**Python – intermediate 1**

1. A function is a block of code that runs only when you call it. You can pass parameters to the function to use in the block of code. We use function to prevent writing the same code a couple of times.
2. Return value, returns the “answer” of the function. The function returns the value that was calculated in the function. Return also symbolizes the end of the function.
3. Pass by value – when parameters are passed by value they are copied to the function, and you can modify them how you want to, and it won’t alter the program outside the function.

Pass by reference – when parameters are passed by reference, they are passed into the function directly and when you modify them it will modify them also outside the function.

1. Scope – the block of code where you can access specific parameters. Those parameters exist only in the specific block of code they are declared in. the only exception is global scope where the parameters that are declared in this scope are available to all the code.

For example, variables that are declared in a function can be accessed only in the function of when a variable is declared in an indentation can be accessed only in the code in the indentation.

9. recursion is the process of defining something in terms of itself. For example

when a function is calling itself, it creates a recursion. We use recursion because it makes the code look clean and we use it when a complex task can be broken into similar sub-problems. But we don’t have to use recursion, we can use nested iteration or looping for example (and many other ways). In python looping is faster than recursion because recursion adds function overhead to its execution which makes it slower.