



جامعة أم القرى
UMM AL-QURA UNIVERSITY

شالان

Advanced Programming Proposal

Instructor: Dr.Manal Alghamdi



PROJECT AND GROUP INFORMATION

Project Name : Bunyan

Project Category : Game

Group Number : 3

Section : 1

Group Members :

Name	Student ID
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THE IDEA AND BENEFIT OF THE PROJECT :



01 The idea

The idea of the game is different because it contains three stages. Each stage represents a floor of the house that the player wants to build. In each stage there is a different game that the player must complete in order to collect the bricks that will help him build a floor of the house. It is worth noting that there are points and time to increase the effectiveness of the game and the possibility of accurately arranging the players' positions.

02 The Benefit

motivating game users to complete their building floors with high quality and in a short time, and this infuses the player's heart with competition and increased concentration. it is important to clarify that this game contains many ideas, as this activates all parts of the mind and increases the rate of enthusiasm when playing



01

project fractionalities

Sign up:

1- The player shall be able to create a new account

1.1 The game shall be able to display sign up form to the user which contains set of fields : (First, and last name , Email , Password)

1.2 the game shall be able to validate the entered data with these constraints: (The email must be unique and there is no other record in the database has the same values, The password should be at least 6 characters that contains letters in uppercase and lowercase and numbers Password must not contain symbols)

1.3 When all the data is filled in correctly, the account data will be . stored in the database

Sign in:

2-The player shall be able to sign in his / her account

2.1 The game shall be able to display login form to the user

2.2 The game shall be able to check from the entered data with the database

2.3 The game shall be able to check if the password matches the password of this player in the database

If not, the system will create an error message (incorrect password)

If the user logged in successfully then the game will view -

Avatar :

- 3- The player shall be able to choose a specific avatar
 - 3.1 The game shall be able to ask the player about their gender
 - 3.2 The game must be able to display more than one avatar to the player depending on his gender
 - 3.3 The game should be able to store a unique number for each avatar and image in the database

Levels :

- 4-The player shall be able to play in multiple levels
 - 4.1 The game should offer multiple levels of increasing difficulty
 - 4.2 The game shall be able to display the levels available to the player
 - 4.3 The game shall be able to prevent the player from entering the next level until he finishes the current level

Playing :

- 5-The player shall be able to interact with the puzzle by tapping, dragging, or swiping the screen
 - 5.1 A game must have a set of rules that determine how players can manipulate the items within it

Scoring :

6- The player shall be able to see his scoring

6.1 The game shall be able to track and display the player's score based on factors such as the time taken to complete a level and the number of coins collected

6.2 The game shall be able to reward players for completing levels quickly and efficiently

Progress saving :

7-The player should be able to resume their game from where they left off

7.1 The game should be able to automatically save the player's progress after completing each level

Achievements :

8- Players shall be able to see their ranking in the game according to specific criteria

