**Bacione Javascript Editor** is an Integrated Development Environment (IDE) for programming small javascript games on a phone.
License: GPL
Github: [github.com/bacionejs](github.com/bacionejs)

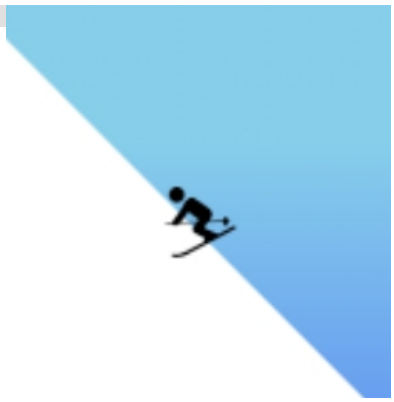
Several games are included in the editor: ski, marslander, chess, monkeymaze, snake, pairs, smash.

Below are several screenshots of ski and marslander with relevant code highlighted to help understand what the code does.

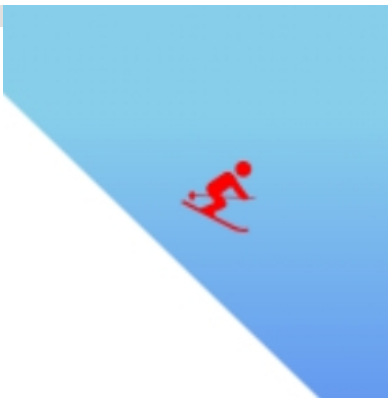
# ski

```
//tree
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(127794,x,x);
      };
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```

```
//skier
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(127794,x,x);
      };
    }
  )()
);
os.push(
  (
    function(){
      let s=floor(W/20), c=L.canvas(s), x=W/4;
      c.translate(x,x);
      c.icon(9975);
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```

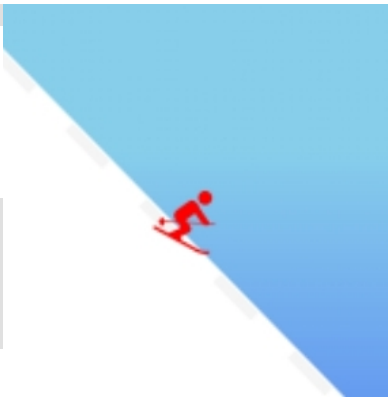


```
//color and flip
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(127794,x,x);
      };
    }
  )()
);
os.push(
  (
    function(){
      let s=floor(W/20), c=L.canvas(s), x=W/4;
      c.fillStyle="red";
      c.scale(-1,1);
      c.translate(-x,x);
      c.icon(9975);
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```



```
//jump
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(127794,x,x);
      };
    }
  )()
);
os.push(
  (
    function(){
      let s=floor(W/20), c=L.canvas(s), x=W/4;
      c.fillStyle="red";
      c.scale(-1,1);
      c.translate(-x,x);
      c.icon(9975);
      let tgl=1;
      addEventListener("click",()=>i||=1,false);
      function jump(){
        c.clearRect(-s,-s,s*2,s*2);
        c.translate((tgl*=-1)*(s),0);
        c.icon(9975);
      }
      let i=0;
      let time=floor(s/speed);
      let reset=3*time;
      return function(){
        if(i==1 || i==reset){
          jump();
        }
        if(i==reset){
          i=0;
        }
        i && i++;
      };
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```

```
//hit
let hit;
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(hit?.(x)?128165:127794,x,x);
      };
    }
  )()
);
os.push(
  (
    function(){
      hit=function(t){ return((x-s)<t && t<(x+s) && !(0<i && i<reset)); }
      let s=floor(W/20), c=L.canvas(s), x=W/4;
      c.fillStyle="red";
      c.scale(-1,1);
      c.translate(-x,x);
      c.icon(9975);
      let tgl=1;
      addEventListener("click",()=>i||=1,false);
      let i=0;
      let time=floor(s/speed);
      let reset=3*time;
      function jump(){
        c.clearRect(-s,-s,s*2,s*2);
        c.translate((tgl*=-1)*(s),0);
        c.icon(9975);
      }
      return function(){
        if(i==1 || i==reset){
          jump();
        }
        if(i==reset){
          i=0;
        }
        i && i++;
      };
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```

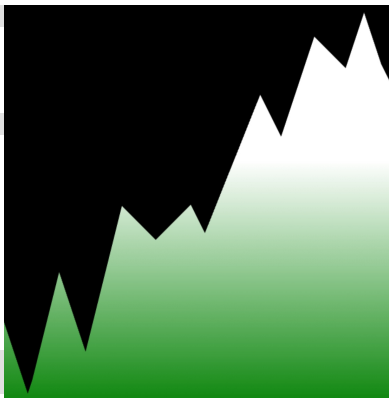


