

Team #20 Final Project – “DICE DASH”

Design Document



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Table of Contents

| | |
|---|----|
| 1. Game Description | 3 |
| 2. Game Rules | 3 |
| 3. Development Technology | 3 |
| 4. User Stories | 4 |
| 5. Use Case Diagram | 5 |
| 6. Flow Diagram | 6 |
| 7. UML Class Diagram | 7 |
| 8. Project Timeline | 8 |
| 9. GUI Mock-ups | 9 |
| 10. Project Backlog | 10 |
| 11. Project testing | 11 |

1. Game Description

This dice based educational 3D trivia game will allow the user to learn and practice different subjects from ASU's Introduction to Software Engineering – CSE360 course. The user goal is to reach the end of the path by throwing the dice and answer material based questions while doing it as fast as possible.

2. Game Rules

- Movement is made based on the dice result
- Correct answer – stays in the new spot
- False answer – move to the pervious spot
- 3 Correct answers in a row – jump additional 2 spots
- 3 False answers in a row – jumps back 2 spots from the original place

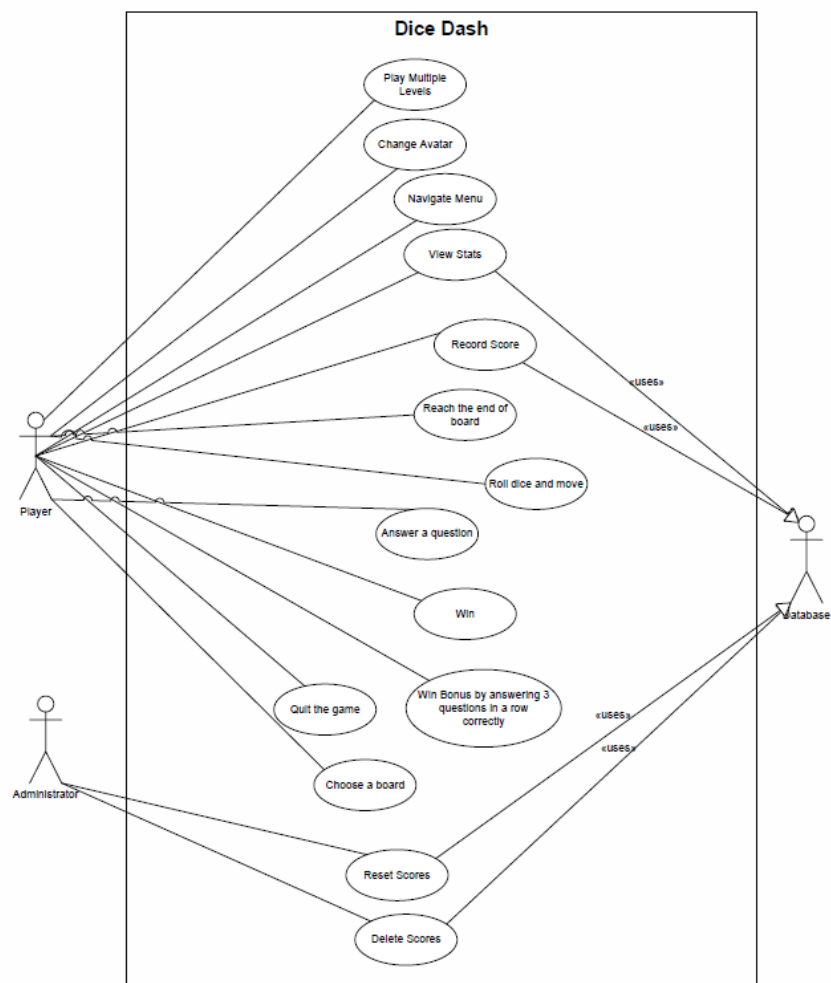
3. Development Technology

- Program - Unity 3D / C#
- Management – Trello
- Source Control - GitHub

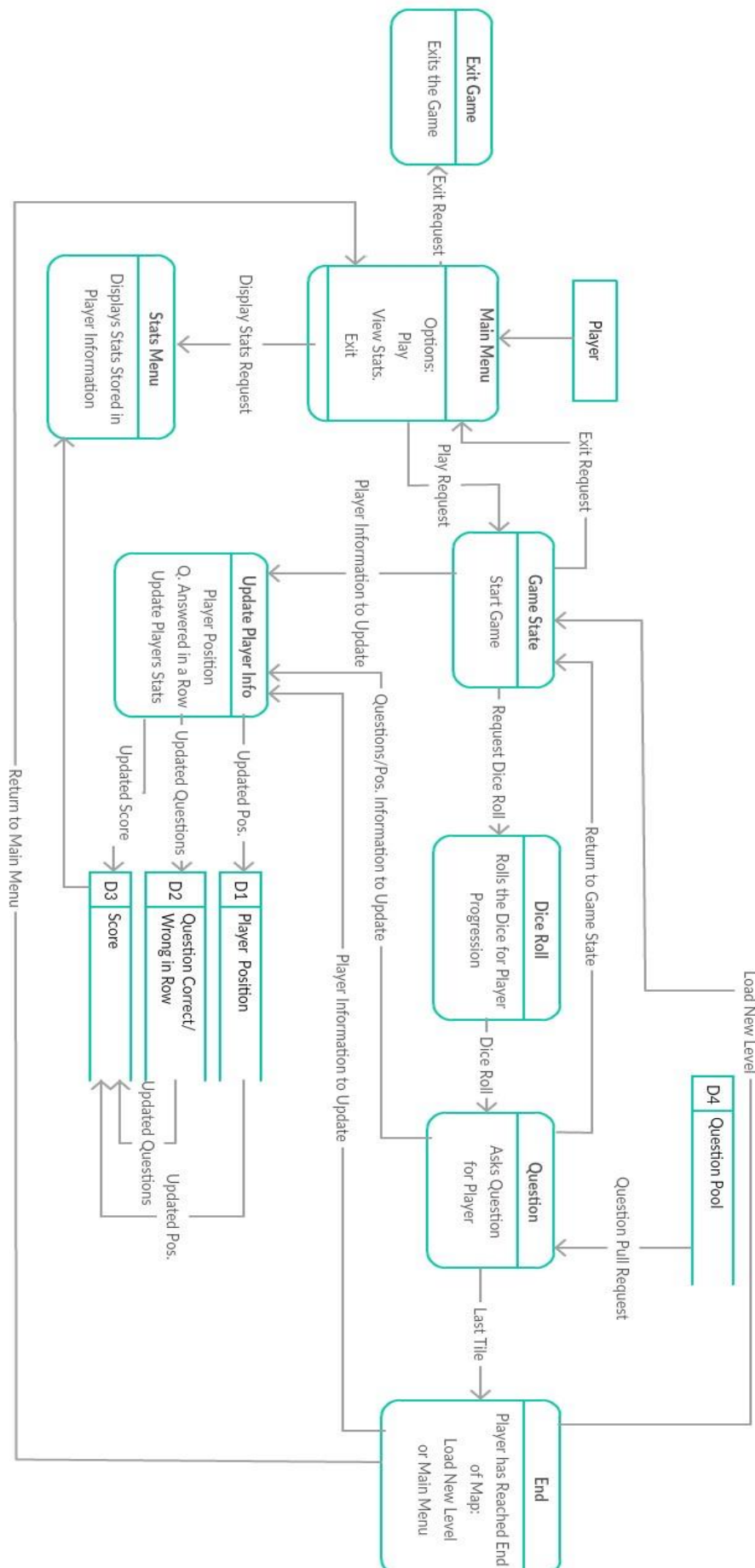
4. User Stories

- **As a Player, I want** to roll the dice **so that** I can move across the board.
- **As a Player, I want** to answer a question **so that** I can stay on my current spot on the board.
- **As a Player, I want** to reach the end of the board **so that** I can win the game.
- **As a Player, I want** to have a Stats Button **so that** I can access the Stats database.
