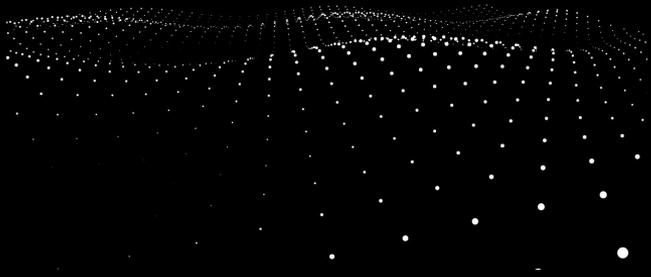


# PURPLE WAVES TUTORIAL

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# INTRODUCTION

In this class, we have manipulated many codes, and made many amazing games and creations. This tutorial will show you how to make a beautiful array of purple spheres in wave formations. If you follow each of the steps exactly how they are told, you will have waves of purple spheres. The before picture is on the left, and the after picture is on the right.



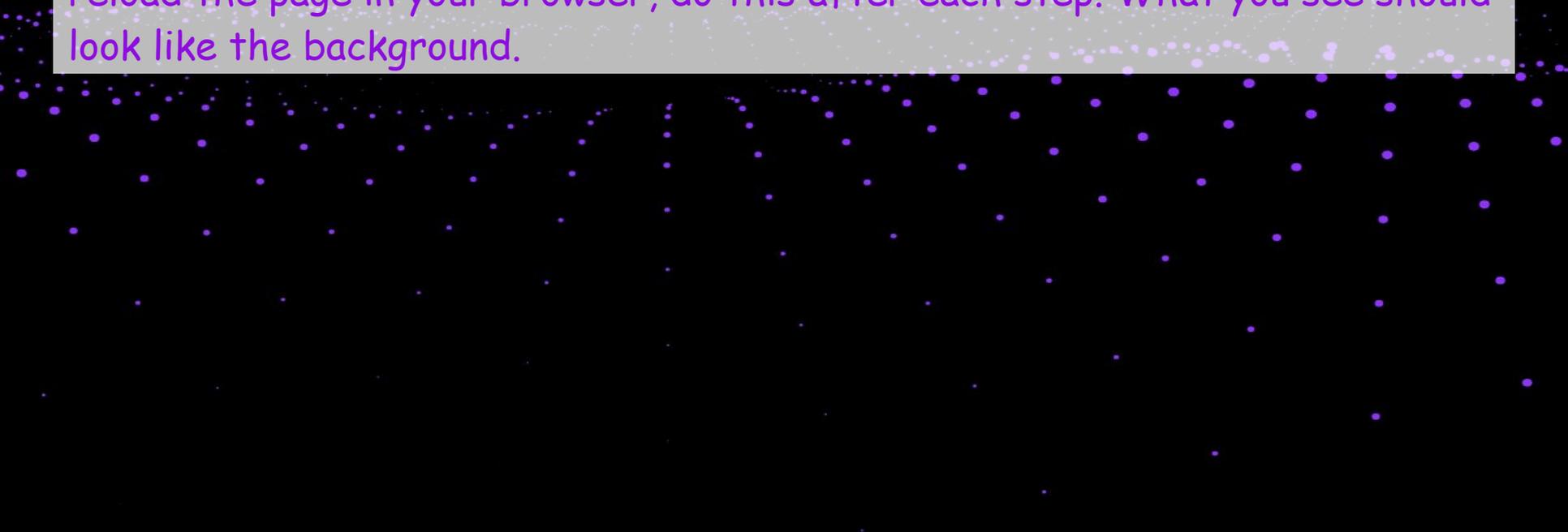
# GETTING STARTED

To begin, click the download link below to get the file, make sure you extract it into the right folder. Then, open index.html in Notepad++, and your browser to begin your coding journey.

[DOWNLOAD](#)

## STEP 1: DOT COLOR CHANGES

On line 59, change `color: 0xffffffff`, to `color: 0x9133ff`, this changes the color of the spheres to purple. When you are finished, save the code, and reload the page in your browser, do this after each step. What you see should look like the background.

