Aarya Arban

S11-07

Assignment No.5 – Control Structures and Function

Control Structures:

- If statement:
```
age = 25
if age >= 18:
    print("You are eligible to vote.")
```

Output:
You are eligible to vote.

- If-else statement:
```
temperature = 20
if temperature >= 30:
    print("It's a hot day.") else:
    print("It's not a hot day.")
```

Output:
It's not a hot day.

- If-elif-else chain:
```
grade = 85
if grade >= 90:
    print("Excellent!") elif grade >= 80:
    print("Very good!") else:
    print("You can do better.")
```

Output:
Very good!

- Ternary operator:
```
number = 10
is_even = "Even" if number % 2 == 0 else "Odd" print(f"The number {number} is {is_even}.")
```

Output:
The number 10 is Even.

- #The and keyword is a logical operator, and is used to combine conditional statements: #Test if a is greater than b, AND if c is greater than a:

```
a=input("Please input first number:")
b=input("Please input Second number:")
c=input("Please input Third number:")
if a > b and c > a:
     print("Both conditions are True")  1
Please input first number:100
Please input Second number:10
Please input Third number:110 Both conditions are True
```

- While loop example:

```
i = 1
while i <= 5:
     print(i)
     i += 1
print("Loop finished!") OUTPUT:
1 2 3 4 5
Loop finished!
```

```
for x in 'banana':
     print(x)
Output:
b a n a n a
```

Functions:
```
def my_function():
    print("Hello World")
 my_function()

 Output:
 Hello World
```

```
def tri_recursion(k):
if(k > 0):
result = k + tri_recursion(k - 1)
print(result)
else:
result = 0
return result
print("\n Recursion Example Results")
tri_recursion(6)
```

Output:
Recursion Example Results
1
3
6
10
15
21
21

```python
def get_square(num):
    return num * num
for i in range(10):
    # function call
    result = get_square(i)
    print('Square of',i, '=',result)
```

Output:
 Square of 0 = 0
 Square of 1 = 1
 Square of 2 = 4
 Square of 3 = 9

Square   of   4   =   16

Square   of   5   =   25

Square   of   6   =   36

Square   of   7   =   49

Square   of   8   =   64

Square   of   9   =   81