**Elizabeth wanjiru-Bscit-05-0009/2018**

**Evanson Ndung'u-Bscit-05-0079/2018**

**Dennis Sila-Bscit-05-0079/2018**

**Python Assignment one**

**Types of operators used in python**

**Arithmetic operators**-arithmetic operators perform various arithmetic calculations such as addition,subtraction,multiplication,division,%modulus etc. There are various methods for arithmetic calculation in python like you can use the eval function,declare variable and calculate or call functions.

**Comparison operators-** these operators compare the values on either side of the operand and determine the relation between them. It is also referred to as *relational operators.* various comparison operators are (==,!=,<>,>,<=,etc).

**Logical operators-**logical operators in python are used for conditional statements are true or false. Logical operators in python are AND, OR and NOT.

**Membership operator-**these operators test for membership in a sequence such as lists, strings or tuples. There are two membership operators that are used in python(in, not in). It gives the results based on the variable present in specified sequence or string.

**Assignment operators-**python assignment operators are used for assigning the value of the right operand to the left operand.various assignment operators used in python are(+=,-=,\*=,/=,etc.

Write a program to sum all element in list

def sum\_list(items):

sum\_numbers=0

for x in items:

sum\_numbers += x

return sum\_numbers

print(sum\_list([1,2,3]))

write a python program to multiply all items in a list

def multiply\_list(items):

tot=1

for x in items:

tot \*=x

return tot

print(multiply\_list([1,2,-8]))

explain two build-in methods for strings

capitalize()-converts first character to capital letter

encode()-return encoded string of given string

write a python program to calculate the length of a string

def string\_length(str1):

count=0

for char in str1:

count +=1

return count

print(string\_length(‘cool ruler’))

A)Define a dictionary as used in Python.

A dictionary is a collection which is unordered, changeable and indexed are written I curly brackets.

B)List 5 dictionary models.

Dictionary length

Nested dictionary

The dictionary() constructor

Copy ()

Pop()

C)create a dictionary model with the following information on name ,last name,reg no

# start with an empty one.>>> mydict,={}

# add a value

# the syntax is :mydict{key}="name"

Released ["Dennis]=2019

# the syntax is my dictionary [key]="last name"

Released ["silla"]=2019

# the syntax is my dict[key]="reg no"

Released ["bscit-01-050/2018"

Python function

A,) Define a function

A function is a block of code which only runs when it is called.

B) write a function to calculate the area and perimeter of a triangle

#python program to find area and perimeter

#three sides of a triangle a,b,c

A=float (input ("enter first side:

B=float (input ("enter second side:

C=float (input ("enter third side:

# calculate the semi perimeter

S=(a+b+c)/2

# calculate the area

Area=(s\*(s-a,)\*(s-b)\*(s-c)\*\*0

Print ("the area of triangle is a: area)

C) write a program to sum two numbers

A=int(input("enter first number:")

B=int(input ("enter second number:")

Sum=a+b

Print ("sum",sum)

D) write a program to check odd numbers

#python program to check if number is odd

#if number is even it is divisible by two

#if remainder is 1 it is odd

Num=,int,(input ("enter a number if(num%2==0

Print ("{0} is even", format (else:

Print ("{0} is odd " format