Mobile Compatible Games

What is our GOAL for this MODULE?

We will make the Trex game Mobile Compatible.

What did we ACHIEVE in the class TODAY?

- Adjusted the game dimension to fit all screen sizes.
- Made the game touch friendly for smartphones.
- Hosted the game online on GitHub.
- Built a web wrapper around the game to generate an APK file.

Which CONCEPTS/ CODING BLOCKS did we cover today?

- OOP concept revision added more functionality.
- Dimensions
- Touches for smartphones
- Generating Apk files

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How did we DO the activities?

In the previous class, you created a **box** class and defined functions to move the box on the canvas. Here, you create a **Student** class that can store the information of a student and display it.

1. Create a **Student** class in the **student.js** file. This class will have attributes such as **name**, **age,** and **grade** of the **Student** in the **constructor()** function. This will also have a method to display these details on the console.

```
class Student
{
    constructor(name,age,grade)
    {
        this.name = name;
        this.age = age;
        this.grade = grade;

    }

    display()
    {
        console.log(this.name);
        console.log(this.age);
        console.log(this.grade);
    }
}
```

2. Create the object of the student in the **sketch.js** file and call the **display()** function using the name of the object, which in this case is, **s1.display()**.

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```
var s1;

function setup() {
  createCanvas(400,400);

  s1 = new Student("john",12,6);
  s1.display();

}
```

Output:

3. Make Trex game mobile compatible by adjusting the game dimensions to fit all the screen sizes. Adjust the width and height of sprites according to the screen size.

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```
function setup() {
  createCanvas(windowWidth, windowHeight);

  sun = createSprite(width-50,100,10,10);
  sun.addAnimation("sun", sunAnimation);
  sun.scale = 0.1

  trex = createSprite(50,height-70,20,50);


  trex.addAnimation("running", trex_running);
  trex.addAnimation("collided", trex_collided);
  trex.setCollider('circle',0,0,350)
  trex.scale = 0.08;

  invisibleGround = createSprite(width/2,height-10,width,125);
  invisibleGround.shapeColor = "#f4cbaa";

  ground = createSprite(width/2,height,width,2);
  ground.addImage("ground",groundImage);
  ground.x = width/2
  ground.velocityX = -(6 + 3*score/100);

  gameOver = createSprite(width/2,height/2- 50);
  gameOver.addImage(gameOverImg);

  restart = createSprite(width/2,height/2);
  restart.addImage(restartImg);
```

WhiteHat Jr + WhiteHat Jr + WhiteHat Jr

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4. Check if there is a touch or a tap as the phone doesn't have a space key to make the Trex jump.

```
if (gameState===PLAY){
  score = score + Math.round(getFrameRate()/60);
  ground.velocityX = -(6 + 3*score/100);

  if(touches.length > 0 || keyDown("SPACE")) && trex.y  >= height-120) {
    jumpSound.play( )
    trex.velocityY = -10;
    touches = [];
  }

  trex.velocityY = trex.velocityY + 0.8

  if (ground.x < 0){
    ground.x = ground.width/2;
  }

  trex.collide(invisibleGround);
  spawnClouds();
  spawnObstacles();
```

