BHARATI VIDYAPEETH
Institute of Technology (Polytechnic), Navi Mumbai

(ACADEMIC YEAR:-2020-2021)

(MICRO PROJECT)
CLIENT SIDE SCRIPTING (CSS)

PROGRAM:- CM5I **COURSE AND CODE:-CSS(22519)**

TOPIC:- :-"Developing Animated Solar System using Javascript "

SUBMITTED BY :-

1. Shreyash Ghatage (3135)
2. Reshma Damare (3136)
3. Shruti Lende (3155)

Annexure- I

Micro- Project Proposal

DEVELOPING ANIMATED SOLAR SYSTEM

1.0 Aims/ Benefits of the Micro – Project :

a) To develop a program for animated solar system.

b) The aim of this project is to how animated solar system is created using java script.

2.0 Course Outcomes Addressed

a)Implement arrays and functions in java script.

b)Use java script for handling Cookies.

3.0 Proposed Methodology (Procedure in brief that will be followed to do the micro-project in about 100-200 words)

In this project we will learns how to develop animated solar system using javascript. We will create a code in html using javascript. In this code for displaying animated solar system more attractive we will use various tags like canvas ,script tags etc. We also use user defined functions. In this code we also various graphics objects like circle, line, arc. The path of the image in provided in image src tag.In this manner we are trying to show animated solar system in javascript.

3.0 Action Plan(Sequence and time required for major activity)

Sr.No.	Details of activity	Planned start date	Planned finish date	Name of responsible team members
1.	Searched topic for microproject	05/08/20	13/08/20	Reshma , Shruti , Shreyash
2.	Collected the requied materials	14/08/20	18/09/20	Shruti
3.	Planned the outline of the project	19/09/20	06/10/20	Shreyash, Reshma
4.	Working on micro project	07/10/20	15/10/20	Reshma, Shruti, Shreyash

4.0**Resources Required** (major resources such as raw material, some machining facility, software etc.)

Sr.No.	Name of resource / material	Specification	Quantity	Remarks
1.	Pc / Laptop	4 GB Ram	1	
2.	Operating System	Windows 10	1	
3.	Software	Notepad	1	

Names of Team Members with Roll Nos.

1. Shreyash Ghatage (335)
2. Reshma Damare (3136)
3. Shruti Lende (3155)

(To be approved by the concerned teacher)

ANNEXURE II

Evaluation Sheet for the Micro Project

Academic Year :2020-2021 Name of Faculty: Mrs. Shobhna Gaikwad

Course: Client Side Scripting Course Code:22519 Semester:CM5I

Title of the Project: Developing Animated Solar System using Javascript.

COs addressed by the Micro Project:

A. Create interactive web pages using program flow control structure.

B. Implement arrays and functions in java script.

Major Learning Outcomes achieved by students by doing the Project:

(a)Practical Outcomes: Develop Javascript to implement array functionalities.

(b) Unit Outcomes in Cognitive domain : Develop javascript to implement the given function.

(c) Outcomes in Affective Domain: a. Follow ethical practices.

b.D

emonstrate working as a leader/a team member.

Comments/Suggestions about team work/leadership/inter-personal communication (if any)

Roll No.	Student Name	Marks out of 6 for performance in group activity (D5 Col. 8)	Marks out of 4 for performance in oral / presentation (D5 Col. 9)	Total out of 10
3135	Shreyash Ghatage			
3136	Reshma Damare			
3155	Shruti Lende			

(Name & Signature of faculty)

CONTENT

INTRODUCTION

JavaScript is a Programming Language commonly used in web development. It was originally developed by Netscape as a means to add dynamic and interactive elements to websites. While JavaScript is influenced by Java, the syntax is more similar to C and is based on ECMA Script, a scripting language developed by Sun Microsystems.

JavaScript is a client-side scripting language, which means the source code is processed by the client's web browser rather than on the web server. This means JavaScript functions can run after a webpage has loaded without communicating with the server. For example, a JavaScript function may check a web form before it is submitted to make sure all the required fields have been filled out. The JavaScript code can produce an error message before any information is actually transmitted to the server.

OBJECTIVE

- To develop a program for animated solar system
- The aim of this project is to show how animated solar system using javascript.

DESCRIPTION OF PROJECT

In this project we will learns how to develop animated solar system using java script. We will create a code in html using javascript.In this code for displaying animated solar system more attractive we will use various tags like canvas ,script tags.etc. We also use user defined functions.In this code we also various graphics objects like circle,line ,arc.The path of the image in provided in image src tag.In this manner we are trying to show animated solar system in javascript.

