**SYSTEM REQUIREMENTS**

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| **Identifier** | **Priority** | **Requirements** |
| REQ1 | 1 | The system shall connect all users to the host using host’s ip address or a port number |
| REQ2 | 1 | The system shall create a new instance of a game |
| REQ3 | 1 | The system shall create new users |
| REQ4 | 4 | The system shall run on any computer with java installed |
| REQ5 | 1 | The system shall create a “client” socket for each user |
| REQ6 | 1 | The system shall create a “serverSocket” for whoever is hosting the game |
| REQ7 | 5 | The system shall allow users to add their own questions/question packs to the game |
| REQ8 | 5 | The system shall allow users to save their username and past scores |
| REQ9 | 5 | The system shall allow users to add a profile pictures |
| REQ10 | 2 | The system shall allow the game to complete rounds of gameplay |
| REQ11 | 5 | The system shall allow the host to select game settings |
| REQ12 | 3 | The system shall display the username of all players connected to the lobby while in the “Pre game lobby” page |
| REQ13 | 4 | The system will only allow the host to begin the game while in the “Pre game lobby” page |
| REQ14 | 3 | The system will display the current question, and question number for each round of play |
| REQ15 | 3 | The system will not allow users to submit blank responses to questions |
| REQ16 | 2 | The system will allow users to vote on which question they found more entertaining |
| REQ17 | 2 | The system will keep track of how many votes a certain answer received |
| REQ18 | 3 | The system will display a leaderboard between rounds |
| REQ19 | 2 | Once the host has created a lobby, there will be a text label which will contain the “room code” which will be entered by players joining the game while on the join game page. |
| REQ20 | 2 | The system will give users the appropriate question depending on which round of gameplay |
| REQ21 | 3 | The system shall give random questions to each pair of users, which will be taken from a large set of questions |
| REQ22 | 2 | The system will have GUI’s to display all of the games content |
| REQ23 | 2 | The system will allow users to answer questions |
| REQ24 | 4 | The system shall allocate the appropriate number of points based on how many votes an answer received |

\*Note: Priority 1 indicates most important, while 5 is least important

**USER STORIES**

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| Identifier | User Story | Size |
| ST-1 | As a host, I can create a game lobby | 10 pts |
| ST-2 | As a user who wants to join existing lobby, I can join an existing lobby by typing in the room code | 15 pts |
| ST-3 | As a host, I can start the game from the pregame lobby screen | 10 pts |
| ST-4 | As any user, I can enter in my username | 1 pt |
| ST-5 | As a host, I can see who has joined my lobby | 5 pts |
| ST-6 | As a host, I can select the settings for the game | 3 pts |
| ST-7 | As a player, I can see which question I need to answer | 3 pts |
| ST-8 | As a player, I can vote on other peoples answers | 5 pts |
| ST-9 | As a player, I can see the leaderboard at the end of every round | 3 pts |
| ST-10 | As a player, I can type my response to my question | 1 pt |
| ST-11 | As a player, I can resize my window | 3 pts |

USE CASES

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| **Actor** | **Actors Goal** | **Use case ID** |
| Host | Create a lobby | CreateLobby (UC-1) |
| Non-Host Player | Join an existing game by using a room code | JoinGame (UC-2) |
| Host | Launch Game from pregame lobby | StartGame (UC-3) |
| General Player | Create and store my username | MakeProfile (UC-4) |
| Host | See the current players in the lobby | ViewUsers (UC-5) |
| Host | Edit the settings for the current game | EditSettings (UC-6) |
| General Player | Can view the question I am supposed to answer | ReceiveQuestion (UC-7) |
| General Player | Vote on other players answers | Vote (UC-8) |
| General Player | I can see the Scoreboard at the end of each round | ShowScoreboard (UC-9) |
| General Player | I can respond to the question I am supposed to answer | Submit (UC-10) |

Detailed use cases:

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| **Use Case ID: 1** | **CreateLobby** |
| Related Requirements | REQ2 |
| Initiating actor | Host |
| Actors Goal | To start a new server for a game so that others can join. |
| Participating Actors | N/A |
| Preconditions | System must be started |
| PostConditions | There is a server session that is accepting client connections.  The host is connected to the server. |
| Flow of events for Main Success Scenario | 1. Host starts application and clicks “Create Lobby” button 2. System creates a new server and connects host as a client |