- **As a Player, I want** to have my score recorded **so that** I can view my score.
- **As a Player, I want** to receive a bonus for answering 3 questions correctly **so that** I can move 2 spaces forward on the board.
- **As a Player, I want** to answer 3 questions incorrectly **so that** I can move 2 spaces backward on the board.
- **As a Player, I want** to answer a question incorrectly **so that** I can move 1 space backward on the board.
- **As a Player, I want** to have an avatar **so that** I can distinguish myself from other players.
- **As a Player, I want** to choose the board **so that** I have a variety of board to play on.
- **As a Player, I want** to have an Exit button **so that** I can leave the game when I want.
- **As a Player, I want** to have Audio **so that** I can listen to music as I play my game.
- **As a Player, I want** to have a random path generator **so that** I have a different path each time I play.
- **As a Player, I want** to have Level Space Items **so that** I alter things in my level.
- **As a Player, I want** to have a timer **so that** I can view the current time I have left in the game.
- **As a Player, I want** to have an Icon EXE **so that** I see a distinguishable executable for my game.
- **As a Player, I want** to have a local database **so that** I can keep track of my moves and score in-game.
- **As an Administrator, I want** to reset the online score database **so that** I can put the score database in its original state.
- **As an Administrator, I want** to delete the online score database **so that** I can punish players who cheat.

