**Checkpoint-II**

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*Narrative:*

*Growth of a programmer* is an Android role-playing game. The player can learn knowledge of computer science while having fun. In the game, the player plays the role of a fighter who plans to subdue all of cities and the player’s mission is to help him achieve this goal. The way for player to defeat his enemy is to answer questions related with computer science correctly and quickly. Each city corresponds to one field of computer science, such as operation system and Java. As the player occupies more and more cities, he learns more and more knowledge.

*Categorized Use Cases:*

**Use case:** Sign up

**Actor(s):** Any player

**Description:**

1. A user launches the app
2. The user inputs the username and password. Then these information is recorded in database

**Entry Condition:**

It only happens at the first time the app is launched.

**Use case:** Review concepts

**Actor(s):** Job applicant

**Description:**

1. The job applicant would create an account or logs in.
2. They would then go to the map view of the game and select the nodes that contain the concept they want to review.
3. Applicants can then play through the nodes any number of times to review the desired concepts.

**Use case:** Learn new concepts

**Actor(s):**  Elementary - College students

**Description:**

1. The student creates an account or logs in.
2. The student can then go to the map view to select the nodes that contain the concept that they want to learn.
3. Students can play through any number of the nodes up to the desired difficulty.

**Use case:** Replay mission

**Actor(s):** computer hobbyist

**Description:**

1. A user clicks the button and the game history shows.
2. The user chooses one finished mission to play again.
3. The user fights in the battle
4. If user gets higher score, his profile information gets updated. The leaderboard may be changed.

**Entry Condition:**

The user must choose the mission he has finished

**Use case:** Start new mission

**Actor(s):** Any player

**Description:**

1. A user chooses unfinished mission on map
2. The user needs to answer 15 single-choice questions related with the mission topic, such as operation system
3. For each question, if user answers correctly, the enemy gets damaged and loses some health points. If user can destroy enemy in limited time, he wins; otherwise, he loses
4. If the user wins, his profile information (progress bar and sum of scores) gets updated and the leaderboard may be changed

**Entry Condition:**

The user must choose the mission he has not played yet.

*Domain Model:*

|  |  |  |
| --- | --- | --- |
| **Domain Class** | **Responsibilities** | **Collaborator** |
| SignIn() | -Create Account for new users  -SignIn page for returned users | none |
| ChooseChar() | -Allow the users to pick up their character or use their image from camera | none |
| MainView() | -Access options for Play game, Profile  -Connect to Google Plus and Facebook | none |
| MapView() | -Navigate through nodes or modules | MainGame() |
| MainGame() | -Play the game  -Calculate the score for node | MapView() |
| Profile() | -Track the game progress  -Change profile info, if wanted  -Track History of the game | ChooseChar()  MainGame()  MapView() |
| LeaderBoard() | -Track the highest score among users | MainGame() |