CO550 WEB APPLICATIONS

CW1 Report

Team members:
Robert Collcott, 21302939, Computing
Elaine Foon, 21224044, Computing
Temi Dare 21327567 Computing

Introduction and Project outline

This is a report to explain our online football quiz game system this will tell my clients how we are going to tackle the project the implementation of the system and any problems encountered on the way.

Rough idea of implementation

We are planning to make several screens that all link together so the user has an easy time we would create a help screen so users know the controls to play screen shortcut keys etc.

The statistics will be captured to a live a web server so I know what will be a popular time to play the game and what is not a popular time to play the game.

Implementation

Originally we thought we were going to implement a big game but due to time constraints and complexity of coding we decided to cut the app back a bit by just doing a quiz with the concept of money involved. On the similar sort of lines of a platform game where you have to do certain things to unlock certain areas.

We thought this would be much simpler because of the time we have to produce the game sourcing the code required and the resources required to do it the original way we want to.

Pages and Screens Explanations

- **Welcome**

This will be the first screen potential players will see it will contain a small picture or welcoming animation with a button to take them to the home screen.

- **Home**

The home page screen on this web based app project will be clean and simple with two buttons programmed for login and register. Validation will be implemented here as this will check to see if the user is already registered or not.

- **Registration**

This is where players will sign up for the game at the end of this form there will be an add button this triggers an action to add the member to the database of players so we can see how many players are added.

- **Login**

This is where existing members go in and sign in to their account captured fields here will be a timer plugin to see what times are popular to pay the game.

- **Player Hub**

This is a fundamental screen for the players of the game as this acts as a personal hub for the information about the players of their time on the game details will include the following things

  - Player details
  - Current total score
  - Gold [Money earned] – this tells the player how much money they have collected by completing levels of questions correctly.

- **Scoring [Ranking Screen]**

This screen is just a general sort of screen in the game this tells the players the highest to lowest scores this will often change when people play the quiz.

- **Game**

Perhaps the most critical screen in the whole game this is what the players will see when playing the game some questions will be multiple choice others will be full written or fill in the missing words as this will test people's knowledge of football.

It also has a time left display as they are timed to answer the question if they don't answer in time they will lose points and also a graphic will loop though to each question to tell the player the current score and also the top score currently recorded on that day.

Validation of data

This will be checked via a text length of 140 characters if it goes over they will not be allowed to enter as the database is only at small capacity. The same also applies to usernames these will be checked to see if they exist on the database.

If a user is registered it will take them to the login page as there is no point of signing them up again. If they are not registered a message will come up saying "YOU ARE NOT REGISTERED PLEASE CREATE AN ACCOUNT". This applies only the username and email registered as we do not want to be sending duplicates of mail to already registered customers.

When the user is creating an account as details are put in a green tick will appear this says to the user this field has been filled correctly.

Passwords are also validated because we want the person's accounts to be secure, we will do this by implementing a piece of code that passwords must be at least 8 characters including one number or 1 capital.

Data Management within the system

When the game is completed the time will be stored the username and the date of the player as these are essential elements to the game that have to be stored on record as if the player forgets login details the admins can reset it for them.

All data will be encrypted by an encryption standard to make it really secure as we do not want hackers stealing player's personal information such as date of birth.

On the next couple of pages are our entities with our data types this will tell you what type of data is associated with what field so data can be stored without any problems.

Data types within each entity

This is outline of data types within each of the entities another 3 tables are below justifying each data type in each of the entities.

This is outline of data types within each of the entities another 3 tables are below justifying each data type in each of the entities.

Data Types of each attribute within each entity					
Entity Player		Entity Score		Entity Level	
Attribute	**Data Type**	**Attribute**	**Data Type**	**Attribute**	**Data Type**
Player ID	**Auto Number**	Level ID	**Auto Number**	Level ID	**Auto Number**
Player Forename	**Text**	Player	**Text**	Player	**Text**
Player Surname	**Text**	Player ID	**Text**	Score	**Text**
DOB	**Date**	Score	**Number**	Gold [Earned]	**Number**
Age	**Number**				
Date signed up	**Date**				
Email address	**Text**				
Password for game	**Text**				

Data Types justification in each entity

Data Types of each attribute		
Entity Player		
Attribute	**Data Type**	**Justification of data type**
Player ID	**Auto Number**	Auto Number is used here as each member must be given an ID reference for query purposes
Player Forename	**Text**	Forename must be text as names do not have numbers
Player Surname	**Text**	Surname must be text as names do not have numbers
DOB	**Date**	Date of birth must be in date format as I am doing it in short hand written format 28 01 91

