<!-- HTML DOCUMENT --!>

<!DOCTYPE html>

<html>

<head>

<link rel="stylesheet" type="text/css" href="myPtrn.css">

<script src="PtrnFunc.js"> </script>

</head>

<body>

<div class="parent">

<!-- The Header Div -->

<div class="header">

<h1> SVG Pattern Editor </h1>

</div>

<!-- The Left Div -->

<div class="sidecontent left" id="svg\_div">

<p id="svg"> SVG PATTERN VIEWER </p>

<svg id="displaySVG" width="500" height="500" style="background: #300000 ;"></svg>

</div>

<!-- The Right Div -->

<div class="sidecontent right" id="js\_div">

<p id="js"> PATTERN CONTROLS</p>

<svg height="200" width="500">

<defs>

<circle id="\_c" cx="20" cy="28" r="12"

stroke-width:3

fill=red

fill-opacity=1>

</circle>

<polygon id="\_t" points="0,40 40,40 20,0"

style= "fill:yellow;

stroke:purple;

width:1;">

</polygon>

<rect id="\_r" width="40" height="40"

style= "fill:blue;

fill-opacity:1;

stroke-opacity=1;" >

</rect>

<polygon id="\_t2" points="0,40 40,40 20,10"

style= "fill:green;

fill-opacity=1">

</polygon>

</defs>

<use x="120" y="40" xlink:href="#\_c" > </use>

<use x="180" y="40" xlink:href="#\_t" > </use>

<use x="240" y="40" xlink:href="#\_r" > </use>

<use x="300" y="0" xlink:href="#\_t2" > </use>

<g id="\_crt">

<use x="370" y="40" xlink:href="#\_r" > </use>

<use x="370" y="40" xlink:href="#\_t" > </use>

<use x="370" y="40" xlink:href="#\_c" > </use>

<use x="370" y="0" xlink:href="#\_t2" > </use>

</g>

<use xlink:href="#\_crt" transform="rotate(180,390,80)"> </use>

<text x="120" y="100"> Shape 1 </text>

<text x="180" y="100"> Shape 2 </text>

<text x="240" y="100"> Shape 3 </text>

<text x="300" y="100"> Shape 4 </text>

<text x="370" y="170"> Shape 5 </text>

<text x="330" y="185"> (combination of 1-4) </text>

</svg>

<form id="svgUI">

<table>

<tr>

<td align="right"> Select How many shapes you want to display : </td>

<td align="left">

<select id="noOfShapes" onchange="disable(this.value)">

<option> 1 </option>

<option> 2 </option>

<option> 3 </option>

<option> 4 </option>

<option selected="selected"> 5 </option>

</select>

</td>

<tr>

<td align="left">\*Please type in the number of rows: </td>

<td align="left"><input type="text" name="rows" id="rows" value="1"> </td>

</tr>

<tr>

<td align="left">\*Please type in the number of columns: </td>

<td align="left"><input type="text" name="cols" id="cols" value="1"></td>

</tr>

<tr>

<td align="center" colspan="2" rowspan="2"><h2>Colours</h2> </td>

</tr>

<tr>

</tr>

<tr>

<td align="left">Choose a colour for each shape </td>

</tr>

<tr>

<td align="center">Shape 1</td>

<td align="left">

<select id="s1Colour">

<option selected="selected"> red</option>

<option> yellow </option>

<option> blue </option>

<option> green </option>

</select>

</td>

</tr>

<tr>

<td align="center">Shape 2</td>

<td align="left">

<select id="s2Colour">

<option> red</option>

<option selected="selected"> yellow </option>

<option> blue </option>

<option> green </option>

</select>

</td>

</tr>

<tr>

<td align="center">Shape 3</td>

<td align="left">

<select id="s3Colour">

<option> red</option>

<option> yellow </option>

<option selected="selected"> blue </option>

<option> green </option>

</select>

</td>

</tr>

<tr>

<td align="center">Shape 4</td>

<td align="left">

<select id="s4Colour">

<option> red</option>

<option> yellow </option>

<option> blue </option>

<option selected="selected"> green </option>

</select>

</td>

</tr>

<tr>

<td align="center"><input type="button" onclick="createSVGPattern()" value="Generate SVG"></td>

<td align="center"><input type="button" onclick="window.location.reload()" value="reset"> </td>