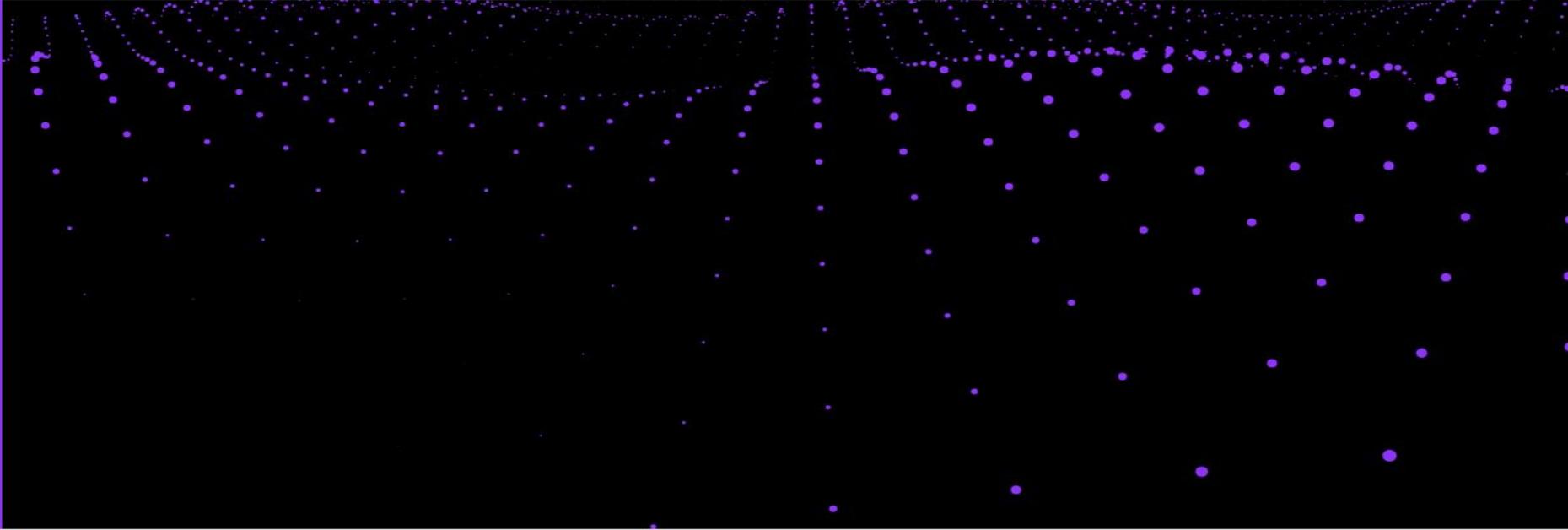


## STEP 2: ADDING THE MARGIN

On lines 9 and 10, change  
This adds a margin, and  
makes that margin purple.