28 is the birth date 01 is the month and 91 is the year of birth |
| Email address | **Text** | I only want professional email addresses not these ones with fancy numbers in as it makes it too hard to email users |
| Age | **Number** | Age is only number as we use age in number format that text |
| Date signed up | **Date** | Date signed up must be in date format as I am doing it in short hand written format 28 01 91

28 is the day of signing up 01 is the month of signing up and 91 is the year of signing up |
| Password for game | **Text** | Passwords can only be text |

Data Types of each attribute		
Entity Score		
Attribute	**Data Type**	**Justification of data type**
Level ID	**Auto Number**	Level ID is auto number as each level has to have a unique reference
Player ID	**Number**	This is the foreign key to player ID in the player table and the same player must have the same ID and link back to the primary key in the player table
Score	**Number**	Score can only been seen in number format

Data Types of each attribute		
Entity Level		
Attribute	**Data Type**	**Justification of data type**
Level ID	**Auto Number**	Level ID is auto number as each level has to have a unique reference
Player ID	**Number**	This is the foreign key to player ID in the player table and the same player must have the same ID and link back to the primary key in the score table
Score	**Number**	Score can only been seen in number format
Gold earned	**Number**	This has to be number because it is going to be displayed on the ranking scoring page screen

Formal constructed entity relationship diagram
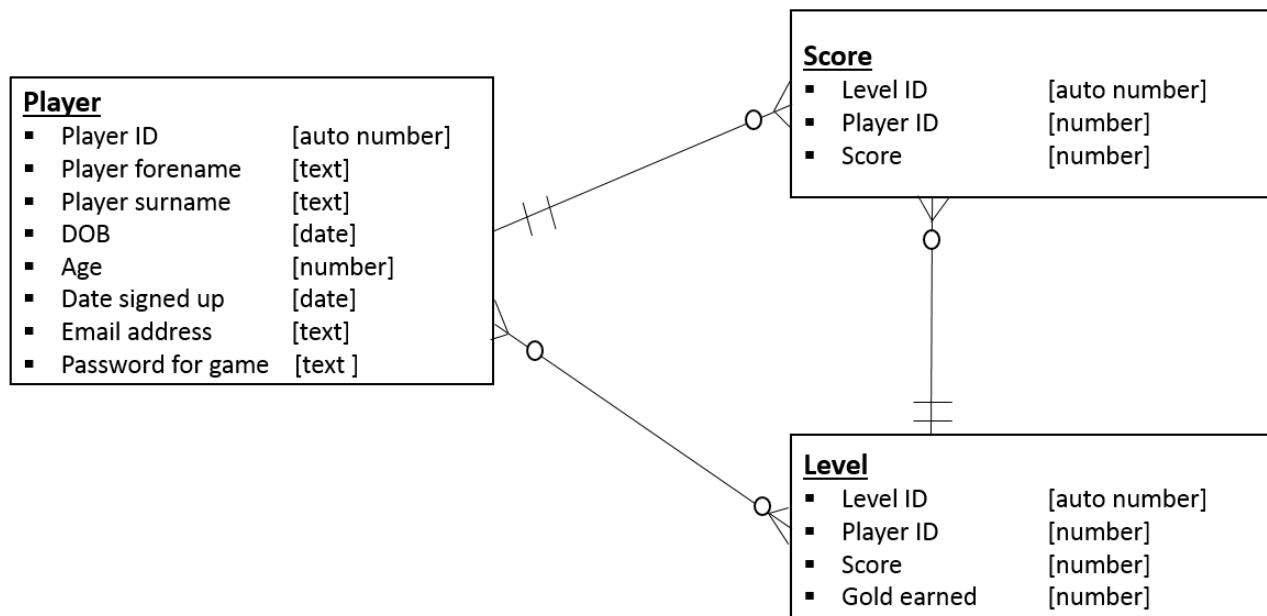
Above is the formal entity relationship diagram for our eventual database implementation of the system.

Player

This is a mandatory to possible many relationship as one player can perhaps have many scores or just one as he or she might only play only one game or even none at all as it's an optional many.

Score

A level can have many score or none, which depending on the times of player have been played. But score must belong to one of the level, it is depending on the level entity.

Level

The last relationship in our system is a player can play many levels and a level can be played by many different registered players.