

Snake++

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User Stories ~

TEMPLATE

- a) *User Story*
 - b) *Tests that will be used to verify the story was developed correctly*
 - c) *Estimate of the size of a story RELATIVE TO THE OTHER STORIES (do this after we finished a) and b) for all the features)*
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Required Features --

1. Backbone ~ snake movement and graphics
 - a. As a player, I can use the keyboard to control the direction of the snake character.
 - b. Testers can use up/down/left/right arrows (and their mixture) to check whether the snake accurately follows the movement commands.
 - c. 7 points.
2. Snake collision w/ Fruit
 - a. In order to increase my score, as a player, I need to control the snake to eat fruits displayed randomly on the screen.
 - b. Testers can move the snake towards the fruits and catch them to see whether the score and the length of the snake increases.
 - c. 2 points.
3. Snake collision w/ Bomb or Snake
 - a. As a player, I want the game to terminate if the snake collides with either itself or any bombs.
 - b. Testers can deliberately collide the snake with itself to see whether the game terminates.
 - c. 2 points.
4. Snake growth
 - a. As a player, I want the length of the snake to increase whenever the snake collides with a fruit.
 - b. Testers can monitor the length of the snake to check whether it is proportional to the number of fruits eaten by the snake so far.
 - c. 3 points.
5. Certain number of Fruits displayed.
 - a. As a player, I want a certain number of fruits being displayed on screen at all times.
 - b. Testers can monitor the number of fruits being displayed on the screen at each time and compare it to the previous times to see whether it is constant.

- c. 2 points.
- 6. Collision effect
 - a. As a player, I want a collision effect to be shown on the screen whenever I collide with a bomb or the snake body so that I can be aware of the collision.
 - b. Testers can control the snake to collide with bombs or itself several times to make sure there would be collision effects shown on the screen.
 - c. 2 points.
- 7. Scoreboard
 - a. As a player, I want to see my current score and compare it to the top 5 previous scores, at the end of the game.
 - b. Testers can play 10 different times and record their scores themselves, then they can check whether the top 5 scores are shown in order in the scoreboard.
 - c. 3 points.
- 8. Snake off-screen movement
 - a. As a player, I want the snake to continue moving from the opposite side of the screen when it moves off one side of the screen.
 - b. Testers can control the snake to hit the borders of the screen and then they can check whether the snake moves off one side of the screen.
 - c. 2 points.
- 9. Placement Algorithm
 - a. As a player, I want the fruits and bombs to appear at a reasonable distance from the snake's head.
 - b. Testers can collide with a fruit and determine if the newly generated fruit and bombs are displayed at a fair distance from the current head of the snake.
 - c. 4 points.
- 10. Bomb Reset
 - a. As a player, I expect the game to regenerate new bombs at a fair distance from the snake's head whenever a fruit is eaten by the snake.
 - b. Testers can record the appearance and the distance of the regenerated bombs whenever a fruit is eaten multiple times to see if this feature is stable throughout the game.
 - c. 3 points.

Optional Features --

1. Hand Movements
 - a. As a player, I want to be able to use my hand movements (gestures) to control the movements of the snake.
 - b. Testers can use different gestures to control the snake to see if the snake can move accurately according to their instructions.
 - c. 10 points.
2. Changing Obstacles
 - a. As a player, I want the game to have obstacles of varying sizes to be shown randomly on the screen; but, at a fair distance from the head of the snake.
 - b. Testers can check whether the sizes of the obstacles actually change as the game proceeds, and check whether whenever that obstacle appears, is it at a reasonable distance from the head of the snake.
 - c. 4 points.
3. Palette Change
 - a. As a player, I want to change the background colour and/or colour of the snake.
 - b. Testers can check whether the colour of the background and the snake can be changed.
 - c. 1 point.
4. Background Music
 - a. As a player, I want to enable background music while I play the game.
 - b. Testers can play the snake game for different amounts of time so that they can check if the background music will always be played during the game.
 - c. 2 points.

Wish-List Features --

1. With a Friend
 - a. As a player, I want to enable a local 2-player mode, instead of single player mode.
 - b. Two testers can control their own snake to move. To test the collision, testers can control their snakes to collide with each other, the bombs and itself to see if the game will be terminated. And testers can also control their snakes to collide with fruits to check if their score will be increased.
 - c. 7 points.

2. Bluetooth Connection
 - a. As players, we want to connect multiple wireless controllers to control different snakes through Bluetooth connection.
 - b. Testers can connect Bluetooth devices and check to see that each Bluetooth device corresponds to the movement of only one of the snakes.
 - c. 8 points.
3. Brain Waves
 - a. As a player, I want to control the movement of the snake using brain waves.
 - b. Testers can write down the movement instructions, and think the instructions accordingly to check if the snake will move based on their brain activity.
 - c. 159 points

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PERSON 1 - 7 points

Feature 1 - Backbone

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PERSON 2 - 6 points

Feature 2 - Collision w/ Fruit

Feature 3 - Collision w/ Bomb or Snake

Feature 6 - Collision Effect

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PERSON 3 - 5 points

Feature 4 - Snake Growth

Feature 8 - Snake Off-Screen Movement

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PERSON 4 - 7 points

Feature 9 - Placement Algorithm

Feature 10 - Bomb Reset

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PERSON 5 - 5 points

Feature 5 - Fruits Displayed

Feature 7 - Scoreboard

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