PROFESSIONAL

THE BALL GAME

INSTRUCTIONS:

Goal of the Project:

By Class 6, you have learned the use of conditional programming, functions, and adding game states in the project.

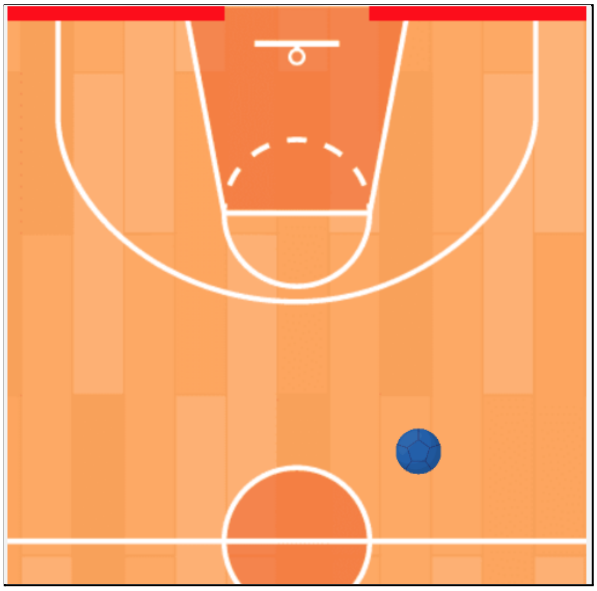
In this project, you will have to practice and apply what you have learned so far and create a single-player ball game for a company that makes some innovative games for kids.

Story:

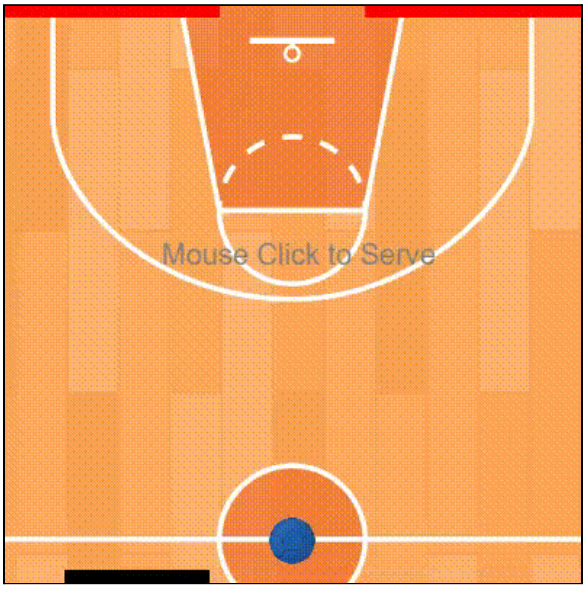
A company, Crafty Child, focuses on making innovative games for kids. This time they are trying to make a new version of a very popular multiplayer game, which you must have played as a team.

They are trying to make a single-player ball game, using which a child can practice the game even if he/she can't go outside or doesn't have a team to play with.

Can you help Crafty Child create this new, interesting game?



Starting Position



Final Output

***This is just for your reference. We expect you to apply your creativity to the project.**

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Getting Started:

1. Login to code.org
2. Click on the following link: Project Template
3. Click on “View Code”.
4. Click on “Remix”.
5. Rename the project to **Project 6** and click on **Save**.

Specific Tasks to complete the Project:

1. Click on the **Animation** tab and check all the animations needed for the project.

2. You will find the **Ball arena** and the **ball sprite** already created in the template code for your reference.

3. Create a **paddle sprite** in the game at the bottom of the screen of width **100** and height **10**. Assign a color to paddle sprite using the **shapeColor** property. ***(See Hint 1)***

4. The variable **gameState** is already defined in the program and initialized with the value **‘serve’**. We will have three states in this game:
   i) **serve:** when the ball is stationary and ready to be served on mouse press.
   ii) **play:** when the ball is moving and the player has to play using the paddle.
   ii) **over:** when the player misses hitting the ball using the paddle and the ball touches the bottom edge.

5. You will find the **if-condition** to check for the **‘serve’** state and the instructions to display text for the player to **serve** the ball is already written. Write an **if condition** to check if the game state is **‘over’** and display the **‘Game Over’** text. ***(See Hint 2)***

6. Bounce off the **ball sprite** from the **left-edge**, **right-edge**, and the **player_paddle**.

7. Make the **player_paddle** move horizontally as per the mouse’s **x-position**.

8. You will find an **if-condition** to check if the ball touches the top edge (*a successful goal*) and accordingly **reset the ball sprite,** after which the game state changes to **‘serve’**. Similarly, write the **if-condition** to check if the ball is touching the bottom edge and accordingly change the game state to **‘over’** inside the **if-condition**. ***(See Hint 3)***

9. Click **Run** to check if the code is working correctly.

Submitting the Project:

1. **SAVE** all the changes made to the project.
2. Click the "**SHARE**" button to generate a shareable link.
3. Copy this link and submit it on the **Student Dashboard > Projects** panel against the correct Class Number.

Hints:

1. The **player_paddle** can be created as follows:

```
var player_paddle = createSprite(200, 395, 100, 10);
player_paddle.shapeColor ="black";
```

2. To check if the **gameState** is **'over'** and display the corresponding "**Game Over**" text to the player as shown below:

```
if (gameState == "over") {
  text("Game Over",140,180);
}
```

3. To check if the **ball** sprite is touching the **bottomEdge** and update the state to **'over'** if it's **true** as follows:

```
if(ball.isTouching(bottomEdge)) {
  gameState = "over";
}
```

REMEMBER... Try your best, that's more important than being correct.
After submitting your project, the teacher will give you feedback on your project work.

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