8.1 The game shall be able to display all players in order by the number of coins and time spent

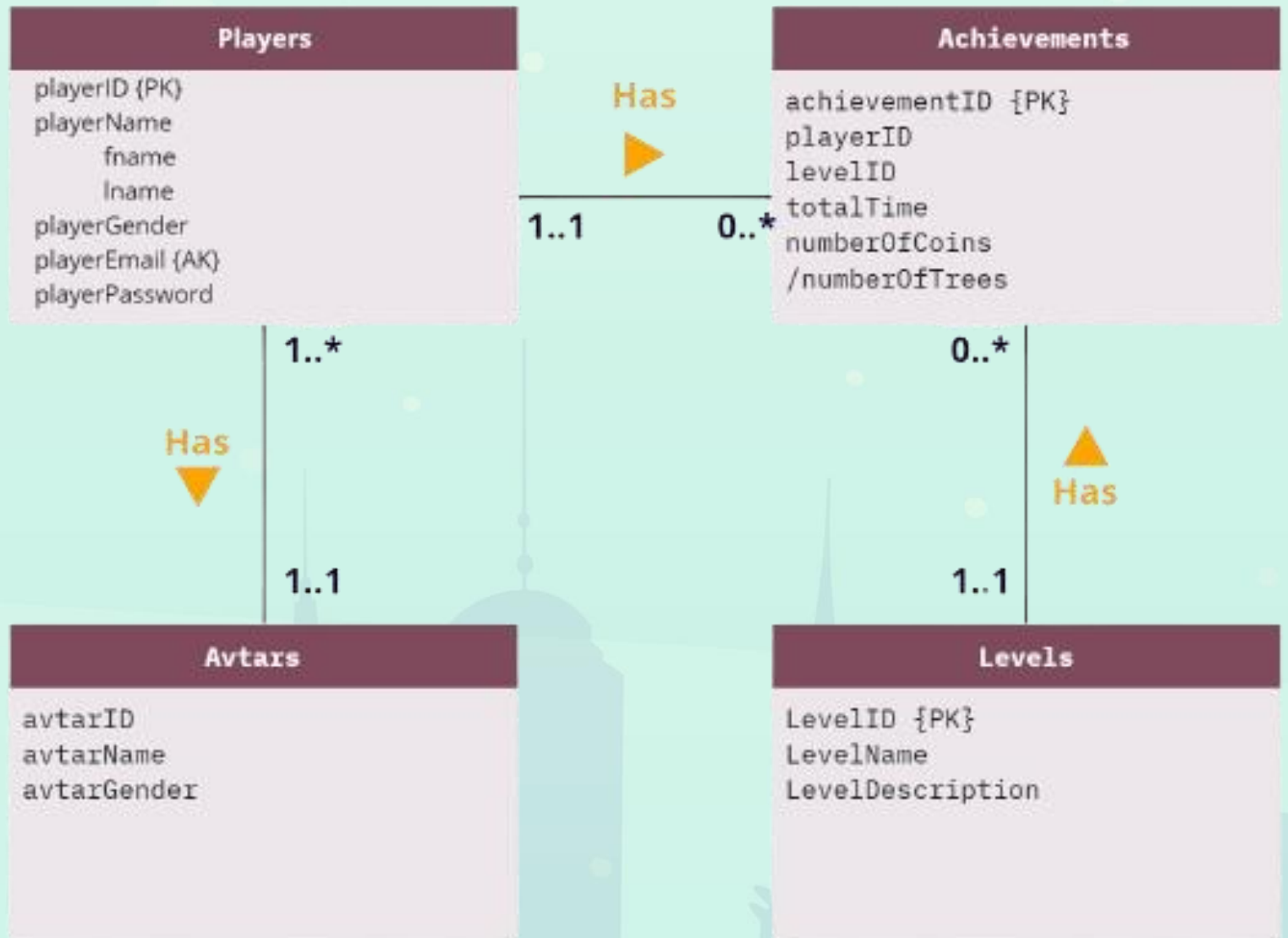
8.2 The game shall be able to calculate the number of trees each player has gained based on the number of coins they have collected



02

Database Requirement

UML:



DATABASE TABLES :

Examples of the contents of each table

Avatar Table :

<u>PlayerID</u>	<u>avatarImageID</u>	avatarName	avatarGender
102345	M1	Omar	male
102346	F1	Rahaf	female
102347	F2	Lamis	female

player Table :

<u>playerID</u>	fname	lname	playerGender	playerEmail	playerPassword
102345	Omar	abdullah	male	Omar_2014@gmail.com	Omar8
102346	Rahaf	abdullah	female	rahaf_2003@gmail.com	Rahaf18
102347	Lamis	mohamed	female	lamis_2003@gmail.com	Lamis22

Levels Table :

<u>levelID</u>	LevelName	LevelDescription
1	one	This level will ask many questions, and the player must answer them by dragging the correct letters that make up the answer and placing them in the designated place.
2	two	This level will ask many mathematical questions, and the player must answer them by choosing the correct answer from the options.
3	three	This level will present many rules for a specific period, then the player will be presented with an order based on the previously presented rules, and the player must do the opposite of what is required (if he is required to press the right mouse button, the player must press the left button, and so on)

Achievement Table :

<u>AchievementID</u>	playerID	levelID	totalTime	numberOfCoins	numberOfTrees = (numberOfCoins/10)
0	102345	1	1:31,49	10	1
1	102345	2	1:06,34	31	3
2	102345	3	2:00,08	25	2
3	102346	1	1:58,20	19	1
4	102346	2	0:58,20	9	0
5	102347	1	2:10,07	40	4



03

INTERFACES



Basic GUI

First Name:

Last Name:

E-mail:

Pass:

Registration GUI



GUI for levels



GUI for level 1



GUI for level 2



GUI for level 3



GUI for level 3