5. Host game on GitHub:
    - Create a new repository.

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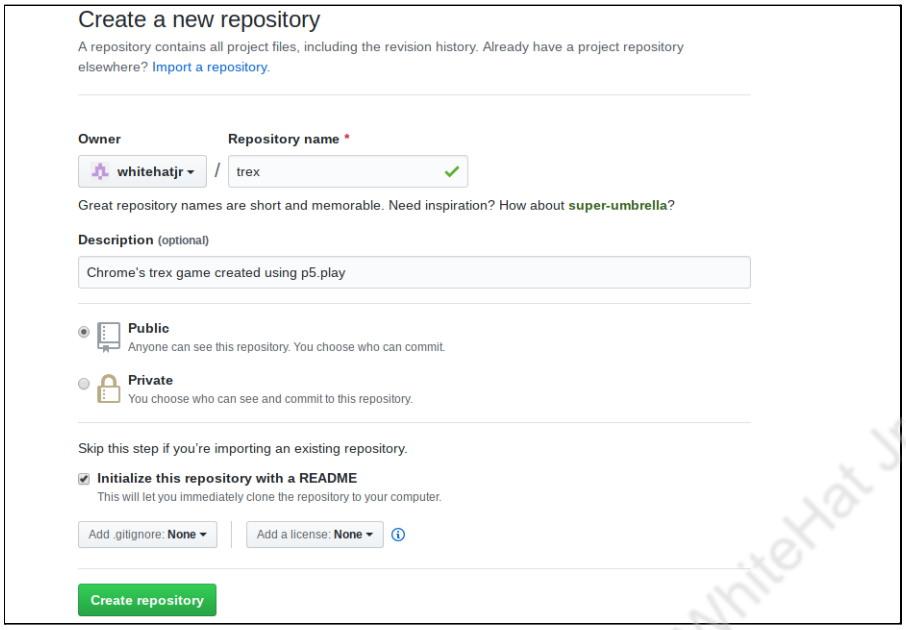
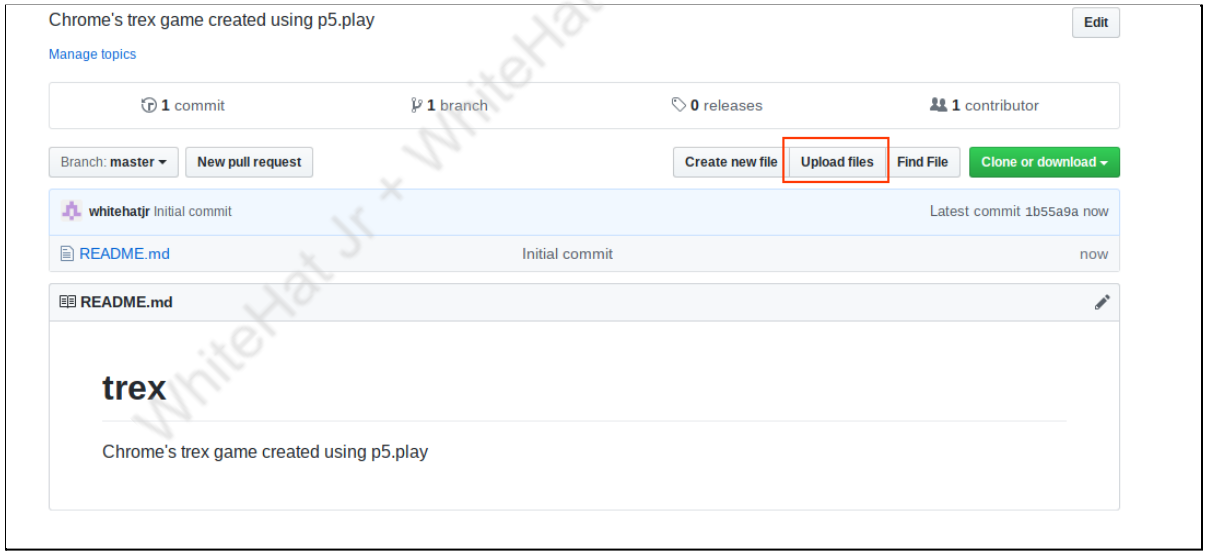
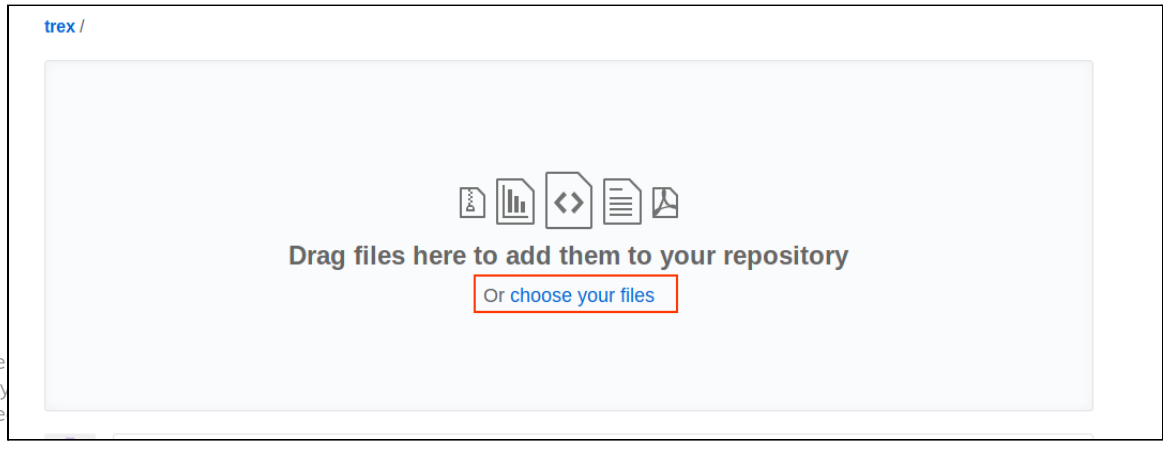


- Upload the Trex project files on GitHub.