```
//motion effect
let hit;
let speed=W/FPS/3, os=[], c=L.canvas();
c.white();
c.fillStyle=L.gradient(c,W,0,[[.2,"blue"],[.8,"skyblue"]]);
c.fill(L.shape([[0,0,W,W,W,0]]));
os.push(
  (
    function(){
      let s=floor(W/30), c=L.canvas(), lw=s/5;
      c.strokeStyle="whitesmoke";
      c.lineWidth=lw;
      c.setLineDash([s,s]);
      c.moveTo(0,lw);
      c.lineTo(W,W+lw);
      return function(){ c.clear(); c.lineDashOffset+=speed; c.stroke(); };
    }
  )()
);
for(let i=0;i<2;i++)
os.push(
  (
    function(){
      let s=floor(W/10), c=L.canvas(s), x=0;
      return function(){
        c.clear();
        x=x>0?x-speed:L.rnd(W*2,W);
        c.icon(hit?.(x)?128165:127794,x,x);
      };
    }
  )()
);
os.push(
  (
    function(){
      hit=function(t){ return((x-s)<t && t<(x+s) && !(0<i && i<reset)); }
      let s=floor(W/20), c=L.canvas(s), x=W/4;
      c.fillStyle="red";
      c.scale(-1,1);
      c.translate(-x,x);
      c.icon(9975);
      let tgl=1;
      addEventListener("click",()=>i||=1,false);
      let i=0;
      let time=floor(s/speed);
      let reset=3*time;
      function jump(){
        c.clearRect(-s,-s,s*2,s*2);
        c.translate((tgl*=-1)*(s),0);
        c.icon(9975);
      }
      return function(){
        if(i==1 || i==reset){
          jump();
        }
        if(i==reset){
          i=0;
        }
        i && i++;
      };
    }
  )()
);
(
  function animation(){
    os.forEach(o=>o?.());
    requestAnimationFrame(animation);
  }
)()
```

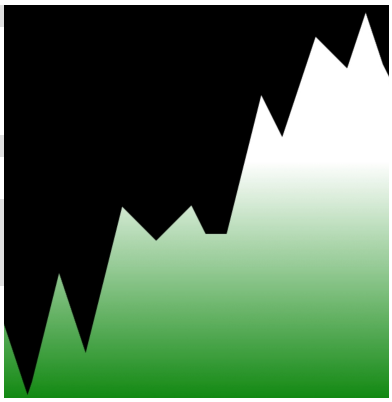
# marslander

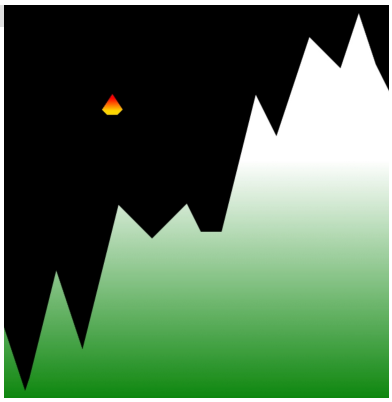
```
//mountain
let cb=L.canvas();
let mountain=[floor(W*0.7)];
(
  function(){
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.stroke(L.shape([L.vertices(mountain)]));
  }
)()
```