5. Use Case Diagram

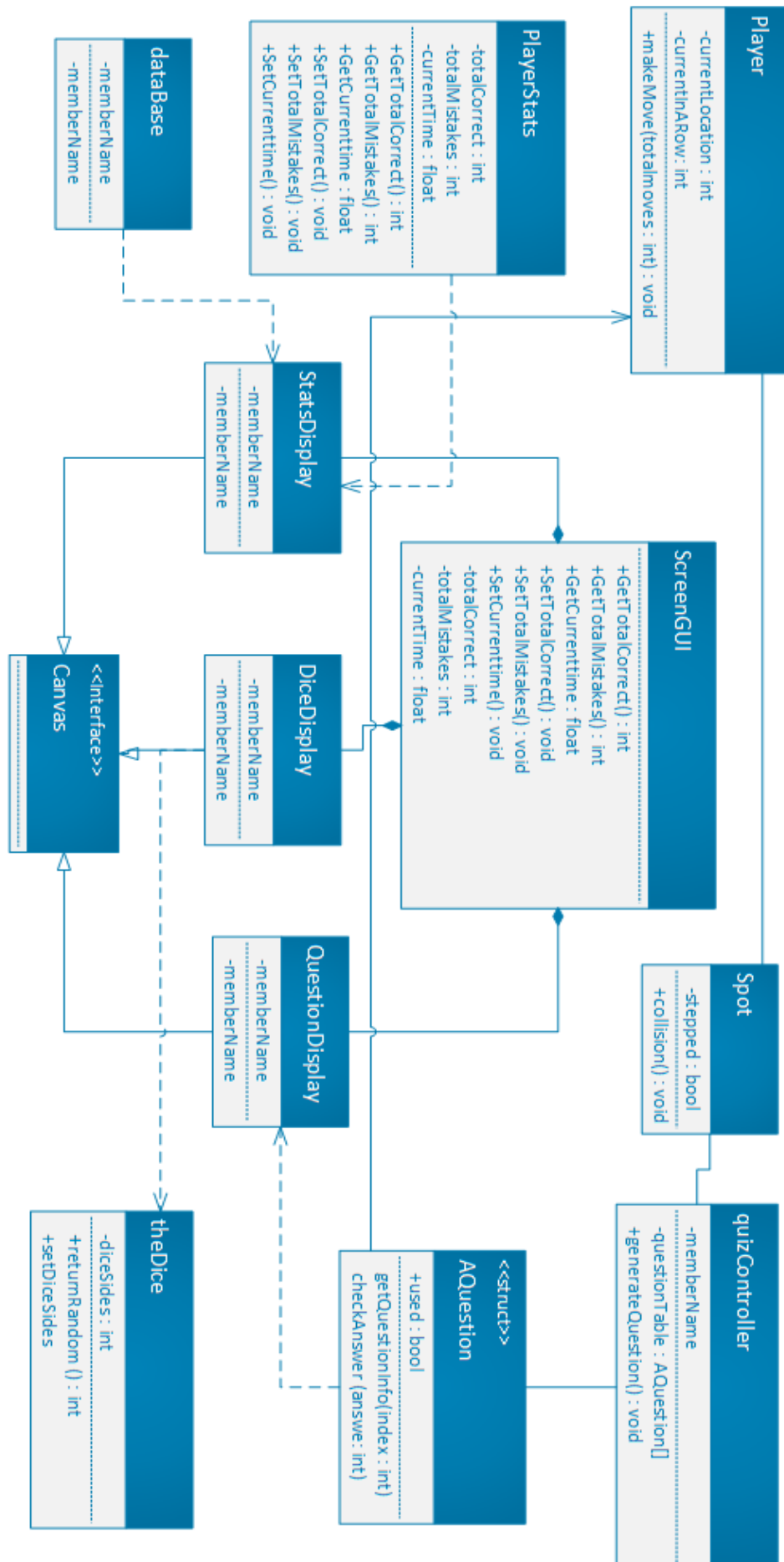


6. Flow Diagram

Dice Game Flow Diagram.pdf

7. UML Class Diagram

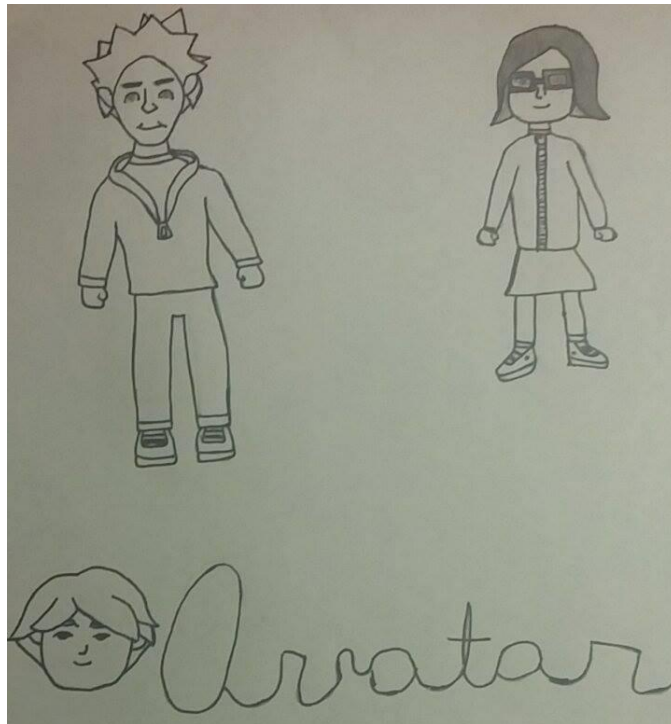
CSE360 Team20 UML.pdf



8. Project Timeline