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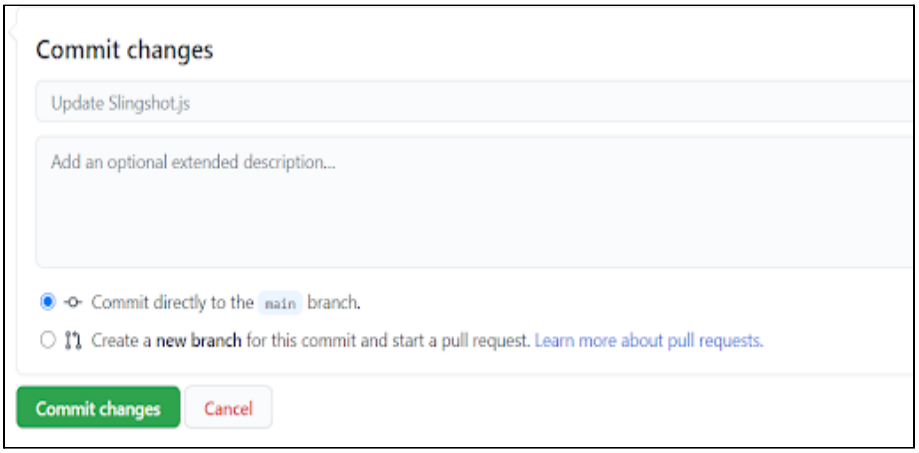
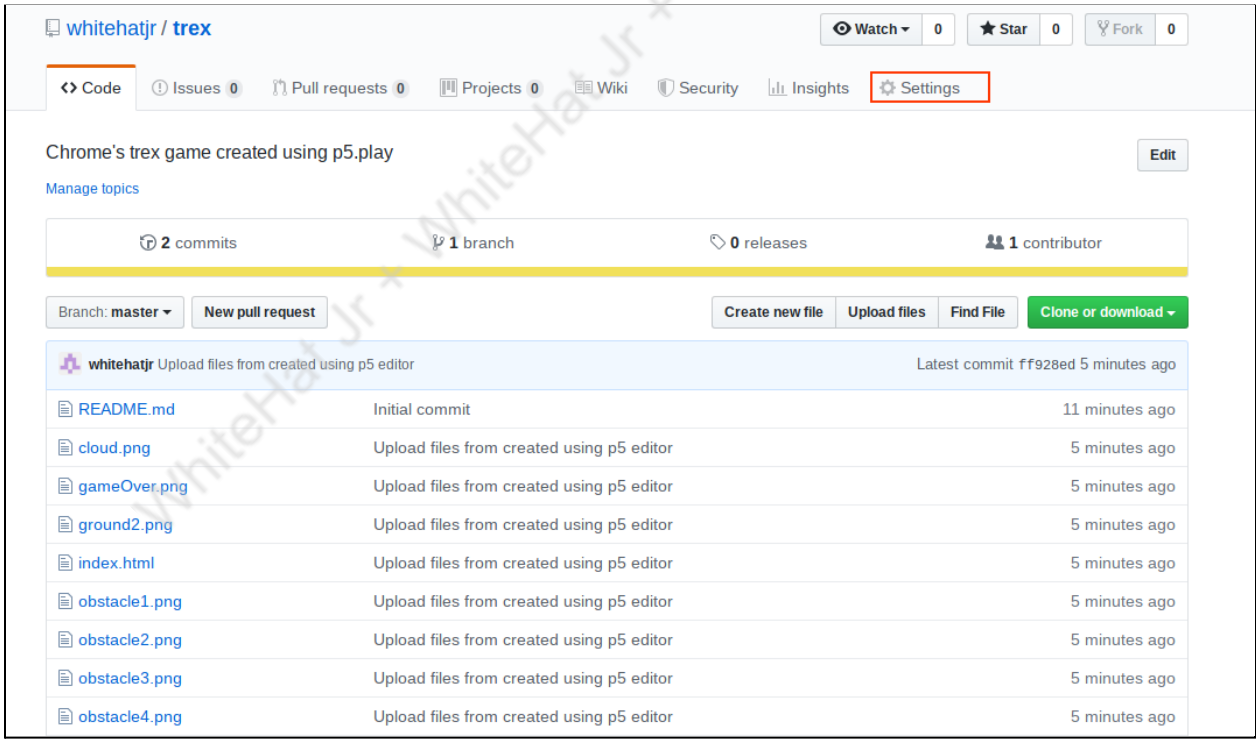


- Go to Settings of the repository.