```
//mountain gradient
let cb=L.canvas();
let mountain=[floor(W*0.7)];
(
  function(){
    cb.black();
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
```

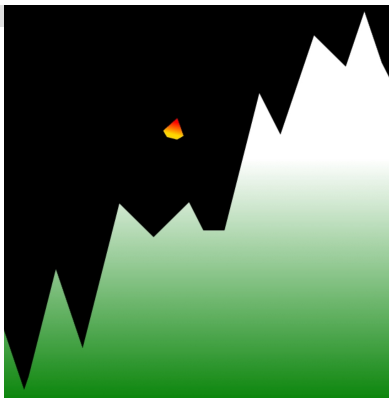


```
//landing site
let cb=L.canvas();
let mountain=[floor(W*0.7)];
(
  function(){
    cb.black();
    let lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
```

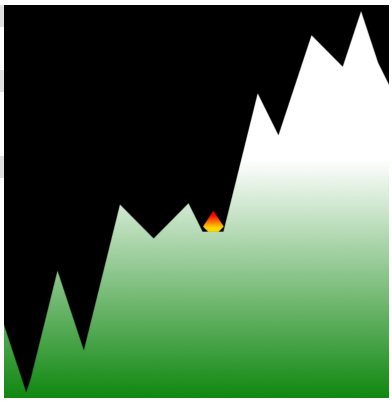




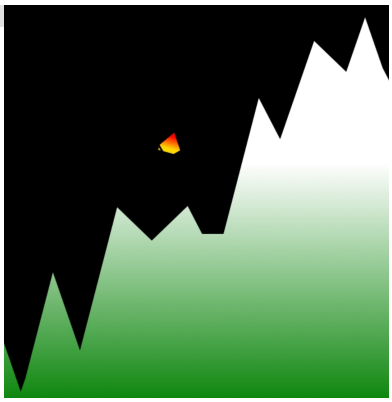
```
//ship
let cb=L.canvas();
let mountain=[floor(W*0.7)];
(
  function(){
    cb.black();
    let lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
let p=floor(W/20);
let ship=L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0]],p/4);
let cf=L.canvas();
cf.fillStyle=L.gradient(cf,0,-p,[[.2,"gold"],[.8,"red"]]);
(
  function animation(){
    cf.resetTransform();
    cf.clear();
    cf.translate(200,200);
    cf.fill(ship);
    requestAnimationFrame(animation);
  }
)()
```



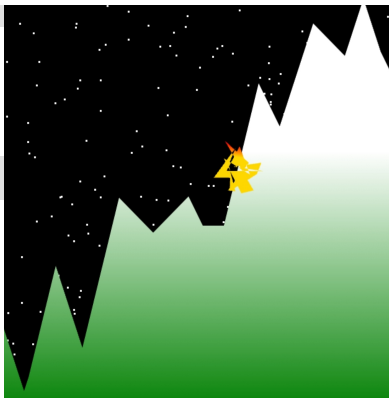
```
//move
let cb=L.canvas();
let mountain=[floor(W*0.7)];
(
  function(){
    cb.black();
    let lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
let p=floor(W/20);
let ship=L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0]],p/4);
let cf=L.canvas();
cf.fillStyle=L.gradient(cf,0,-p,[[.2,"gold"],[.8,"red"]]);
addEventListener("click",move,false);
let x=L.rnd(W),y=0;
let xx=0.0,yy=0.5;
function move({pageX}){
  yy-=0.2;
  if(pageX<(W/2)){xx+=0.1;}
  else           {xx-=0.1;}
}
(
  function animation(){
    cf.resetTransform();
    cf.clear();
    x+=xx;
    y+=(yy+=0.001);
    cf.translate(x,y);
    cf.rotate(xx/4);
    cf.fill(ship);
    requestAnimationFrame(animation);
  }
)()
```



```
//land
let cb=L.canvas();
let mountain=[floor(W*0.7)];
let lx;
(
  function(){
    cb.black();
    lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
let p=floor(W/20);
let ship=L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0]],p/4);
let cf=L.canvas();
cf.fillStyle=L.gradient(cf,0,-p,[[.2,"gold"],[.8,"red"]]);
addEventListener("click",move,false);
let x=L.rnd(W),y=0;
let xx=0.0,yy=0.5;
function move({pageX}){
  yy-=0.2;
  if(pageX<(W/2)){xx+=0.1;}
  else           {xx-=0.1;}
}
(
  function animation(){
    x+=xx;
    y+=(yy+=0.001);
    cf.resetTransform();
    cf.clear();
    cf.translate(x,y);
    cf.rotate(xx/4);
    let landed=(y>mountain[floor(x)]);
    cf.fill(ship);
    if(landed){return;}
    requestAnimationFrame(animation);
  }
)()
```



