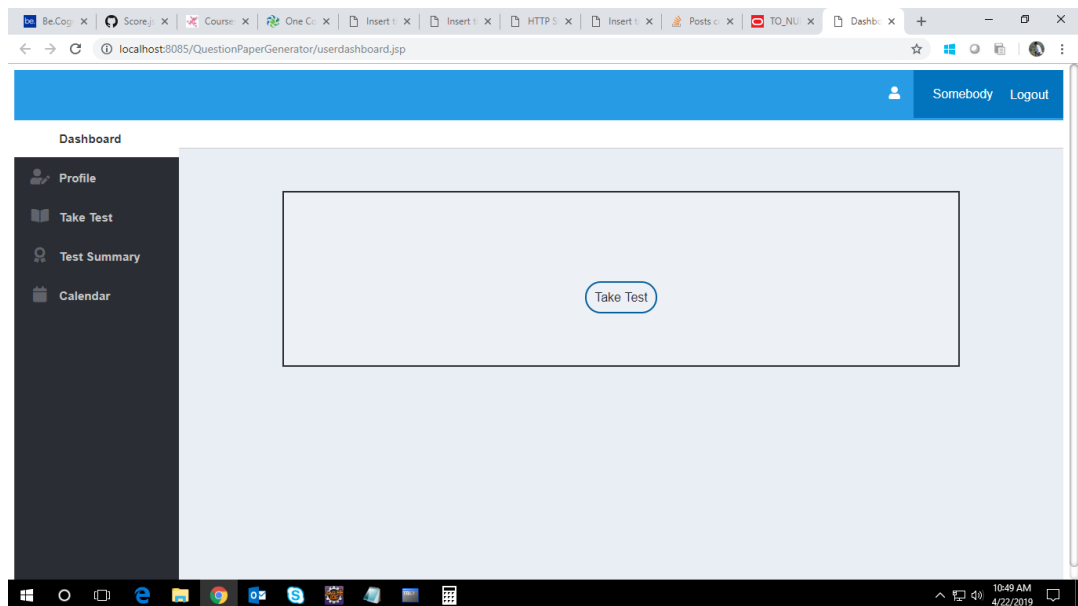A user – is able to view all his basic details.

3.8.2 Business Rules

Business rules should be defined using the following attributes: -

- User must click on 'View Profile' option from dashboard.
- Upon clicking the 'View Profile' option user can view his basic details.

3.8.2 UI Requirements

Here is a prototype of Profile Page

3.8 Use case 'Score'

3.8.1 Use case attributes

Use Case Description:

This use case deals with the graphical representation of the result.

Scope: Score

Actors:

- User – the operator

Trigger:

Click 'Result' button

Pre-Condition:

User must have given the exam in order to view the graphical representation of his score.

Post Condition:

User is in the result page and can view his score.
Flow of Events:

User at homepage → Click 'login' → User at login page→
→ User at Dashboard → Click on Result → User Result Page→User is redirected to result page and can view his score.

Primary Scenario:

A user – is able to view his graphical representation of score in all the exams attempted.
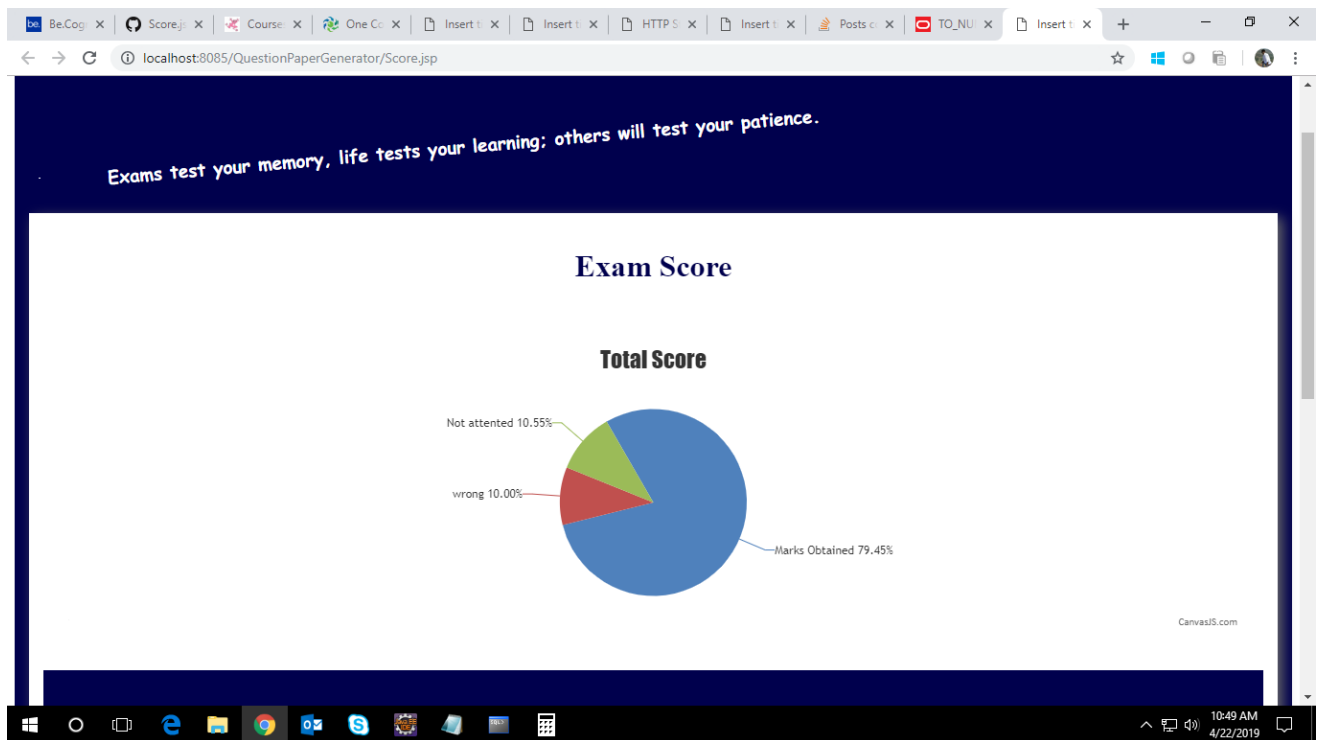
3.8.2 Business Rules

Business rules should be defined using the following attributes: -

- User must click on 'View Profile' option from dashboard.
- Upon clicking the 'View Profile' option user can view his basic details.

3.8.2 UI Requirements

Here is a prototype of Profile Page

4.0 Database Design

4.1 Tables Structure

4.1.1 New User Registration:

Field Name	Field Type	Data Type	Mandatory	Possible Values
First Name	Text(50)	Alphabetic	Yes	
Last Name	Text(50)	Alphabetic	Yes	
Email	Text(50)	Alphabetic	Yes	
UserId	Text(10)	Alphanumeric	Yes	Emp ID
Password	Text(15)	Alphanumeric	Yes	
Emp Type	Text(1)	Alphabetic	Yes	A – Admin U - User

4.1.2 Exam:

Field Name	Field Type	Data Type	Mandatory	Possible Values
Exam ID	Text(20)	Alphabetic	Yes	
Exam Description	Text(100)	Alphabetic	Yes	
Skill set	Text(20)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level - 3

4.1.3 Question:

Field Name	Field Type	Data Type	Mandatory	Possible Values
Question ID	AlphaNumeric(10)	Numeric	Yes	System Generated
Question creator	Text(15)	Alphanumeric	Yes	Admin User id
Question	Text(500)	Alphabetic	Yes	
Choice 1	Text(500)	Alphabetic	Yes	

Choice 2	Text(500)	Alphabetic	Yes	
Choice 3	Text(500)	Alphabetic	No	
Choice 4	Text(500)	Alphabetic	No	
Selection	Text(1)	Alphabetic	Yes	R – Radio button C – Check box
Skill set	Text(20)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level – 3
Mark	Numeric(2)	Numeric	Yes	

4.1.4 Assessment:

Field Name	Field Type	Data Type	Mandatory	Possible Values
User ID	Text(10)	Alphanumeric	Yes	
Assesessment id	Number	numeric	yes	
Exam ID	Text(20)	Alphabetic	Yes	
Exam Description	Text(100)	Alphabetic	Yes	
Competency Level	Text(10)	Alphabetic	Yes	Level – 1 Level – 2 Level - 3
Score	Number(3)	numeric	yes	
Start time	Time	Time	yes	
End time	Time	Time	yes	

5.0 Conclusion :

E- learning is not just a change of technology. It is part of a redefinition of how we as a species Transmit knowledge, skills, and values to younger generations of workers and students. I will End this book by daring to make a few prediction of how e-learning and the functions it serves will continue to develop.