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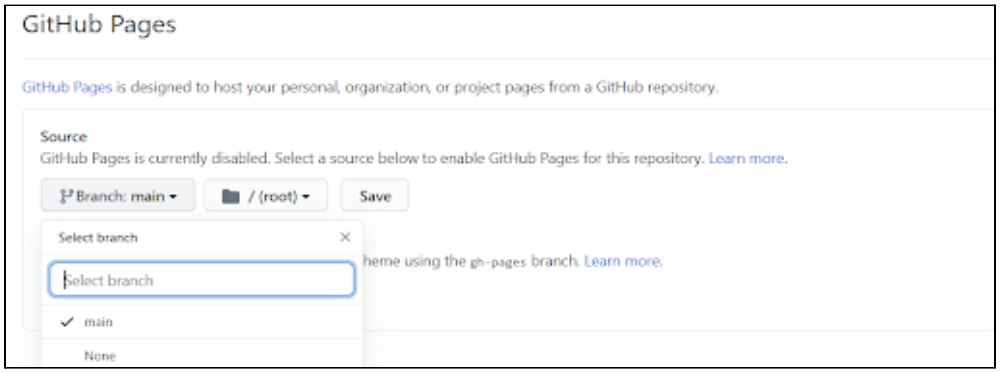
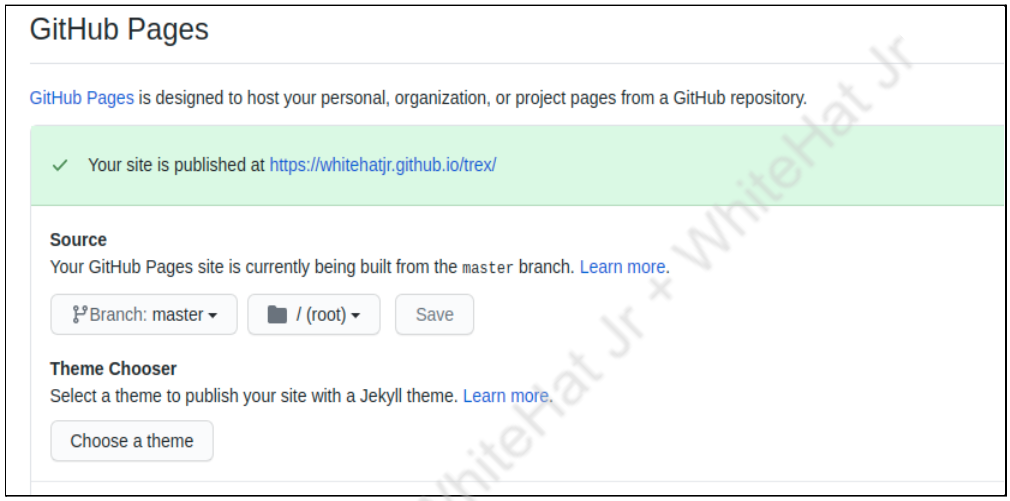
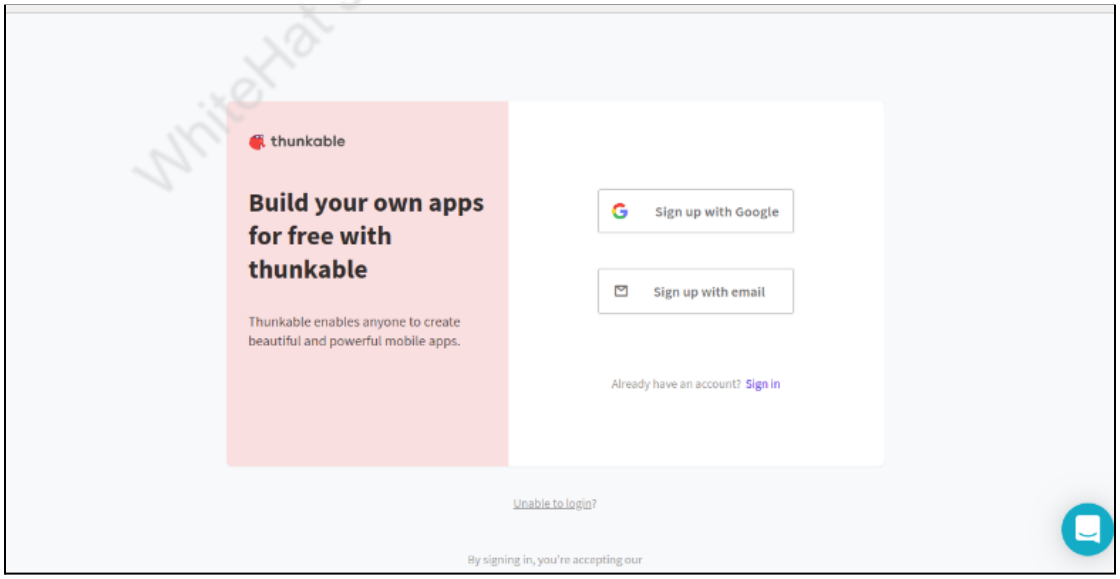




