

Interactive online game—the apple collector Mr. K Test Case

Requirement to test	Test Data Input	Expected Outcomes	Actual Outcomes
1.1. Mr K's movement is controlled by using the keyboard arrow keys (up, down, left, right).	<ol style="list-style-type: none"> 1. On the landing page, select the "PLAY GAME" tab page to get the game loaded. 2. Click on start to begin the game. 3. Use keyboard arrow key to play around. 	<ul style="list-style-type: none"> ✧ The Character (refer to as "Mr. K") can go left if the user presses the left arrow key. ✧ Mr. K can go right if the user presses the right arrow key. ✧ Mr. K can go up if the user presses the up arrow key. ✧ Mr. K can go down if the user presses the down arrow key. 	<ul style="list-style-type: none"> ✧ Mr. K can go left when the user presses the left arrow key. ✧ Mr. K can go right when the user presses the right arrow key. ✧ Mr. K cannot go up and down if the user presses the up/down arrow key. It isn't necessary for this child interacting game, or the up and down function can be added in the next version.
1.2. additional key to turn the basket (for example- blank space)	Continue with test case 1.1 input.	<ul style="list-style-type: none"> ✧ Mr. K can turn its body around if the user presses the space key on the keyboard. 	<ul style="list-style-type: none"> ✧ Mr. K can turn around.
1.3. Mr K's movement is restricted inside the canvas.	Continue with test case 1.1 input. Press the left or right arrow key firmly for Mr. K to go straight in one direction.	<ul style="list-style-type: none"> ✧ Mr. K should be going straight in one direction and stopped at the boundary in the canvas. ✧ The user can go to the opposite direction. 	<ul style="list-style-type: none"> ✧ Mr. K is going straight and got stopped at the boundary in the canvas. ✧ The user can control Mr. K to go to the opposite direction.
1.4. Mr K's head should always stay under the tree branches.	Continue with test case 1.1 input.	<ul style="list-style-type: none"> ✧ Users cannot make Mr. K to go higher than the tree branch 	<ul style="list-style-type: none"> ✧ Because the up/down arrow key has no functionality, Mr. K's head is always under the tree branch.

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2.1. Every time Mr K successfully catches an apple, a score of one is added to the current score and a 'happy' sound is played.	<ol style="list-style-type: none"> 1. On the landing page, select the "PLAY GAME" tab page to get the game loaded. 2. Click on start to begin the game. 3. Using arrow key to control Mr. K to catch an apple. 	<ul style="list-style-type: none"> ✧ Upon successfully caught an apple, there is one score added to the score display. ✧ Something to indicate the score adding. ✧ Some sound should be played. 	<ul style="list-style-type: none"> ✧ Upon successfully caught an apple, one score is added to the score on top left of the canvas. ✧ A "+1" sign shown as the score incremented. ✧ The bubble sound is played.
2.2. If an apple falls on Mr K's head, an 'unhappy' sound will be played and current score will be deducted by one.	<ol style="list-style-type: none"> 1. Continue with case 2.1 input. 2. Wait for an apple to get matured and move Mr. K and place the head directly under the apple. 	<ul style="list-style-type: none"> ✧ "unhappy" sound should be played ✧ Score should be deducted by one. ✧ Some sign should indicate a controlling mistake has made. 	<ul style="list-style-type: none"> ✧ Upon being hit by an apple, a crowd disappointing sound is played. ✧ A clip art of "BOM" is shown right above Mr. K's head. ✧ Score display shows one point is deducted.
3.1 Minimum 4 different sounds in the game collision beeps start and end game sounds) and users should be able to control the volume of the sounds.	<ol style="list-style-type: none"> 1. Go in to the landing page and select the "PLAY GAME" tab. 2. On the game menu, tweak the volume slider to the minimum and maximum. 3. Go through the game, catch an apple, and get a hit by the apple. 	<ul style="list-style-type: none"> ✧ User should be able to change the volume. ✧ Sound effect should be played when collision is detected after catching an apple and hit by an apple. ✧ Different music sound during the game phases. 	<ul style="list-style-type: none"> ✧ User can change the volume. At the beginning there is a calm music played for user to change the volume to the desired level. ✧ Sound effects are played when collision is detected after catching an apple (bubble sound) and hit by an apple (disappointed sound). ✧ Different music sound during the game phases: beginning, game time, finishing leader board.