</table>

<script>

function disable(noOfShapes){

if(noOfShapes == 1){

document.getElementById("s1Colour").disabled=false;

document.getElementById("s2Colour").disabled=true;

document.getElementById("s3Colour").disabled=true;

document.getElementById("s4Colour").disabled=true;

} else if(noOfShapes == 2){

document.getElementById("s1Colour").disabled=false;

document.getElementById("s2Colour").disabled=false;

document.getElementById("s3Colour").disabled=true;

document.getElementById("s4Colour").disabled=true;

} else if(noOfShapes == 3){

document.getElementById("s1Colour").disabled=false;

document.getElementById("s2Colour").disabled=false;

document.getElementById("s3Colour").disabled=false;

document.getElementById("s4Colour").disabled=true;

} else if (noOfShapes <= 4){

document.getElementById("s1Colour").disabled=false;

document.getElementById("s2Colour").disabled=false;

document.getElementById("s3Colour").disabled=false;

document.getElementById("s4Colour").disabled=false;

}

}

</script>

</form>

</div>

<!-- WHERE MY JAVASCRIPT WILL APPEAR -->

</div>

<!-- The Bottom Div -->

<div class="footer" >

NAME: CHRISTIAN PAUL DOMINGO &nbsp STUDENT ID:EEP214 &nbsp MODULE: ICP-4123 TECHNOLOGY FOR INTERNET SYSTEMS &nbsp @BANGOR UNIVERSITY

</div>

</body>

</html>

/\*\* JAVASCRIPT DOCUMENT \*\*/

var NS = "http://www.w3.org/2000/svg";

var xrf = "http://www.w3.org/1999/xlink";

function createSVGPattern(){

//get where svg will be displayed

var body = document.getElementById("displaySVG");

//get all attributes of the js form to create svg

var noOfShapes = document.getElementById("noOfShapes").value;

var rows = document.getElementById("rows").value;

var cols = document.getElementById("cols").value;

var s1Colour = document.getElementById("s1Colour").value;

var s2Colour = document.getElementById("s2Colour").value;

var s3Colour = document.getElementById("s3Colour").value;

var s4Colour = document.getElementById("s4Colour").value;

if(rows == "" || cols == ""){

alert("please put some number to rows and column textbox");

window.location.reload();

return;

}

// alert("no of Shapes Selected " + noOfShapes + "\n" +

// "no of rows inputted " + rows + "\n" +

// "no of cols inputted " + cols + "\n" +

// "colour for shape 1 " + s1Colour + "\n" +

// "colour for shape 2 " + s2Colour + "\n" +

// "colour for shape 3 " + s3Colour + "\n" +

// "colour for shape 4 " + s4Colour);

//def objects

var defs = document.createElementNS(NS,"defs");

var circle = doCircle(20,28,12 , "\_c", s1Colour);

var triangle = doTri(s2Colour ,"\_t");

var rectangle = doRect(40,40, "\_r", s3Colour);

var triangle2 = doTri2(s4Colour,"\_tr");

defs.appendChild(circle);

defs.appendChild(triangle);

defs.appendChild(rectangle);

defs.appendChild(triangle2);

//for each cases of shape

var ax = 0, ay=0; // will be used for offset

var g\_ptrn = document.createElementNS(NS,"g");

g\_ptrn.setAttributeNS(null,"id","\_ptrn");

if(noOfShapes == 1){

var c = useIt("#\_c",0, 0);

g\_ptrn.appendChild(c);

ax=24;

ay=24;

// body.appendChild(c)

} else if ( noOfShapes == 2){

var c = useIt("#\_c",10, 10);

var t = useIt("#\_t",10, 10);

g\_ptrn.appendChild(t);

g\_ptrn.appendChild(c)

ax = 40;

ay = 40;

// body.appendChild(t);

// body.appendChild(c);

} else if ( noOfShapes == 3){

var c = useIt("#\_c",10, 10);

var t = useIt("#\_t",10, 10);

var r = useIt("#\_r",10, 10);

g\_ptrn.appendChild(r);

g\_ptrn.appendChild(t);

g\_ptrn.appendChild(c);

ax = 40;

ay = 40;

// body.appendChild(r);

// body.appendChild(t);

// body.appendChild(c);

