WhiteHat Jr
Live Online Coding for Kids

INSTRUCTIONS:

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Goal of the Project:

In Class 13 you have learned about game states PLAY and END. You also learned how to create groups, add objects in groups and use properties and functions for groups.

In this project, you will have to practice and apply what you have learnt in the class and add all balloons in the group so that we can give them the same behavior and shoot an arrow with a space key.

** This is a continuation of Project 12, so make sure to complete that before doing this project. **

Story:

So far you have helped Meera a great deal to design a game of bursting balloons with an arrow. Now this is the last step to complete the game. You need to add a feature to the game where when an arrow hits a balloon, it gets destroyed.
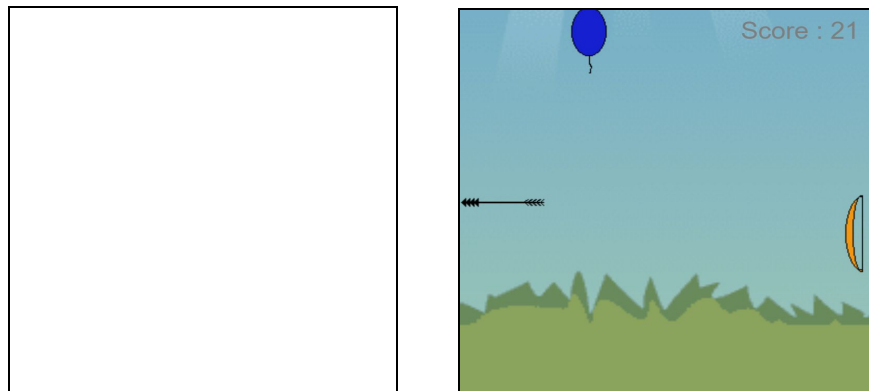
*This is just for your reference. We expect you to apply your own creativity in the project.

Getting Started:

There are two ways you can start with this project:

Option 1:

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 13** and click on **Save**.

Option 2:

If you decide to use your Project 12 as a starting point to complete this project, follow the steps given below:
1. Login to code.org
2. Open the link for Project 12 from your panel.
3. Click on "Remix".
4. Rename the project to **Project 13** and click on **Save**.

Specific Tasks to complete the Project:

1. In Projects 10 and 11, you have created functions for balloons and arrows. Now create a group for all the functions before the draw function.
   - Add all the balloons in the respective group. This will be very similar to a group of clouds and obstacles that you created in the t-rex game in class.
   - Add an arrow in the arrow group.

```
function createArrow() {
  var arrow= createSprite(100, 100, 60, 10);
  arrow.setAnimation("arrow");
  arrow.x = 360;
  arrow.y=bow.y;
  arrow.velocityX = -4;
  arrow.lifetime = 100;
  arrowGroup.add(arrow);
}
```

2. Place the bow at the right edge of the drawing area.

3. In the draw() function:
   - Call the createArrow() function, delete temp_arrow after creating a group of arrow in createArrow() function.

```
if (keyDown("space")) {
createArrow();

}
```

   - Create the **isTouching()** function for each balloonGroup and arrowGroup.

```
if (arrowGroup.isTouching(redB))
  redB.destroyEach();
  arrowGroup.destroyEach();
    score=score+1;
}
```

4. If an arrow touches a specific color balloon:
   - Destroy the balloon
   - Destroy the arrow
   - Increment the score by different values.
     For example: For redBalloon, give 1 point. For blueBalloon give 3 points, etc.

5. Click on "**Run**" once to check if it is working.

*Refer to the images given above for reference.

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 in the Student Dashboard Projects panel against the correct class number.

Hints:

1. From the Toolbox, select Group to learn about creation of groups and using different functions of groups.
   For example: Add sprite red in group redB.

```
var redB=createGroup();
var greenB=createGroup();
var blueB=createGroup();
var yellowB=createGroup();
var arrowGroup=createGroup();
```

```
function redBalloon() {
  var red = createSprite(0,randomNumber(20, 370), 10, 10);
  red.setAnimation("animation_1");
  red.velocityX = 3;
  red.lifetime = 150;
  redB.add(red);
}
```

2. destroy() is for individual sprites, but for groups you have to use destroyEach.

```
if (arrowGroup.isTouching(yellowB)) {
  yellowB.destroyEach();
  arrowGroup.destroyEach();
  score=score+1;
}
```

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

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