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| **Use Case ID: 2** | **JoinGame** |
| Related Requirements | REQ1 |
| Initiating actor | Non-Host Player, and Host Player |
| Actors Goal | Join an existing game by using a room code. |
| Participating Actors | N/A |
| Preconditions | There must be a server that the user can connect to.  The player must know the port to use to connect. |
| PostConditions | They are in a lobby with the host and anyone else that joined. |
| Flow of events for Main Success Scenario | 1. Non-Host Player clicks “Join Game” button 2. System asks for lobby/port number 3. Non-Host Player enters the lobby/port number |

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| **Use Case ID: 3** | **StartGame** |
| Related Requirements | REQ13 |
| Initiating actor | Host |
| Actors Goal | Launch Game from pregame lobby. |
| Participating Actors | Non Host Player |
| Preconditions | The host must have created a new server.  There must be the people in the lobby. |
| PostConditions | All players connected to the server will be in a game. |
| Flow of events for Main Success Scenario | 1. Host clicks “Launch Game” 2. System creates a game object with all users in the lobby as players |

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| **Use Case ID: 4** | **MakeProfile** |
| Related Requirements | REQ3, REQ8 |
| Initiating actor | General Player |
| Actors Goal | Create and store my username. |
| Participating Actors | N/A |
| Preconditions | The user advances past the first game |
| PostConditions | There will be statistics tracked for the user. |
| Flow of events for Main Success Scenario | 1. System asks for username and password 2. General Player submits username and password 3. System creates new profile for general player |

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| **Use Case ID: 5** | **ViewUsers** |
| Related Requirements | REQ12 |
| Initiating actor | Host |
| Actors Goal | See the current players in the lobby. |
| Participating Actors | N/A |
| Preconditions | The host must have created a new server.  There must be user(s) connected to the server. |
| PostConditions | The players that are connected to the server are listed for the host. |
| Flow of events for Main Success Scenario | 1. Host creates new server 2. System displays the users connected to the server |

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| **Use Case ID: 6** | **EditSettings** |
| Related Requirements | REQ11 |
| Initiating actor | Host |
| Actors Goal | Edit the settings for the current game. |
| Participating Actors |  |
| Preconditions | The host must have created a new server. |
| PostConditions | The settings for the server session are saved. |
| Flow of events for Main Success Scenario | 1. Host creates new server 2. System to enter settings for game 3. Host can select settings for game 4. System saves settings for when game is created |

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| **Use Case ID: 7** | **ReceiveQuestion** |
| Related Requirements | REQ20, REQ21 |
| Initiating actor | System |
| Actors Goal | Can view the question I am supposed to answer. |
| Participating Actors | General Player |
| Preconditions | The host has created a server and launched the game with certain settings.  The game has figured out which users are receiving which questions |
| PostConditions | Questions will be displayed to each user with a spot to type an answer. |
| Flow of events for Main Success Scenario | 1. System calculates how questions are distributed 2. System sends questions to each player 3. System displays one question at a time to each player |

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| **Use Case ID: 8** | **Vote** |
| Related Requirements | REQ16, REQ17 |
| Initiating actor | General Player |
| Actors Goal | Vote on other players answers. |
| Participating Actors | General Player |
| Preconditions | All answers to questions have been received. |
| PostConditions | The votes for each answer have been tallied by the game. |
| Flow of events for Main Success Scenario | 1. General Player selects which answer they find funniest 2. System tallies that vote and gives a point to the player who submitted the answer |

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| **Use Case ID: 9** | **ShowScoreboard** |
| Related Requirements | REQ18, REQ22, REQ24 |
| Initiating actor | System |
| Actors Goal | I can see the Scoreboard at the end of each round. |
| Participating Actors | General Player |
| Preconditions | Votes have been tallied and players’ scores are tallied. |
| PostConditions | The score for each player has been displayed. |
| Flow of events for Main Success Scenario | 1. System determines order of highests scores by player 2. System displays the list of players based on scores |

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| **Use Case ID: 10** | **Submit** |
| Related Requirements | REQ20, REQ21, REQ23 |
| Initiating actor | General Player |
| Actors Goal | I can respond to the question I am supposed to answer. |
| Participating Actors | N/A |
| Preconditions | Users must have received the questions they are supposed to answer.  They must be able to type in a response. |
| PostConditions | The game will have collected all of the answers to each question. |
| Flow of events for Main Success Scenario | 1. General Player types in answer to their question 2. System takes the answer and associates it with that player |

Use Case Diagram:

