"Sum Fun" Initial Product Backlog

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| **Id** | **User Story** | **Conditions of Satisfaction** | **Priority** | **Estimated  Time (Hours)** |
| SF-1 | As a player, I want to start playing an untimed game. | 1. Tile queue populated with five random values from 0 - 9. 2. 9x9 game board populated with 49 random values from 0-9 arranged in 7x7 grid. 3. Start immediately after launching app. 4. Start after previous game, timed or untimed, completed. 5. Start while current game in progress. | High | **12** |
| SF-2 | As a player, I want to start playing a timed game. | 1. Tile queue populated with five random values from 0 - 9. 2. 9x9 game board populated with 49 random values from 0-9 arranged in 7x7 grid. 3. Start immediately after launching app. 4. Start after previous game, timed or untimed, completed. 5. Start while current game in progress. | High |  |
| SF-3 | As a player, I want to select and place a tile from the tile queue onto the game board. | 1. Only first tile from the tile queue may be selected. 2. Place onto corner tile of game board. 3. Place onto border tile of game board. 4. Place onto interior tile of game board. 5. Can only place onto unoccupied tile of game board. | High | **4** |
| SF-4 | As a player, I want to view what happens to the tile queue when I select a tile from the tile queue. | First tile of tile queue (the one selected) must be removed, remaining tiles moved up one position, new tile added in last position. | High | **4** |
| SF-5 | As a player, I want to view what happens when I place a tile onto a corner square of the game board. | 1. Tile must appear in square selected. 2. If the sum of the **three** neighboring tiles modulo 10 is equal to the number on the placed tile, the neighboring tiles and the placed tile must be removed. 3. Unoccupied neighboring squares contribute 0 to the sum. | High | **10** |
| SF-6 | As a player, I want to view what happens when I place a tile onto a border square of the game board. | 1. Tile must appear in square selected. 2. If the sum of the **five** neighboring tiles modulo 10 is equal to the number on the placed tile, the neighboring tiles and the placed tile must be removed. 3. Unoccupied neighboring squares contribute 0 to the sum. | High |  |
| SF-7 | As a player, I want to view what happens when I place a tile onto an interior square of the game board. | 1. Tile must appear in square selected. 2. If the sum of the **eight** neighboring tiles modulo 10 is equal to the number on the placed tile, the neighboring tiles and the placed tile must be removed. 3. Unoccupied neighboring squares contribute 0 to the sum. | High |  |
| SF-8 | As a player, I want to view how many moves I have left when playing an untimed game. | 1. Number of moves left must be 50 when game is started. 2. Number of moves must decrease by 1 each time a tile is placed. | High | **4** |
| SF-9 | As a player, I want to view how much time I have left when playing a timed game. | 1. Time must begin at 5:00 minutes. 2. Time must be updated each second. | High |  |
| SF-10 | As a player, I want to view how many points I have earned after placing a tile. This only occurs when removing 3 or more tiles. | 1. Points are only earned when placement of a tile results in removal of it and at least 3 other tiles. 2. Points are equal to 10 \* (# neighbors removed) 3. Number of neighbors removed in range 1-7 inclusive. | High |  |
| SF-11 | As a player, I want to view the total points I have earned anytime while playing the game. |  | High | **5** |
| SF-12 | As a player, I want to refresh the tile queue at any time while playing the game. | Can only be done once. | Medium |  |
| SF-13 | As a player, I want to select a single tile from the game board and remove all tiles with the same number. | Can only be done once. | Medium |  |
| SF-14 | As a player, I want to know where I can place my selected tile to remove the most tiles from the game board. | Can be done up to three times. | Medium |  |
| SF-15 | As a player, I want to add my name to the "Top Ten Least Moves" list whenever I qualify. | 1. Only relevant for untimed games. 2. Name may appear multiple times. 3. List must display name, number of moves and date. 4. List must be displayed in ascending order of number of moves. 5. List limited to 10 names. 6. Must work if only name in list. 7. Must work if name inserted at beginning of list. 8. Must work if name inserted at end of list. 9. Must work if name inserted in middle of list. | Low |  |
| SF-16 | As a player, I want to add my name to the "Top Ten Most Points" list whenever I qualify. | 1. Name may appear multiple times. 2. List must display name, points and date. 3. List must be displayed in descending order of points. 4. List limited to 10 names. 5. Must work if only name in list. 6. Must work if name inserted at beginning of list. 7. Must work if name inserted at end of list. 8. Must work if name inserted in middle of list. | Low |  |
| SF-17 | As a player, I want to add my name to the "Top Ten Least Time" list whenever I qualify. | 1. Only relevant for timed games. 2. Name may appear multiple times. 3. List must display name, time and date. 4. List must be displayed in ascending order of time. 5. List limited to 10 names. 6. Must work if only name in list. 7. Must work if name inserted at beginning of list. 8. Must work if name inserted at end of list. 9. Must work if name inserted in middle of list. | Low |  |
| SF-18 | As a brand new player, I want to learn how to play the game. |  | Low |  |
| SF-19 | As a player, I want to be able to save a partially completed untimed game and resume it later. |  | Low |  |
| SF-20 | As a Windows user, I want to be able to play the game on my PC. | 1. Java is installed (assumed) | High | **1** |
| SF-21 | As a Mac user, I want to be able to play the game on my PC. | 1. Java is installed (assumed) 2. Java is not installed | Medium |  |
| SF-22 | As a player, I want game play to be engaging. | Elements which contribute to making the game engaging include color, animation and sound. | Medium |  |
| SF-23 | Organizing similar development environments |  | High |  |
| SF-24 | Creating and syncing Git repository |  | High |  |
| SF-25 | Creating the initial GUI layout and UI elements |  | High |  |