

**NAME: KAYODE PETER TEMITOPE**

**MATRIC NUMBER: 208077**

**DEPARTMENT: COMPUTER SCIENCE (200 Level)**

**COURSE: FOUNDATIONS OF COMPUTER SCIENCE (CSC 242)**

**Assignment**

Write 3 code snippet each in python that contains For loop, While loop, and the loop recursion.

**Solutions**

S/N	Loop Type	Code	Output
1	FOR LOOP	i = 1 while i < 6: print(i) i += 1	1 2 3 4 5
		i = 3 while i < 9: print(i) i += 1	3 4 5 6 7 8
		i = 2 while i < 4: print(i) i += 1	2 3
2	WHILE LOOP	i, j, k, u = 0, 5, 1, 3 for l in range(i, j, k): if l == u: print(l) u = 8 i = 12 j = 7 k = -1 else: print(l)	0 1 2 3 4
		i, j, k, u = 0, 5, 1, 3 for l in range(i, j, k): if l == u: print(l) u = 8 i = 12 j = 7 k = -1 else:	0 0 0 3 12

		print(i)	
		i, j, k, u = 2, 5, 1, 3 for l in range(i, j, k): if l == u: print(l) u = 8 i = 12 j = 7 k = -1 else: print(k)	1 3 -1
3	<b>LOOP RECURSION</b>	def tri_recursion(k): if (k > 0): result = k + tri_recursion(k - 1) print(result) else: result = 0 return result print("\n\nRecursion Example Results") tri_recursion(6)	1 3 6 10 15 21
		def tri_recursion(k): if (k > 2): result = k + tri_recursion(k - 1) print(result) else: result = 0 return result print("\n\nRecursion Example Results") tri_recursion(4)	3 7
		def tri_recursion(k): if (k > 1): result = k + tri_recursion(k - 1) print(result) else: result = 2 return result print("\n\nRecursion Example Results") tri_recursion(7)	4 7 11 16 22 29