**Srabone Raxit(21-45038-2)**

def my\_function():

print("Hello rfrom a function")

my\_function()



def my\_function(fname):

print(fname + "Refsnes")

my\_function("Email")

my\_function("Tobias")

my\_function("Linus")

def my\_function(fname, lname):

print(fname + " " + lname)

my\_function("Emil", "Refsnes")



def my\_function(\*kids):

print("The youngestb child is " + kids[2])

my\_function("Emil", "Refsnes", "Linus")



def my\_function(child3, child2, child1):

print("The youngestb child is " + child3)

my\_function(child1="Emil", child2="Tobias", child3="Linus")



def my\_function(\*\*kid):

print("His last name is " + kid["lname"])

my\_function(fname="Tobias", lname="Refsnes")



def my\_function(country="Norway"):

print("I am from " + country)

my\_function("Sweden")

my\_function("India")

my\_function()

my\_function("Brasil")



def my\_function(food):

for x in food:

print(x)

fruits = ["apple", "banana", "cherry"]

my\_function(fruits)



def my\_function(x):

return 5\*x

print(my\_function(3))

print(my\_function(5))

print(my\_function(9))



**Insertion Sort:**

def insertionSort(array):

for step in range(1, len(array)):

key = array[step]

j = step - 1

while j >= 0 and key < array[j]:

array[j + 1] = array[j]

j = j - 1

array[j + 1] = key

data = [19, 53, 7, 12, 45]

insertionSort(data)

print("Insertion sort: ")

print(data)

**Output:**

Insertion sort:

[7, 12, 19, 45, 53]

1. **Area of a triangle**

import math

def triangleArea(a, b, c):

s=(a+b+c)/2

area=math.sqrt(s\*(s-a)\*(s-b)\*(s-c))

return area

print("Enter 3 sides of the triangle: ")

a=float(input())

b=float(input())

c=float(input())

print("Area of the triangle is: ")

ans=triangleArea(a, b, c)

print(ans)

**Output:**

Enter 3 sides of the triangle:

5.5

6.7

9.8

Area of the triangle is:

17.668616244629906



**Area and perimeter of circle**

from math import pi

def circleArea(r):

area = pi\*r\*r

perimeter = 2\*pi\*r

return area, perimeter

print("Enter radius of the circle: ")

r=float(input())

area, perimeter = circleArea(r)

print("Area of the circle is: ", + area)

print("Perimeter of the circle is: ", + perimeter)

**Output:**

Enter radius of the circle:

7

Area of the circle is: 153.93804002589985

Perimeter of the circle is: 43.982297150257104



**Bubble sort**

def bubbleSort(array):

for i in range(len(array)):

for j in range(0, len(array) - i - 1):

if array[j] > array[j + 1]:

temp = array[j]

array[j] = array[j+1]

array[j+1] = temp

data = [19, -53, 7, 12, 45]

bubbleSort(data)

print("Bubble Sort: ")

print(data)

**Output:**

Bubble Sort:

[-53, 7, 12, 19, 45]

**14**.

**Selection Sort**

def selectionSort(array, size):

for step in range(size):

minIndex = step

for i in range(step + 1, size):

if array[i] < array[minIndex]:

minIndex = i

(array[step], array[minIndex]) = (array[minIndex], array[step])

data = [89, -5, 7, 12, 45]

size = len(data)

selectionSort(data, size)

print("Selection Sort: ")

print(data)

**Output:**

Selection Sort:

[-5, 7, 12, 45, 89]