```
//rockets
let cb=L.canvas();
let mountain=[floor(W*0.7)];
let lx;
(
  function(){
    cb.black();
    lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
let p=floor(W/20);
let rocketleft =L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0],[-1.5,0,-2,0,-2,-0.5]],p/4);
let rocketright=L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0],[ 1.5,0, 2,0, 2,-0.5]],p/4);
let rocketnone =L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0]]                      ,p/4);
let ship=rocketnone;
let cf=L.canvas();
cf.fillStyle=L.gradient(cf,0,-p,[[.2,"gold"],[.8,"red"]]);
addEventListener("click",move,false);
let x=L.rnd(W),y=0;
let xx=0.0,yy=0.5;
function move({pageX}){
  yy-=0.2;
  if(pageX<(W/2)){ xx+=0.1;ship=rocketleft;  }
  else           { xx-=0.1;ship=rocketright; }
  setTimeout(()=>          ship=rocketnone,200);
}
(
  function animation(){
    x+=xx;
    y+=(yy+=0.001);
    cf.resetTransform();
    cf.clear();
    cf.translate(x,y);
    cf.rotate(xx/4);
    let landed=(y>mountain[floor(x)]);
    cf.fill(ship);
    if(landed){return;}
    requestAnimationFrame(animation);
  }
)()
```



```
//stars and crash
let cb=L.canvas();
let mountain=[floor(W*0.7)];
let lx;
(
  function(){
    cb.black();
    cb.fillStyle="white";
    for(let stars=W*W/2000;stars>0;stars--){cb.fillRect(L.rnd(W),L.rnd(W),1,1);}
    lx=L.rnd(W);
    let tgl=-1,rise,mx=0,mx2=0,y;
    while(mx<W){
      if(mx==lx){
        rise=0;
        mx2=lx+40;
      }else if(mx==mx2){
        rise=(tgl*=-1)*L.rnd(5,1);
        mx2=mx2+L.rnd(floor(W/10),floor(W/20));
      }
      y=mountain[mx]+rise;
      if(y<0 || y>W){mx2=mx;continue;}
      mountain[1+(mx++)]=y;
    }
    cb.fillStyle=L.gradient(cb,W,-W,[[0,"green"],[0.3,"white"]]);
    cb.fill(L.shape([[W,mountain.at(-1),W,W,0,W,0,mountain[0],...L.vertices(mountain)]]));
  }
)()
let p=floor(W/20);
let rocketleft =L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0],[-1.5,0,-2,0,-2,-0.5]],p/4);
let rocketright=L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0],[ 1.5,0, 2,0, 2,-0.5]],p/4);
let rocketnone =L.shape([[0,0,-1,0,-2,-1,0,-4,2,-1,1,0]]                       ,p/4);
let ship=rocketnone;
let cf=L.canvas();
cf.fillStyle=L.gradient(cf,0,-p,[[.2,"gold"],[.8,"red"]]);
addEventListener("click",move,false);
let x=L.rnd(W),y=0;
let xx=0.0,yy=0.5;
function move({pageX}){
  yy-=0.2;
  if(pageX<(W/2)){ xx+=0.1;ship=rocketleft;  }
  else           { xx-=0.1;ship=rocketright; }
  setTimeout(()=>          ship=rocketnone,200);
}
(
  function animation(){
    x+=xx;
    y+=(yy+=0.001);
    cf.resetTransform();
    cf.clear();
    cf.translate(x,y);
    cf.rotate(xx/4);
    let landed=(y>mountain[floor(x)]);
    let crash=(yy>0.5 || x<lx || x>(lx+40));
    if(landed && crash){ ship=L.shape([Array.from({length:40},()=>L.rnd(p*2)-p)]); }
    cf.fill(ship);
    if(landed){return;}
    requestAnimationFrame(animation);
  }
)()
```