6. Publish the game using Thunkable.



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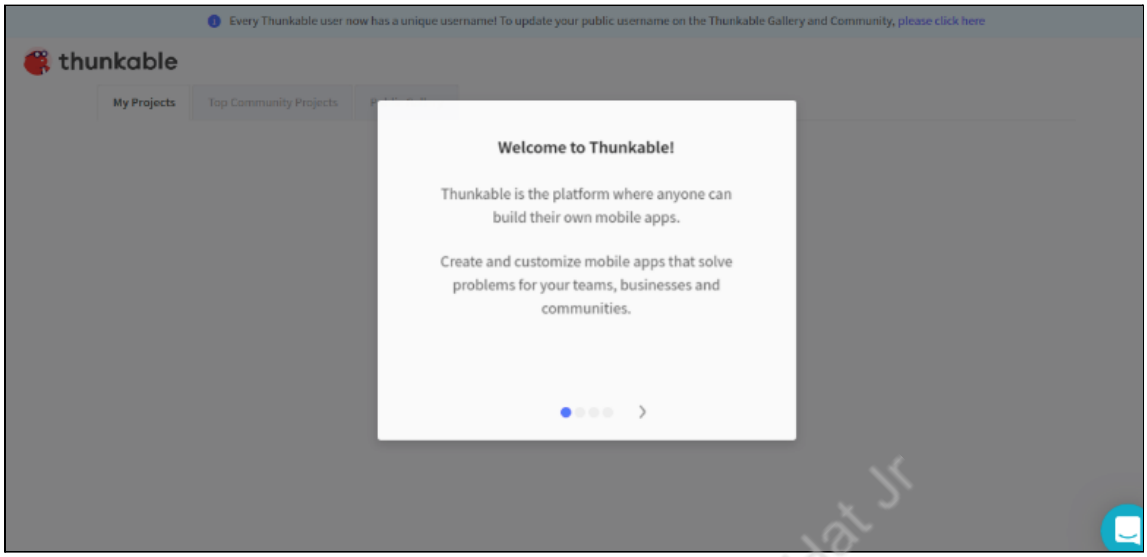