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3.2. Provide feedback with appropriate text messages and sound to the player	<ol style="list-style-type: none"> Go in to the landing page and select the "PLAY GAME" tab. Go through the game, catch an apple, and get a hit by an apple. 	<ul style="list-style-type: none"> The user should be able to see a sign and hear something when an apple is caught. The user should be able to see a sign and hear something when an apple hit Mr. K's head. 	<ul style="list-style-type: none"> Signs are provided, a "+1" sign is shown when an apple is caught and a "BOM" sign is shown when an apple hits the head. Sound effects are played when collision is detected after catching an apple (bubble sound) and hit by an apple (disappointed sound).
3.3. Time settings which can be changed by player.	<ol style="list-style-type: none"> Go in to the landing page and select the "PLAY GAME" tab. Change the volume and listen. Change the game duration and start the game to see the countdown. 	<ul style="list-style-type: none"> Default time setting for duration of game should be 5 minutes. User is able to choose other possible value like 1, 3 and 7 minutes. The game should have a countdown with the selected duration, and the game should end when the timer hits 0. 	<ul style="list-style-type: none"> On the game page a calm music is playing in the background, the user can change the volume and immediately gets the effect. Next to the volume slider, there is a minute slider to choose game duration, in the game the countdown is set to the desired duration. The game ends when the timer hits 0. But there is some lagging between the ending and leader board.
3.4. Start button and restart button	<ol style="list-style-type: none"> Continue with case 3.3 inputs. Type in a name Click the start button. In the game click the restart button 	<ul style="list-style-type: none"> User should be able to start the game with the start button. User should be able to restart the game in the middle of playing. 	<ul style="list-style-type: none"> User is able to start the game with the start button. User is able to restart the game in the middle of playing.

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4.1 Each apple has a life cycle	<ol style="list-style-type: none"> Go in to the landing page and select the "PLAY GAME" tab. Start the game Observe the apple animation 	<ul style="list-style-type: none"> A small yellow apple with a radius = 5px will appear randomly on the tree. Growing time for each apple is 5 seconds. Each apple grows to a size of radius Apple's colour changes gradually from yellow to red in duration of 4 seconds. Falling time for each apple is 6 sec. 	<ul style="list-style-type: none"> A small apple with a radius = 5px appears randomly on the tree. Growing time for each apple is 5 seconds. Each apple grows to a radius of 25px. Apples' color changes gradually from yellow to red in duration of 4 seconds, and the rest doesn't have gradient color changing, but the graphic sometimes glitches, need to fix in the later version. Falling time for each apple is 6 sec.
4.2 Apple falls and stays on the ground if Mr K is unable to catch it. Or if it falls on the head of Mr K it should disappear or if Mr K catches an apple, it should be displayed in the basket.	<ol style="list-style-type: none"> Go in to the landing page and select the "PLAY GAME" tab. Start the game Wait for an apple to get mature, make Mr. K stay away from it and watch it fell on the ground. Catch an apple. Let an apple hit the head. 	<ul style="list-style-type: none"> If the user allows the apple to fall on the ground, the apple should not disappear. The apple hits the head should disappear. The apple got caught should go to the basket. 	<ul style="list-style-type: none"> The apple to fall on the ground doesn't disappear. The apple hits the head is disappeared and gone. The apple got caught goes to the basket. But the Maximum number of the basket is 50, exceeding that number will cause the basket goes missing.

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