

C4: Pac Man

Media required:

pacman_up.png, pacman_down.png,
pacman_right.png, pacman_left.png

Design mode:

Create the app on the right, make the background of the screen black.

Pacman is an image. It's id is pacman.

The other 4 widgets are buttons. Their id is the same as their text.

Code mode:

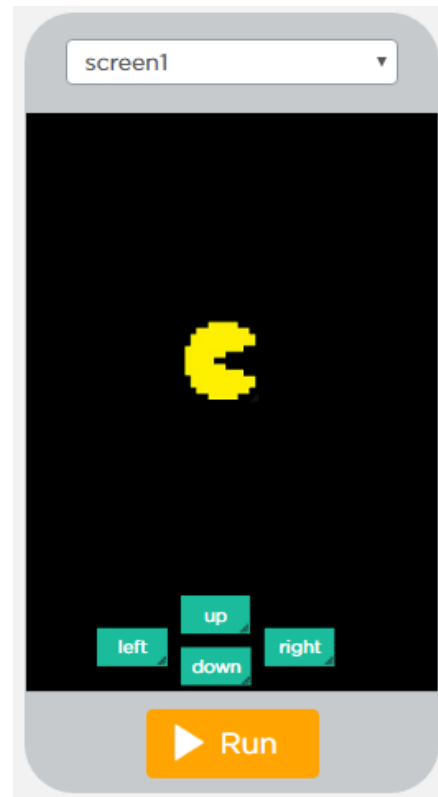
Similar to bouncing ball, we need some variables to track pacman's location and direction.

```
var x = getXPosition(▼ "pacman");  
var y = getYPosition(▼ "pacman");  
var dir="right";
```

Then, for each of the 4 button clicks, we need to change the direction variable and the picture – pacman is facing the correct way. Up is shown.

```
onEvent(▼ "up", ▼ "click", function(event) {  
  dir= "up";  
  setImageURL(▼ "pacman", ▼ "pacup.png");  
});
```

Note that pacman isn't moved at all in these blocks. The setInterval is going to do that. All these block do is edit the direction to move as the user wishes.



In the setInterval block, we need to make pacman move around:

```
setInterval( function() {  
  if ( dir== "up" ) {  
    y = y - 3 ;  
  }  
  if ( dir== "down" ) {  
    y = y + 3 ;  
  }  
  if ( dir== "left" ) {  
    x = x - 3 ;  
  }  
  if ( dir== "right" ) {  
    x = x + 3 ;  
  }  
}
```

Then, if pacman hits a wall, we need to adjust the direction and change the picture.

```
if ( y <= 0 ) {  
  dir= "down";  
  setImageURL(▼ "pacman", ▼ "pacdown.png");  
}  
if ( y >= 450 ) {  
  dir= "up";  
  setImageURL(▼ "pacman", ▼ "pacup.png");  
}  
if ( x <= 0 ) {  
  dir= "right";  
  setImageURL(▼ "pacman", ▼ "pacright.png");  
}  
if ( x >= 320 ) {  
  dir= "left";  
  setImageURL(▼ "pacman", ▼ "pacleft.png");  
}
```

This will seem really familiar. It is a variant of the onEvent blocks for the 4 buttons that you made earlier.

And, last, but not least, we need to draw pacman on the screen:

```
setPosition(▼ "pacman", x, y, 62, 66);  
}, 20);
```

Set the timer increment to 20 seconds.

That's it. Test it and see how it works.