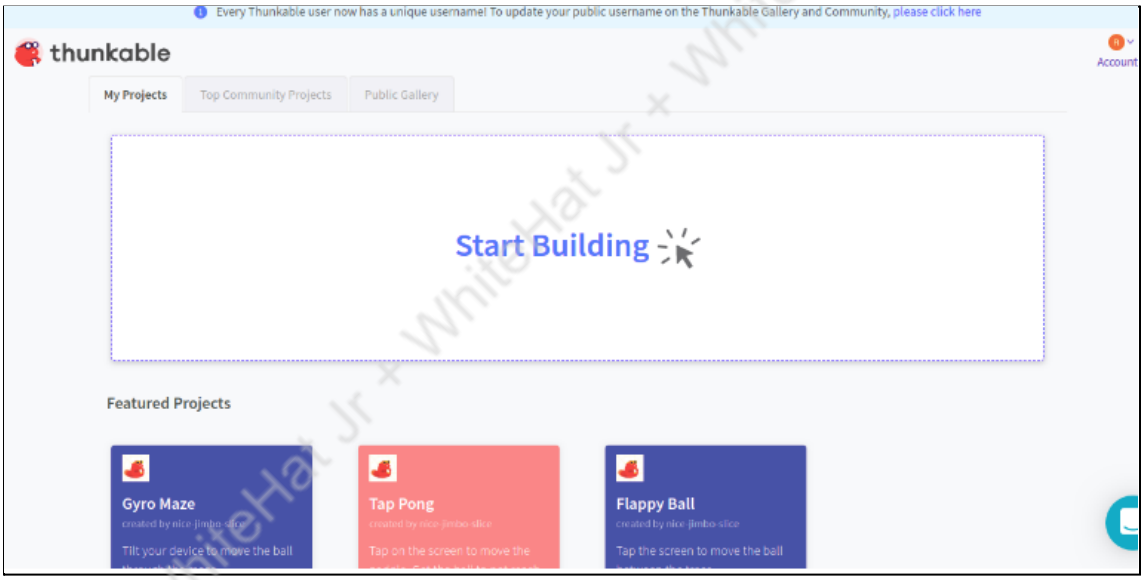

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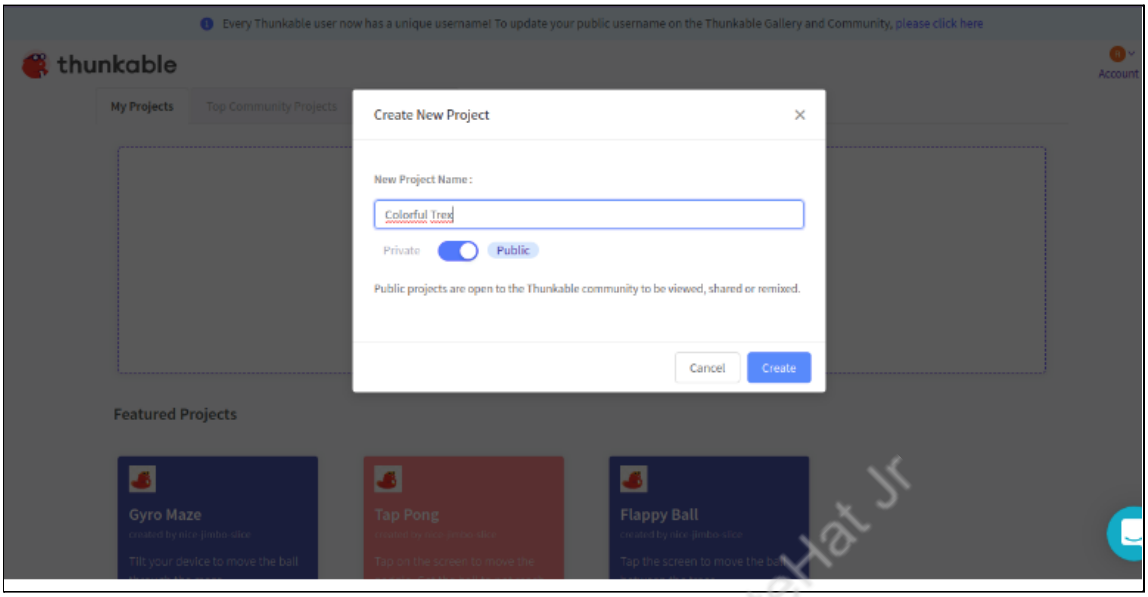
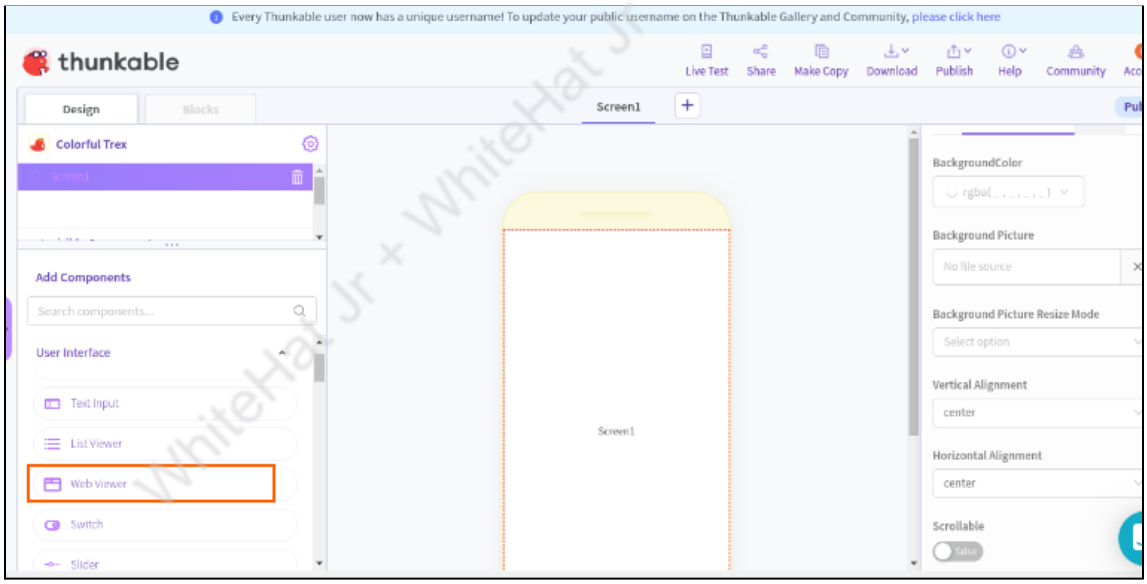


7. Locate and add the “web view” component to the screen.



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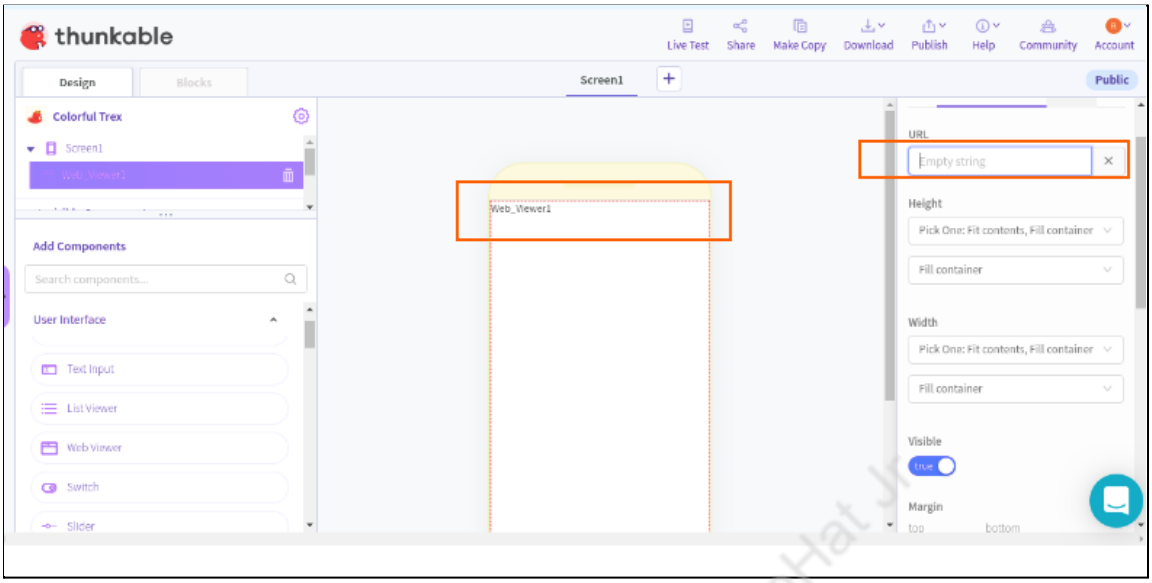
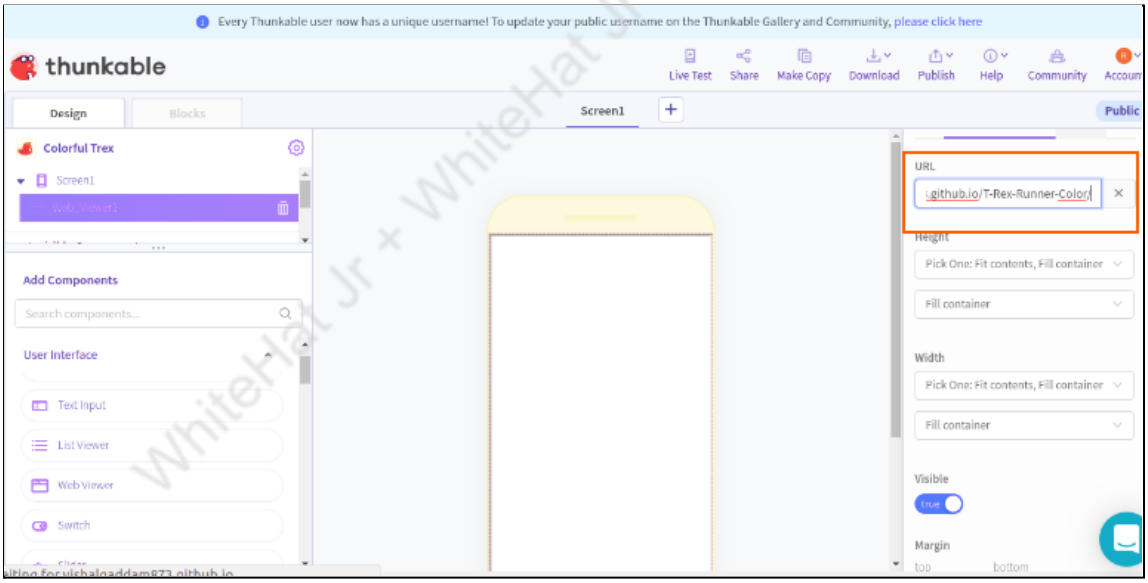