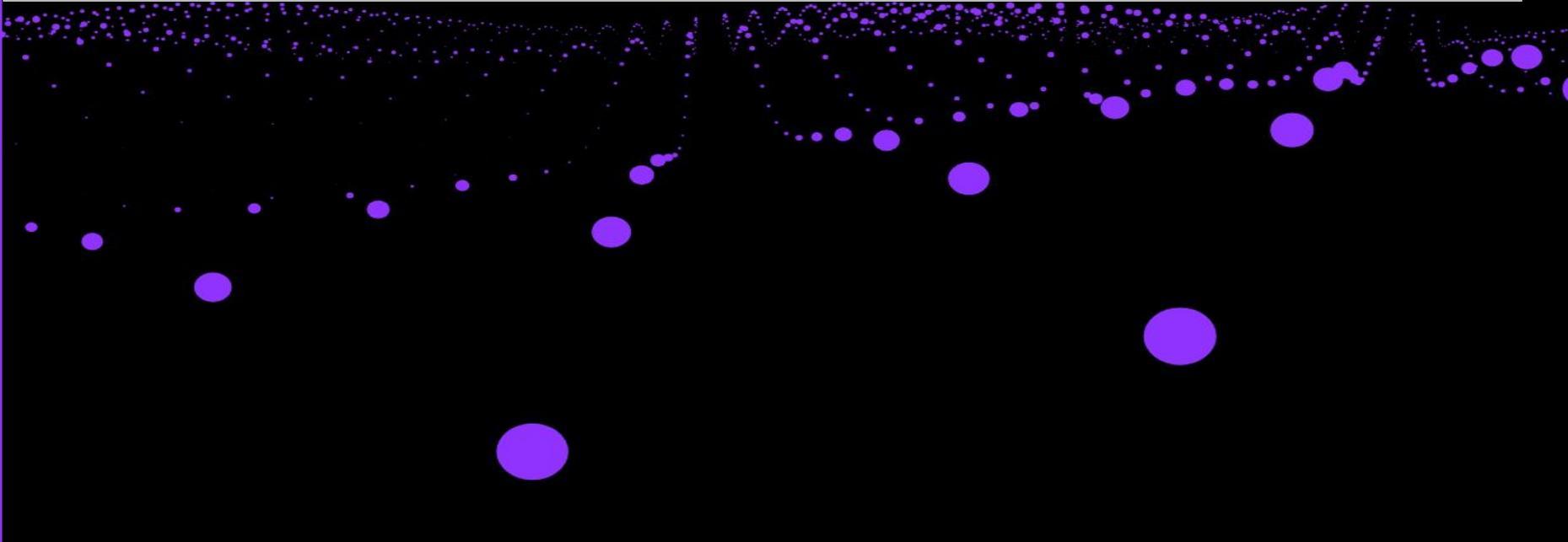
```
background-color: #000000;  
margin: 0px;  
overflow: hidden;
```

```
background-color: #9133ff;  
margin: 50px;  
overflow: hidden;
```



## STEP 3: CAMERA PERSPECTIVE

On line 50, change `camera.position.z = 1000;` to `camera.position.z = 500;` this changes the perspective that the dots are viewed to a lot closer, so they appear bigger.



## STEP 4: MOUSE SENSITIVITY

On Lines 164 and 165, change the Mouse Sensitivity from 0.05 to 0.5, this changes the speed at which the perspective of the dots changes. If you did it right, it should look like this

Before

```
camera.position.x += ( mouseX - camera.position.x ) * 0.05;  
camera.position.y += ( - mouseY - camera.position.y ) * 0.05;  
camera.lookAt( scene.position );
```

After

```
camera.position.x += ( mouseX - camera.position.x ) * .5;  
camera.position.y += ( - mouseY - camera.position.y ) * 0.5;  
camera.lookAt( scene.position );
```

## STEP 5: WAVES

On line 175 change

```
particle.position.y = ( Math.sin( ( ix + count ) * 0.3 ) * 50 ) +
```

To this:

```
particle.position.y = ( Math.sin( ( ix + count ) * 0.5 ) * 350 ) +
```

This makes big waves in the purple spheres, giving it a cool look.

## STEP 6: CHANGING SPEED OF SPHERES

To change the amount of spheres, go to line 187 and change the 0.1 to a 0.05, this slows down the speed of the waves and makes them a little easier to see.

```
renderer.render( scene, camera );  
count += 0.1;
```

```
renderer.render( scene, camera );  
count += 0.05;
```

## STEP 7: BETTER WAVES

On line 176, change `( Math.sin( ( iy + count ) * 0.5 ) * 50 );` to this:  
`( Math.sin( ( iy + count ) * 10 ) * 50 );`

This makes the waves more erratic and cool. This is the last step of the tutorial, and if your page doesn't look like background of this slide, you may have made a mistake. Go back through the slides and check your work, to make sure you have the best result!

# CONCLUSION

So by now, your page should look very alike to the background of this slide. If it does not, make sure to go back and look for any errors. But now you should have a nice relaxing set of purple waves to watch and enjoy.

We hope you enjoyed our variable modifications, and get busy coding!