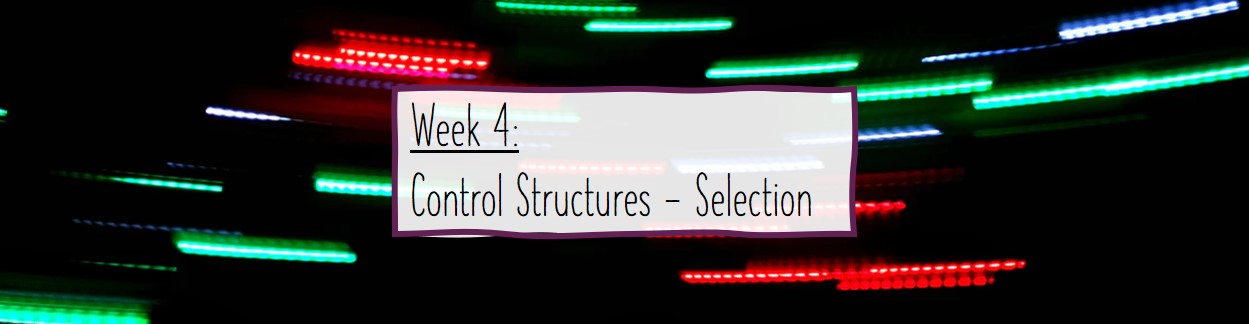
****

4.11: Using Boolean Operators

By using nesting, we have created a program which isn’t a very easy to read and understand. As stated in the previous walkthrough, we have the following 4 possible options for our program:

* Even and divisible by 3
* Even and not divisible by 3
* Odd and divisible by 3
* Odd and not divisible by 3

Based on this, let’s consider using multiple elif statements instead. Therefore, we need to have 4 clauses in our if statement: 1 if statement, 2 else if statements, and finally an else. This will allow us to take all the possibilities into account. Let’s adapt our if statement to cater for the following:

* Even and divisible by 3 *(if statement)*
* Odd and divisible by 3 *(else if statement 1)*
* Even and not divisible by 3 *(else if statement 2)*
* Odd and not divisible by 3 *(else statement)*

The code will need to be:

number = int(number)

if(number % 2 == 0 and number % 3 == 0):

print(str(number) + " is even and divisible by 3")

elif (number % 3 == 0):

print(str(number) + " is odd and divisible by 3")

elif(number % 2 == 0):

print(str(number) + " is even and not divisible by 3")

else:

print(str(number) + " is odd and not divisible by 3")

From this you should notice a couple of things:

1. We have used the keyword and, which means that both conditions need to be true for the block of code to be executed
2. We only need to test both conditions in the first “if test”. If the test gets to the first elif statement, we have already established that the number is not even or it is not divisible by 3 (as at least one of the conditions were false). Therefore, we only need to test which condition was false. The else statement takes into account that they both could have been false.

Now, you should be able to test the function, again using the four different values to ensure all options are covered:



**Your Turn 5:**

Adapt your program so that if Saturday or Sunday are entered it says:

“It’s not payday, but it is the weekend!”