8. Paste the git link in the URL part.



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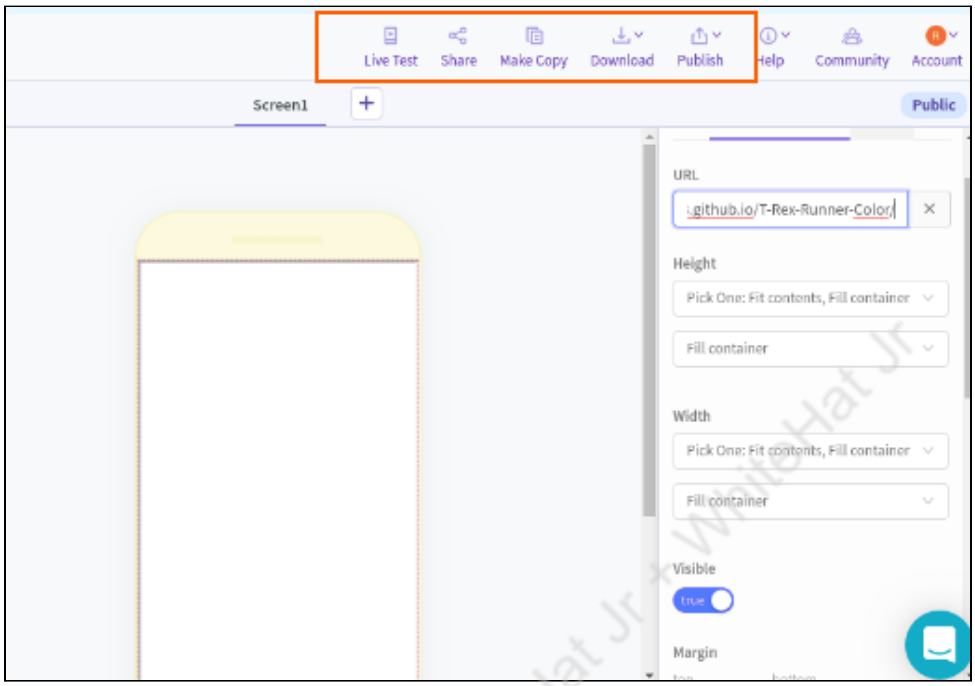
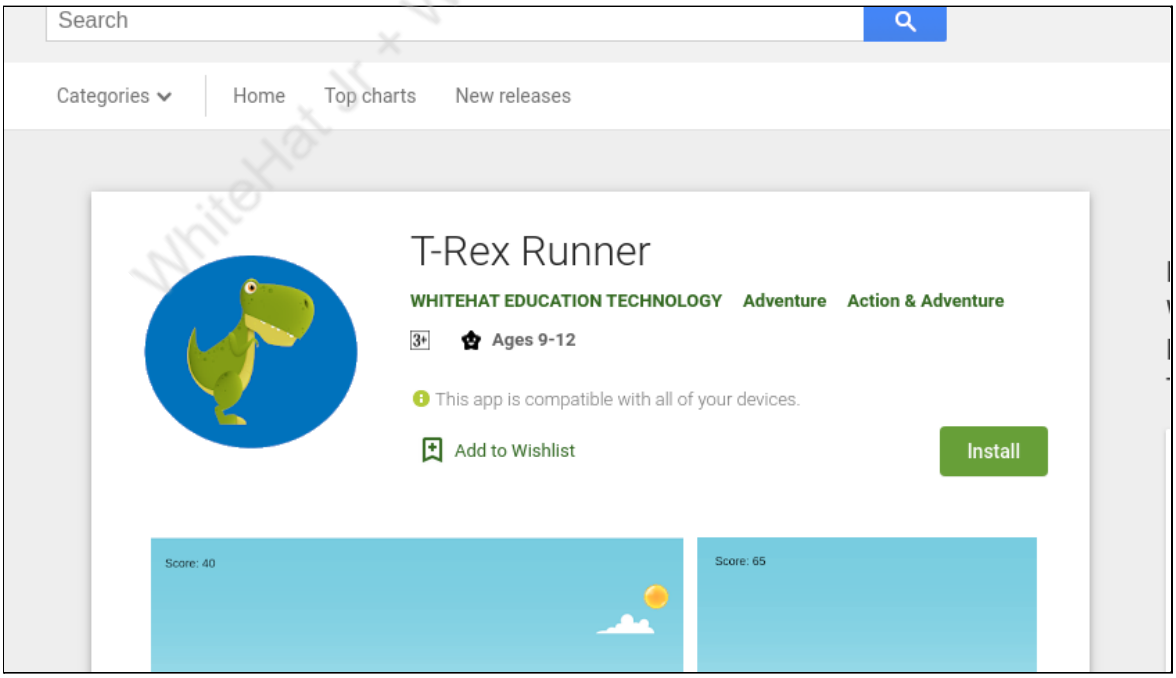
9. Check the live preview on the app, and also download the apk to be installed on ios and android.



10. Download the file from the Play Store.



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What's next?

We will learn how to build a different infinite running game - a ghost running on the tower - which you will be coding on your own!

Extend Your Knowledge:

1. Learn & Experiment with more components of Thunkable: https://thunkable.com/#/

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