Beleg Slither-Buddy - Testing

Software Engineering II

Gruppe A
Bauhaus-Universität Weimar

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Black-Box Test Cases:

#	Test case (brief description)	Preconditions (required setup)	Test steps	Expectation	Observation ('pass' or failure description)
1	Hitting the other snake with head.	Having the game running.	move own snake head into other snake body.	the player with the snake that hit the other snakes body should loose.	pass: the player with the snake that got hit by the other ones head was declared the winner.
2	Destroy both snakes at the same time.	Having the game running.	Loose with both snakes simultaneously.	The game should end with a draw.	pass: Destroying both snakes at the same time resulted in a draw.
3	Moving the snakes.	Having the game running.	Try all inputs with both snakes.	The snakes should move according to the input direction	pass: The snakes moved forward on their own and changed their direction according to the direction entered by the player.
4	Making no inputs.	none	Do nothing.	The game should not start and the snakes should not move.	pass: The game did not start.
5	Restarting the game.	Having the game running.	Play the game until one player wins or the game ends with a draw / click on the 'Play again!' button.	After clicking the button the game should restart, the snakes should have their original lenght back and be positioned like they were at the start of the first round.	pass: the game went back to the state it was in at the start
6	Doing two inputs to try and move the snake head into the body.	Having the game running.	Start the game / press left and down quickly during one frame.	Players should not be able to reverse their direction and should do only do 90 degree turns.	failure: The players can perform 180 degrees turns and run into their body instantly, where the game is then over.
7	Snake visuals.	none	start the game / move the snakes in multiple directions.	All parts of one snake should stay connected and the eyes should always be directed forward.	partial failure: The snake stays connected but the eyes do not rotate and are always aligned horizontally, which breaks the game immersion.

#	Test case (brief description)	Preconditions (required setup)	Test steps	Expectation	Observation ('pass' or failure description)
8	Loosing at border.	having the game running.	move the snakes to the border with different timings.	A Snake should loose instantly if they move into a border.	failure: The expectations were met with regards to the upper and left border, but when one snake would move into the bottom or right border their game over would be delayed by one frame so that they could move one cell beyond the screen border.
9	Both snakes hitting their heads onto each other.	Having the game running	Moving both snakes so that their heads collide with each other either head on or in a 90 degree angle to each other.	The game should come to a draw in all cases.	pass: There was no winner and the game ended with a draw in all tests.
10	Stalling the match to let the snakes grow.	Having the game running.	Survive with both snakes for a sufficient amount of time	Snakes grow over time at the same consistent rate	pass: the snakes grew at the same rate with consistent timing
11	Color at game end.	having the game running.	survive with one of the snakes / restart / survive with the other one. /	The color of the snake which survived should be the color of the player who was declared the winner.	pass: The color of the winnier was the color of the surviving snake
12	Loosing by obstacles.	Having the game running.	Make one snake run into an obstacle.	The snake running into the obstacle should loose just like when running into the other snake or a wall.	pass: The snake that ran into an obstacle lost in every test.
13	Changing direction at the last row before the edge.	Having the game running and moving towards the edge.	starting the game / pressing a valid direction while the head is on the last space before the edge.	Both player should be able to change their direction at any point, even when positioned in front of the borders of the game area.	failure: both snakes are unable to change their direction when on the last space before the edge on the upper and left border.

White-Box Test Cases:

#	Test case (brief description)	Preconditions (required setup)	Test steps	Expectation	Observation ('pass' or failure description)
1	Snake out of bounds.	none	Make a new snake / check if out of bounds / move it forward 10 times / check if snake out of bounds.	Snake should have alive set to false.	pass: snake is no longer alive after moving.
2	Snake elongation.	none	Check lenght of instantiated snake / elongate it by a set length / check if the new lenght corresponds to the expected value.	The snake should elongate by the set value.	pass: the new lenght was correct
3	Barriers spawn.	Set the anzahl_barrier to around 300.	Run the app and check the barrier positions.	Barriers should be almost everywhere exept where the snakes are and the tiles infront of their heads.	failure: The barriers wont spawn in the lower most row, the right most column and the column of the purple snake: