

Practical 2

Jumping Rivers

Question 1

Consider the following simple function

```
v = 5
def Fun1():
    v = 0
    return v
```

Fun1()

1. Why does the final line return 0 and not 5.
2. Delete line 3 in the above piece of code. Now change Fun1() to allow v to be passed as an argument, i.e. we can write Fun1(5). Call this function to make sure it works.

Question 2

Consider the two functions defined below:

```
def Fun2(x = 10):
    return x
```

```
def Fun3(x):
    return x
```

1. Why does

Fun2()

work, but this raises an error

Fun3()

2. Change Fun2 so that it returns x*x.

Question 3

```
a = 2
total = 0
for blob in range(a, 5):
    total = total + blob
total
```

1. In the code above, delete line 1. Now put the above code in a function called `Fun5`, where `a` is passed as an argument, i.e. we can call `Fun5(1)`
2. Alter the code so that the `for` loop goes from `a` to `b`, rather than `a` to 5. Allow `b` to be passed as an argument, i.e. we can call `Fun5(1,6)`.
3. Change `Fun5` so that it has default arguments of `a = 1` and `b = 10`.
4. The `range()` function also has a step argument, so to create the sequence 1, 3, 5 we would write `range(1, 6, 2)`. Alter the code such that `Fun5()` can now go up in steps of `c`. Allow `c` to be passed as an argument.