INSTRUCTIONS:

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Goal of the Project:

In Class 20, you learned how to evaluate if two sprites have collided.

In this project, you will apply what you have learned in the class to achieve the following goals.

Main Goal	● Set a background. ● Create cat and mouse sprites. ● Make the cat move towards the mouse.
Additional Goal 1	● Use keyEvents to calculate collision between cat and mouse.

Story:

Richard loves watching Tom and Jerry. And he always wanted to create a game which is similar to Tom and Jerry for himself. So he decided to create a game on cat and mouse. Can you help in creating a collision game in which cat will run towards mouse and if both cat and mouse collides animation changes to funny or happy image.

See a video of this in action.
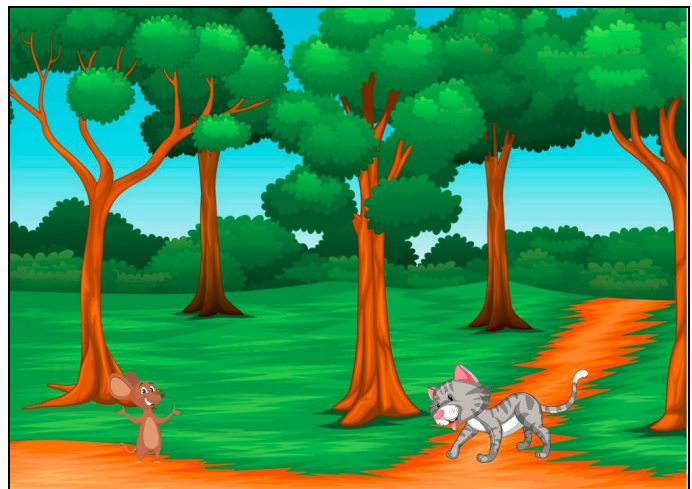
*This is just for your reference. We expect you to apply your own creativity in the project.

Getting Started:

1. Use the template on github, available for download on the following link:
    https://github.com/priyapandey2020/tomAndJerryTemplate/archive/master.zip
2. **Unzip** this folder.
3. Rename the unzipped folder as **Project 20.**
4. **Import** this folder **into VS Code**.
5. Start editing your code in **sketch.js**.

Specific Tasks to Achieve the Main Goal:

1. Create canvas and add a background Image.
2. Create two variables for **cat** and **mouse** sprites.
3. Load the images for cat and mouse sprite in preload( ).
4. Write **keyPressed( )** to change cat's animation as running and mouse should start teasing cat.
5. Also, add code for **LEFT_ARROW** key to move cat towards mouse.
6. Make sure the project works before you submit it.

*Refer to the images given above for reference.

Submitting the Project:

1. **Upload** your completed project to your own github account.
2. Enable **Github** pages for the repository.
3. Copy and paste the link to the github pages in the Student Dashboard against the correct class number.

Hints for the Main Goal:

1. You can use the below code to move the cat:

```
function keyPressed(){

    if(keyCode === LEFT_ARROW){
        cat.velocityX = -5;
        cat.addAnimation("catRunning", catImg2);
        cat.changeAnimation("catRunning");


    }
}
```
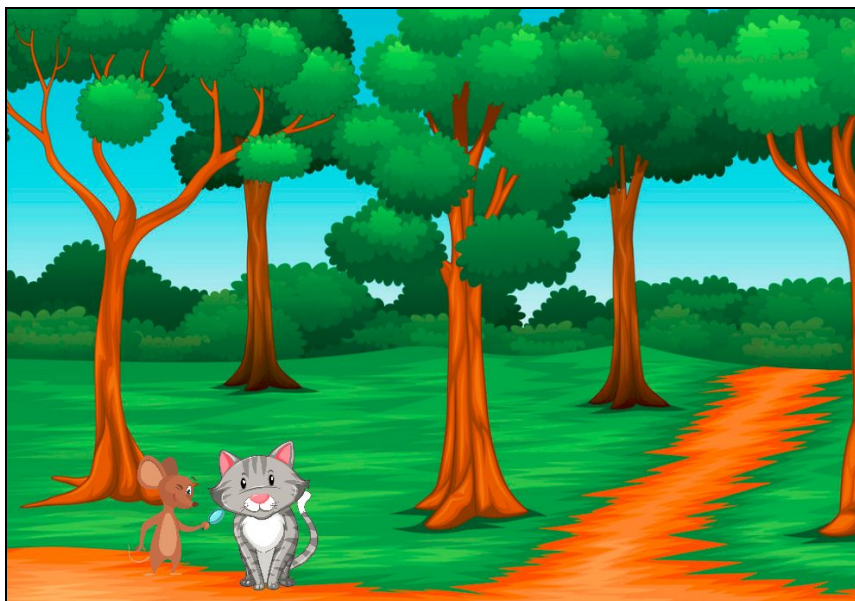
2. You can use the code given below to find the X and Y position:

```
text(mouseX + ',' + mouseY, 10, 45);
```

Additional Goal 1:

Now you have to write code to stop the cat from moving and the mouse from teasing by calculating collisions between them.

Are you ready for the challenge?

Specific Tasks to Achieve Additional Goal 1:

1. Add condition to check if cat and mouse are colliding.
2. Change the animation of cat and mouse to the final animation.
3. Stop the cat from moving when a collision happens.
4. Make sure the project works before you submit it.

*SAVE all the changes made to the project and **SUBMIT** the shareable link in the Student Dashboard Projects panel against the correct class number.

Hints for the Additional Goal 1:

1. You can use the below given code snippet to evaluate collision:

```
if(cat.x - mouse.x < (cat.width - mouse.width)/2)
{
    //write code here to change animation
}
```

2. When the collision happens, set the velocityX of the cat to 0.
3. To change animation you can use the below code to set and change the animation.

```
cat.addAnimation("catLastImage", catImg3);
cat.changeAnimation("catLastImage");
```

REMEMBER... There is always something new to learn. Learning polishes your mind.
After submitting your project your teacher will send you feedback on your work.

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