Kalyani Government Engineering College  
Department of Computer Application  
Python Programming Lab – MCAN191, Year: 2022-2023

1. Write a program that asks the user for his name and then welcomes him. The  
   output should look like this:  
   Enter your name : Saksham  
   Hello Saksham

Solution:

Name = input("Enter your name : ")

print("Hello",Name)

2. Write a program that prompts the user to enter two integers and display the  
total on the screen.

Solution:

print("Ënter two integers : ", end=" ")

a,b = map(int, input().split())

print("Sum =", a+b)

3. Write a program that prompts the user to input a Celsius temperature and  
outputs the equivalent temperature in Fahrenheit. The formula to convert the  
temperature is: F = 9/5 C + 32 where F is the Fahrenheit temperature and C is  
the Celsius temperature.

Solution:

temp = float(input("Ënter temperture in Celcius : "))

print("Temperature in Farenheit is", ((9/5)\*temp)+32 )

4. Write a program which accept principle, rate and time from user and print the  
 simple interest. The formula to calculate simple interest is: simple interest =  
 principle x rate x time / 100

Solution:

print("Enter principal rate and time separated by space: ", end=" ")

p, r, t = map(int, input().split())

print("Simple Interest =", p\*r\*t\*.01)

5. Write a program that accepts seconds from keyboard as integer. Your program  
should convert seconds in hours, minutes and seconds. Your output should like  
this:  
Enter seconds: 13400  
Hours: 3  
Minutes: 43

Seconds: 20

Solution:

#time conversion

sec = int(input("Enter seconds : "))

hours = 0

mins = 0

if sec > 60:

  mins = sec//60

  sec -= mins\*60

  if mins > 60:

    hour = mins//60

    mins -= hour\*60

print("Hours:",hour)

print("Minutes:",mins)

print("Seconds:",sec)

6. Write a program that prompts the user to enter number in two variables and  
swap the contents of the variables.

#swapping

a = int(input("A = "))

b = int(input("B = "))

c = a

a = b

b = c

print("A =", a, "\n2B =",b)

7. Write a program that prompts the user to enter number in two variables and  
swap the contents of the variables. (Do not declare extra variable.)

a = int(input("A = "))

b = int(input("B = "))

a,b = b,a

print("A =", a, "\n2B =",b)

8. Write a program that prompts the user to input the radius of a circle and outputs  
the area and circumference of the circle. The formula is  
Area = pi x radius2  
Circumference = 2 x pi x radius

radius = float(input("Enter Radius : "))

print("Area =", 3.141\*radius, "\nCircumference =",2\*3.141\*radius)

9. Write a program that prompts the user to input the length and the width of a  
rectangle and outputs the area and circumference of the rectangle. The formula  
is  
Area = Length x Width  
Circumference = 2 x (Length + Width)

length = float(input("Enter length : "))

width = float(input("Enter width : "))

print("Area =", length\*width, "\nCircumference =",2\*(length+width))

10. Suppose a, b, and c denote the lengths of the sides of a triangle. Then the area  
of the triangle can be calculated using the formula:  
Area = √s(s-a)(s-b)(s-c)

S =( a+b+c) / 2

a,b,c = map(int, input("Enter sides: ").split())

s = (a+b+c)/2

area = (s\*(s-a)\*(s-b)\*(s-c))\*\*(1/2)

print("Area =",area)

11. Write a program that asks the user to input the length of sides of the triangle  
and print the area.

a,b,c = map(int, input("Enter sides: ").split())

s = (a+b+c)/2

area = (s\*(s-a)\*(s-b)\*(s-c))\*\*(1/2)

print("Area =",area)

12. Write a program which prompts the user to input principle, rate and time and  
calculate compound interest. The formula is:  
CI = P(1+R/100)^T – P

print("Enter principal rate and time separated by space: ", end=" ")

p, r, t = map(int, input().split())

print("Compound Interest =", p\*(1 + (r\*.01))\*\*t - p)