

**Assignment:** create a simple falling snow animation using Javascript.

**Solution:**

```

<style>b{color:white}</style>
<script>
var snowType=["Times", "Calibri", "Verdana"] // Set the fonts that create
snowflakes
var snowletter=["*", "$", "^", "&#8356;", "#", "@", "&"]; // Set the symbols that
create your snowflakes
var snowMax=25 // Set the number of snowflakes
var snowColor=["#c4bbcc", "#ccddFF", "#ccd6DD"] // set the colors for the snow
var sinkspeed=1 // Set the speed of sinking (recommended values range from 0.3
to 2)
var snowMaxSize=45 // Set the maximal size of snowflakes
var snowMinSize=18 // Set the minimal size of snowflakes
var snowRange=snowMaxSize-snowMinSize
// Set borders (in the range [0, 1]
var leftBorder=0.0 //snow left border
var snowWidth=1.0 //snow width
var opac=0.35 //snow opacity (0.0-1.0)
var stepTime=120 //frame animation step (msec).
var snow=new Array()
var marginbottom
var marginright
var timer
var xMove=new Array(); var coordinates=new Array(); var leftRight=new
Array();
var browserinfos=navigator.userAgent
d=document
var isOpera=self.opera
var ie5=d.all && d.getElementById &&! isOpera
var ns6=d.getElementById &&! d.all
var browserok=ie5 || ns6 || isOpera

function getRandom(range){return Math.floor(range*Math.random())}

function botRight ()
{
  if(ie5||isOpera)
  {
    marginbottom=d.body.clientHeight;
    marginright=d.body.clientWidth;
  }
  else
  if(ns6)
  {
    marginbottom=innerHeight; marginright=innerWidth;
  }
}

function checkPgDn ()
{
  scrltop=ns6?pageYOffset:document.body.scrollTop;
}

```

```
function initSnow()
{
    checkPgDn();if(ns6)setInterval("checkPgDn()",999);
    botRight();
    for (i=0;i<=snowMax;i++)
    {
        coordinates[i] = 0;
        leftRight[i] = Math.random()*20;
        xMove[i] = 0.03 + Math.random()/10;
        snow[i]=d.getElementById("s"+i)
        snow[i].style.fontFamily=snowType[getRandom(snowType.length)]
        snow[i].style.fontSize=snow[i].size=getRandom(snowRange)+snowMinSize
        snow[i].style.color=snowColor[getRandom(snowColor.length)]
        snow[i].sink=sinkspeed*snow[i].size/5
        newPosSnow(getRandom(marginbottom-3*snow[i].size));
    }
    movesnow();
}

function newPosSnow(y)
{
    var temp;

    snow[i].posx=getRandom(marginright*snowWidth-2*snow[i].size)+marginright*left
    Border
    snow[i].posy=y+(ns6?pageYOffset:d.body.scrollTop);
    snow[i].size=getRandom(snowRange)+snowMinSize;
    if(snow[i].childNodes()&&(temp=snow[i].childNodes[0]).tagName=='IMG')
    temp.width=temp.height=
    getRandom(snowRange/1.6)+snowMinSize;
}

function movesnow()
{
    for (i=0;i<=snowMax;i++)
    {
        snow[i].style.top=snow[i].posy+=snow[i].sink+leftRight[i]*Math.sin(coordinate
        s[i])/3;
        coordinates[i] += xMove[i];
        snow[i].style.left=snow[i].posx+leftRight[i]*Math.sin(coordinates[i]);
        if(snow[i].posy>=marginbottom-3*snow[i].size+scrltop ||
        parseInt(snow[i].style.left)>(marginright-3*leftRight[i]))newPosSnow(0);
    }
    var timer=setTimeout("movesnow()",stepTime)
}

for (i=0;i<=snowMax;i++)
{
    d.write("<span id='s"+i+"'
    style='position:absolute;"+(opac<1?"-moz-opacity:"+
    opac+";filter:alpha(opacity="+ (opac*100)+") ":"")+";top:-"+snowMaxSize+"'">"
    +snowletter[Math.floor(snowletter.length*Math.random())]+</span>")
}
    //-moz-opacity:0.5;filter:alpha(opacity=50);
```

# Assignment 4 Student

The way to your success!

```
onload=function()  
{  
  if(browserok)setTimeout("initSnow()",99);  
}  
  
onmousewheel = onscroll = function(){checkPgDn();}  
onresize = function(){botRight();}  
</script>
```