

Lesson 4: Keyboard Input, Function Parameters

Getting input from the keyboard

Like `mousePressed` there is also `keyPressed`. This is *true* when any key is pressed.

Individual keys:

We can check for individual key presses (in this example key for 'd') using:

```
if(key == 'd'){ //← check if the letter d is pressed
```

Note: the key letter must be in *single* quotes

Example code we will be working with:

```
int squareHorizontalPoz = 250; //number variable, with value 250
void setup() {
  size(600, 300);
}

void draw() {
  background(0);
  rect(squareHorizontalPoz, 100, 100, 50);
  if(keyPressed == true){ //← check if any key is pressed
    if(key == 'd'){ //← check if the letter d is pressed
      squareHorizontalPoz = squareHorizontalPoz+2;
    }
    // add the code for other letters here (do NOT repeat the
    // keyPressed check!)
  }
}
```

Task

1. Copy the above and see what it does.
2. Extend the program so the following happens:
 - a. the 'a' button moves the shape **left**
 - b. the 'w' button moves the shape **up**
 - c. the 's' button moved the shape **down**

Function Parameters

In lesson 3 we wrote our own functions - blocks of code that did a specific thing when we called them. **You may have wondered why we had to use brackets** (we wrote “drawTarget()”, instead of “drawTarget”). We can pass data (numbers, letters, booleans, etc) to the function by placing them between these brackets.

First we have to **declare** our function, such that it is expecting to receive a parameter.

```
void drawTarget(int numCircles) {  
    if(numCircles == 1){ // draw one circle for one  
        ellipse(mouseX, mouseY, 10, 10);  
    }  
    if(numCircles == 2){ // draw two circles for two  
        ellipse(mouseX, mouseY, 20, 20);  
        ellipse(mouseX, mouseY, 10, 10);  
    }  
    // fill in the code for three circles here  
}
```

We can't now call “drawTarget()” - we have to give a number between the brackets.

Here's a starting point (**remember - you still need void setup(), void draw(), and all the other usual code!**)

```
if(keyPressed == true){ // check if any key is pressed  
    if(key == '1'){ // check if the key '1' is pressed  
        drawTarget(1);  
    }  
    if(key == '2'){ // check if the key '2' is pressed  
        drawTarget(2);  
    }  
    // add the code here for 3, 4, etc...  
}
```