

INSTRUCTIONS:

Goal of the Project:

In Class 11, we have learned to use random numbers to generate clouds at random positions. We also learned about frame count to introduce a delay in the game.

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

Main Goal	You have to spawn the first sprite i.e apples at random positions and add code for moving the rabbit sprite using a mouse.
Additional Goal 1	Add the other two sprites i.e. different color leafs and spawn them with the first sprite you created in the main goal using random numbers.

Story:

Shailey loves rabbits and she wants to create a game in which a rabbit can eat different leafs and carrots. We have already helped Shailey in creating the design of the game with moving background and a rabbit. Now she wants to make the game a bit challenging. She wants to spawn apples at random positions.

Are you up for the challenge?

See a video of this in action [video](#).



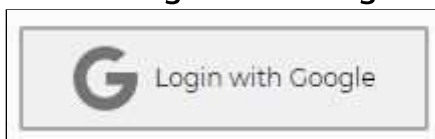
***This is just for your reference. We expect you to apply your own creativity in the project.**

Getting Started:

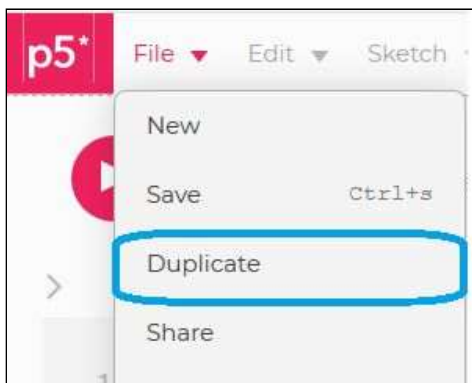
1. Click on the following link: [Project Template](#)
2. Click on **Log in** to login to P5.js editor.



3. Click on **Login with Google** and use your gmail id to login into P5.js editor.

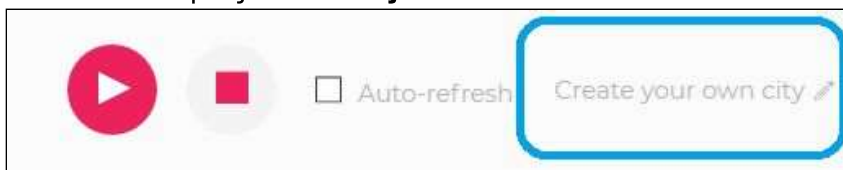


4. Click on “**Duplicate**” under the **File menu**.

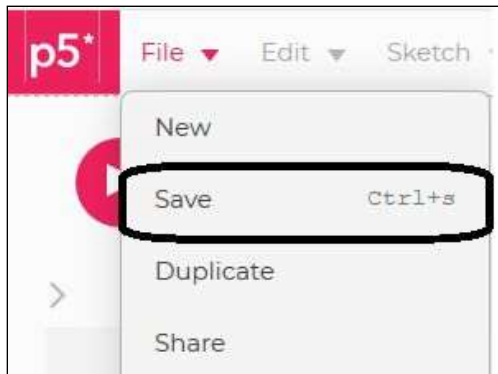


a. This will create a copy of the sample project in your account.

5. Rename the project to **Project 11**.



6. Click on “**Save**” under the **File menu** to save your project **OR** press **Command+s** on **Mac** and **CTRL+s** on **Windows** systems to save your project.



7. Start writing code in sketch.js file.
8. Download the images from [here](#).

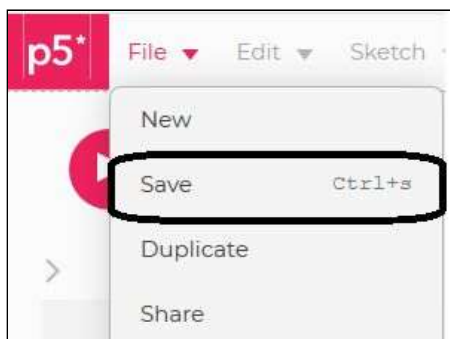
Specific Tasks to Achieve the Main Goal:

1. Create a function to spawn apples at random X position. This will be very similar to the spawnCloud function created in the t-rex game.
2. Use **frameCount** and **% operator** to create apples after every 80 frames.
3. The apples should start moving downwards to show that it is moving with the ground.
4. Add code to move the rabbit in X position using mouseX.
5. Click on **"Play"** once to check if it is working.

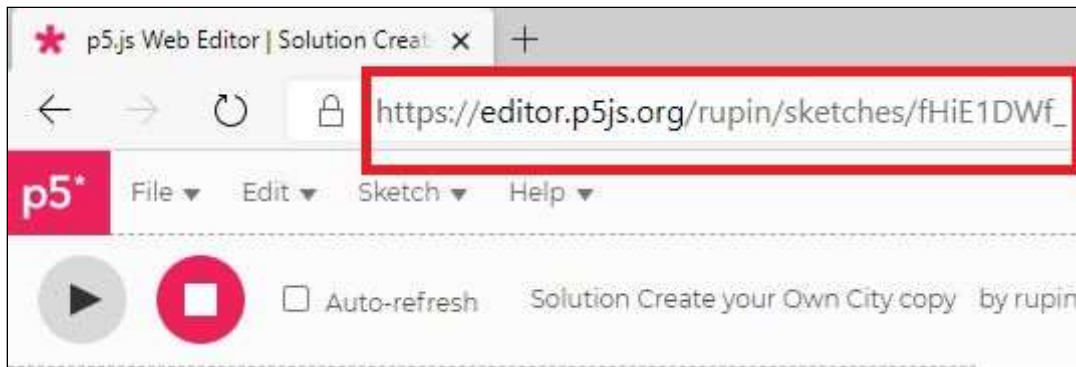
*Refer to the images given above.

Submitting the Project:

1. Click on **"Save"** under the **File menu** to save your project or press **Command+s** on **Mac** and **CTRL+s** on **Windows** systems.



- Copy the link of your browser's address bar and paste it in the Student Dashboard Projects panel against the correct class number.



Hints for the Main Goal:

- You can use the **if condition** given below to spawn the apples.

```
if (frameCount % 80 == 0) {  
    createApples();  
}
```

- Here is a sample code snippet of a function which creates an apple.

```
function createApples() {  
    apple = createSprite(random(50, 350), 40, 10, 10);  
    apple.addImage(appleImg);  
    apple.scale=0.07;  
    apple.velocityY = 3;  
}
```

- Code to make the rabbit move using mouse:

```
// boy moving on Xaxis with mouse  
rabbit.x = World.mouseX;
```

Additional Goal 1:

Now Shailey wants to spawn orangeLeaf and redLeaf.

Can you help her in spawning different color leaves?

**Specific Tasks to Achieve Additional Goal 1:**

1. The way you have created createApples() is the main goal. Similarly, write functions to spawn orangeLeaves and redLeaves.
2. Assign lifetime for each sprite getting created.
3. Use random numbers to create different sprites.
4. Click on "**Play**" once to check if it is working.

***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 set the lifetime of the sprite using **sprite.lifetime** code given in the sprites section.

```
orangeL.lifetime = 150;
```

2. Use **if else** statement to use a random number and call all the functions randomly.

```
var select_sprites = Math.round(random(1,3));

if (frameCount % 80 == 0) {
  if (select_sprites == 1) {
    createApples();
  }else {
    createRed();
  }
}
```

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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