TECHNOLOGY AND TOOLS USED

- System used(COMP/LAPTOP): Computer Processor, 4GB RAM
- Operating System: Windows 7
- Software: Notepad

ADVANTAGES

1. User can get more information by seeing virtual image.
2. User will get more attracted towards the virtual image of the Solar System.
3. This will increase the interest of the user to perform more graphical animations.

CODING

```
<!DOCTYPE HTML>
<html>
<head>
<meta charset="UTF-8">
<title>Solar System</title>
<style type="text/css">
*{
margin:0;
padding:0p;
font-family:"Helvetica";
}
body{
background:black;
user-select: none;
}
ul{
list-style:none;
}
li{
display:inline-block;
}
.body{
margin:0 auto;
width:1000px;
padding-top:40px;
```

```
}#canvas{
}
</style>
<body>
<canvas id="canvas" height="800" width="1000"></canvas>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></s
cript>
<script type="text/javascript">
window.onload = function(){
if(navigator.appVersion.indexOf("MSIE 7.") != -1
||navigator.appVersion.indexOf("MSIE 8.") != -1){alert("Please don't use old IE
browser");
}
var canvas = document.getElementById("canvas"),
ctx = canvas.getContext("2d"),
cw = canvas.width,
ch = canvas.height,
time = 1;
/*set support for requestAnimationFrame - ovrride method */
window.requestAnimationFrame = window.requestAnimationFrame ||
window.mozRequestAnimationFrame ||
window.webkitRequestAnimationFrame ||
function(callback){window.setTimeout(callback, 1000/60);}
function circle(radius,color,x,y){/*set default*/
x = typeof x !== "undefined" ? x : cw/2;
y = typeof y !== "undefined" ? y : ch/2;
```

```
ctx.beginPath();
ctx.fillStyle = color;
ctx.arc(x,y,radius,0,2*Math.PI,true); //true = clockwise, false = counterclock
ctx.fill();
ctx.closePath();
}
function circleStroke(radius,strokeColor,x,y,lineWidth){
ctx.beginPath();
ctx.arc(x,y,radius,0,2*Math.PI,true);
ctx.lineWidth = lineWidth;
ctx.strokeStyle = strokeColor;
ctx.stroke();
ctx.closePath();
}
function line(ax,ay,bx,by){
ctx.beginPath();
ctx.moveTo(ax*2,ay);
ctx.lineTo(bx,by);
ctx.strokeStyle = "rgba(255, 255, 255,0.12)";
ctx.stroke();
ctx.closePath();
}
function text(text,color,font,x,y){
ctx.beginPath();
ctx.font = font;
ctx.fillStyle = color;
```