} else if (noOfShapes == 4) {

var c = useIt("#\_c",10, 40);

var t = useIt("#\_t",10, 40);

var r = useIt("#\_r",10, 40);

var tr = useIt("#\_tr" ,10 , 0);

g\_ptrn.appendChild(r);

g\_ptrn.appendChild(t);

g\_ptrn.appendChild(c);

g\_ptrn.appendChild(tr);

ax = 40;

ay = 70;

// body.appendChild(r);

// body.appendChild(t);

// body.appendChild(c);

// body.appendChild(tr);

} else if (noOfShapes == 5){

var g\_crt = document.createElementNS(NS,"g");

g\_crt.setAttributeNS(null,"id", "\_crt");

var c = useIt("#\_c",10, 40);

var t = useIt("#\_t",10, 40);

var r = useIt("#\_r",10, 40);

var tr = useIt("#\_tr" ,10 , 0);

g\_crt.appendChild(r);

g\_crt.appendChild(t);

g\_crt.appendChild(c);

g\_crt.appendChild(tr);

var crt2 = useIt("#\_crt",0,0);

crt2.setAttributeNS(null,'transform','rotate(180,30,80)');

g\_ptrn.appendChild(g\_crt);

g\_ptrn.appendChild(crt2);

// body.appendChild(g\_crt);

// body.appendChild(crt2);

ax = 40;

ay = 110;

}

while(body.firstChild){

body.removeChild(body.firstChild)

}

body.appendChild(defs);

body.appendChild(g\_ptrn);

for(var i = 0; i < rows; i++){

for(var j = 0; j < cols; j++){

if(i%2 == 1 && noOfShapes == 5){

body.appendChild(useIt("#\_ptrn",ax\*j-20,ay\*i));

}else{

body.appendChild(useIt("#\_ptrn",ax\*j,ay\*i));

}

}

}

}

function doCircle(cx, cy, r, myID, colour){

var c = document.createElementNS(NS,"circle");

c.setAttributeNS(null,"id",myID)

c.setAttributeNS(null,"cx",cx);

c.setAttributeNS(null,"cy",cy);

c.setAttributeNS(null,"r",r)

c.style.fill=colour;

c.style.opacity=1;

return c;

}

function doRect(h,w, myID,colour){

var r = document.createElementNS(NS,"rect");

r.setAttributeNS(null,"id",myID);

r.setAttributeNS(null,"height",h);

r.setAttributeNS(null,"width",w);

r.style.fill=colour

r.style.opacity=1;

return r;

}

function doTri(colour,myID){

var t = document.createElementNS(NS,"polygon");

t.setAttributeNS(null,"id",myID);

var mypoints = [0,40, 40,40, 20,0];

t.setAttributeNS(null,"points", mypoints );

t.style.fill=colour;

t.style.opacity=1;

t.style.width=1;

return t;

}

function doTri2(colour,myID){

var t2 = document.createElementNS(NS,"polygon");

t2.setAttributeNS(null,"id",myID);

var mypoints = [0,40, 40,40, 20,10];

t2.setAttributeNS(null,"points", mypoints );

t2.style.fill=colour;

t2.style.opacity=1;

t2.style.width=1;

return t2;

}

function useIt(shape, x, y){

var use = document.createElementNS(NS,"use");

use.setAttributeNS(null,"x",x);

use.setAttributeNS(null,"y",y);

use.setAttributeNS(xrf,"href",shape);

return use;

}

/\*\* CSS DOCUMENT \*\*/

body{

background-color:#F0F0F0 ;

min-width:1000px;

}

.header {

color: @color;

background-color: @title-color;

font-family: @font-family;

margin-bottom: 5px;

font-size: 20px;

text-align: center;

border: 0px solid #D5D5D5;

border-radius: 2px;

height: 50px;

}

.parent{

white-space: nowrap;

overflow-x: scroll;

min-width: 1000px;

}

.left {

background-color: #989898 ;

float: left;

}

.right {

float: right;

background-color: #D8D8D8 ;

}

.sidecontent {

width: 49%;

border: 0px solid #D5D5D5;

display: inline-block;

padding: 5px;

vertical-align: top;

height: 600px;

overflow-y: auto;

border-radius: 5px;

min-width: 500px;

white-space: normal;

}

.footer{

color: #990000;

padding: 5px;

font-family: monospace;

font-size: 12px;

text-align: center;

border: 0px solid #D5D5D5;

border-radius: 20px;

}

#svg {

background-color: #FFFF00;

}

#js {

background-color: #FF0000;

}