9. GUI Mock-ups

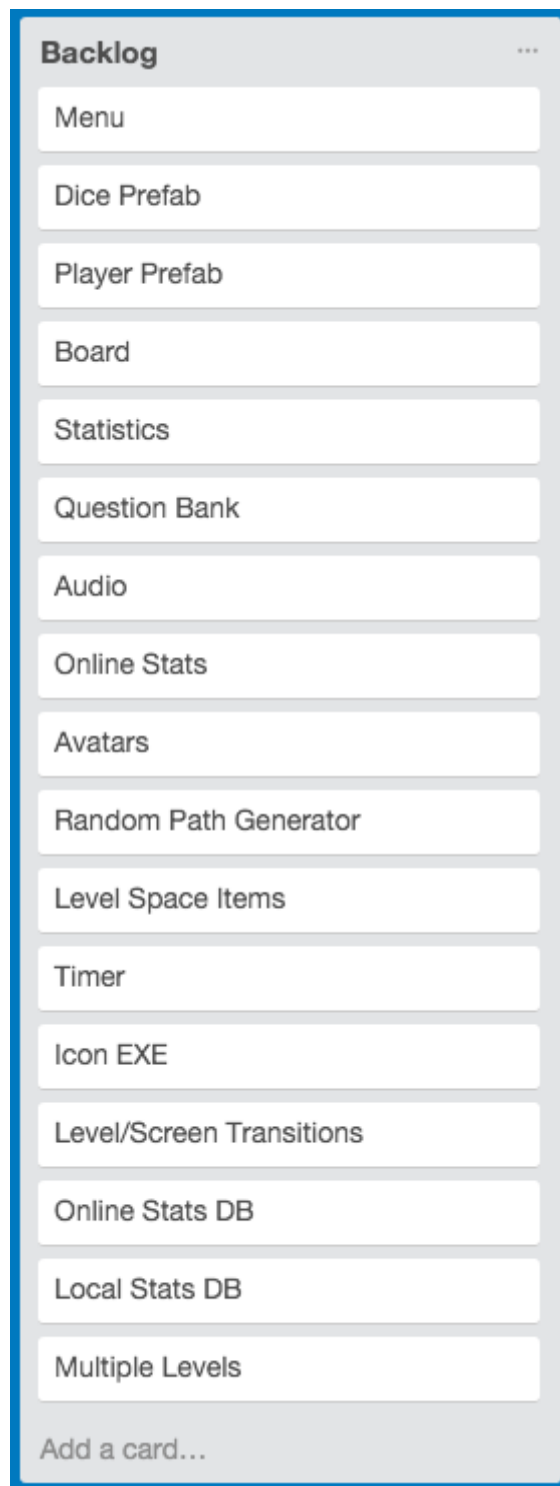
- Optional Avatars:



- Main Menu screen:



10. Project Backlog



(screenshot from the team's Trello page)

11. Project Testing

(see project **readme** file for more info)