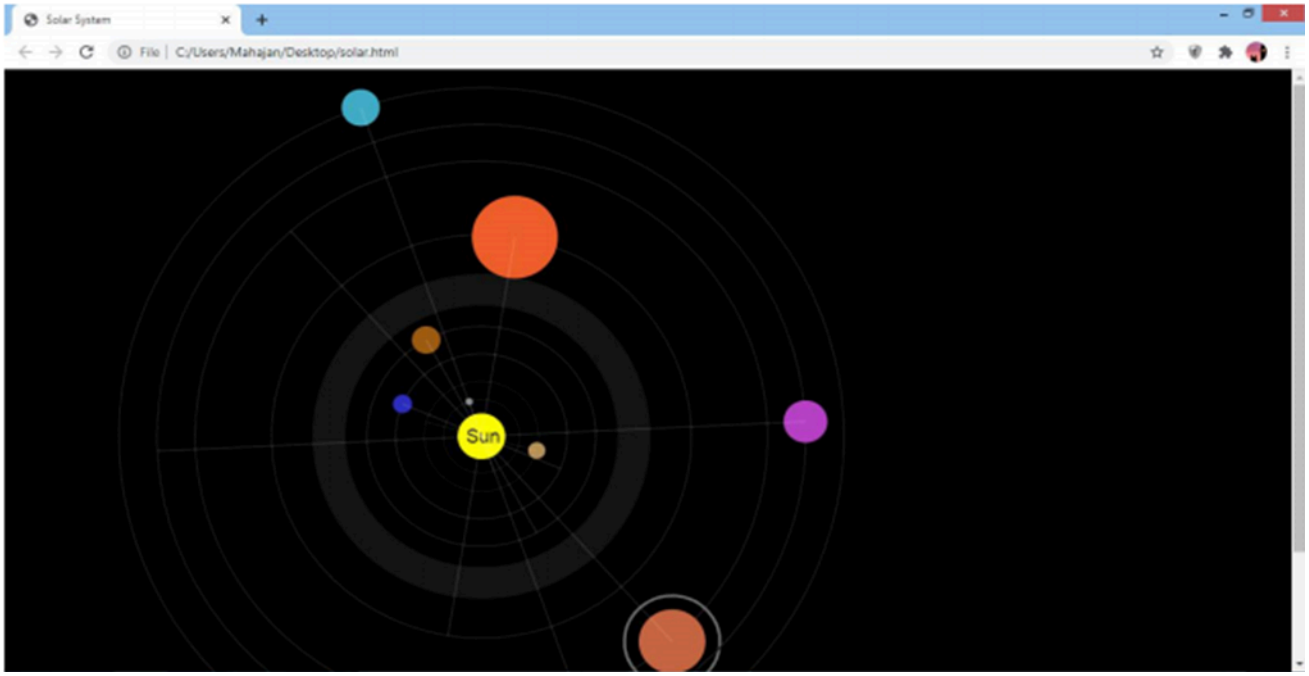
```
ctx.fillText(text,x,y);ctx.closePath();
//console.log(text);
}
function animate(){
ctx.save();
ctx.beginPath();
ctx.fillStyle = "black";
ctx.fillRect(0,0,cw,ch);
ctx.closePath();
//Sun - center
ctx.translate(cw/2,ch/2);
circle(25,"yellow",0,0);
text("Sun", "black","15pt arial", -16,7);
//Mercury white line
circleStroke(40,"#1c1c1c",0,0,"1");
//Mercury
ctx.rotate(time / 30); /*.restore and .save doesn't work on rotate()*/
ctx.translate(40,0);
circle(3.8,"#898989",0,0);
line(-40,0,0,0);
//Venus white line
ctx.translate(-40,0); //reset translate
circleStroke(60,"#1c1c1c",0,0,"1");
//Venus
ctx.rotate(time / 100 - (time / 90)); /*.restore and .save doesn't work
onrotate()*/ ctx.translate(60,0);
```

```
circle(9,"#b9955b",0,0);
line(-60,0,0,0);
//Earth white line
ctx.translate(-60,0);
circleStroke(90,"#1c1c1c",0,0,"2");
//Earth - This is Where i live
ctx.rotate(time / 100 - (time / 80));
ctx.translate(90,0);
circle(10,"#2f2fc1",0,0);
line(-90,0,0,0);
//Moon.. nobody likes the moon anyway :P
// ctx.rotate(time/120);
// ctx.translate(20,0);
// circle(4,"white",0,0);
//Mars white line
ctx.translate(-90,0);
circleStroke(120,"#1c1c1c",0,0,"2");
//Mars
ctx.rotate(time / 120 - (time / 50));
ctx.translate(120,0);
circle(15,"#9f5e13",0,0);
line(-120,0,0,0);
//asteroid belt
ctx.translate(-120,0);
circleStroke(160,"#151515",0,0,"35");//jupiter white line
ctx.translate(0,0);
```

```
circleStroke(220,"#1c1c1c",0,0,"2");
//jupiter
ctx.rotate(time / 120 - (time / 50));
ctx.translate(220,0);
circle(45,"#ef602c",0,0);
line(-220,0,0,0);
//saturn white line
ctx.translate(-220,0);
circleStroke(300,"#1c1c1c",0,0,"2");
//saturn
ctx.rotate(time / 120 - (time / 90));
ctx.translate(300,0);
circle(35,"#c76743",0,0);
line(-300,0,0,0);
//saturn asteroid belt
ctx.translate(0,0);
circleStroke(50,"#747474",0,0,"3");
//uranus white line
ctx.translate(-300,0);
circleStroke(340,"#1c1c1c",0,0,"2");
//uranus
ctx.rotate(time / 120 - (time / 90));
ctx.translate(-340,0);
circle(23,"#b843c7",0,0);line(340,0,0,0);
//neptune white line
ctx.translate(340,0);
```

```
circleStroke(380,"#1c1c1c",0,0,"2");
//neptune
ctx.rotate(time / 120 - (time / 140));
ctx.translate(-380,0);
circle(20,"#43aec7",0,0);
line(380,0,0,0);
ctx.restore();
time++;
// console.log(time);
window.requestAnimationFrame(animate);
}
window.requestAnimationFrame(animate);
}
</script>
</body>
```

OUTPUT



CONCLUSION AND REFRENCE

CONCLUSION

This project can be used to display animated solar system. Instead of using the inbuilt application a user can make use of this to make the representation more effective. This will increase the interest of the user to perform more graphical animations.

REFRENCE

1. **BookName**- Javascript Demystified **Author**-Keogh, Jim
   Publication-McGraw-Hill 2015, NewDelhiISBN:0-07060347-2.
2. **BookName**- Beginning JavaScript **Author**-Wilton, Paul
   Publication- WilyIndia, New Delhi,2015,ISBN:0-7645-5587-1