DAY 1:

#WAP to input radius and calculate circle of area.

radius=int(input("enter radius"))

area=3.14\*(radius)\*\*2

print("area of circle=",area)

OUTPUT: enter radius 34

area of circle= 3629.84

#WAP to input base and height and calculate area of triangle.

base=int(input("base of triangle"))

height=int(input("height of triangle"))

area=0.5\*base\*height

print("area of triangle=",area)

OUTPUT: base of triangle 45

height of triangle23

area of triangle= 517.5

#WAP to input three number and calculate average and percentage.

maths=int(input("enter the marks of maths="))

science=int(input("enter the marks of science="))

english=int(input("enter the marks of english="))

average=(maths+science+english)/3

percentage=((maths+science+english)/300)\*100

print("average=",average)

print("percentage=",percentage)

OUTPUT: enter the marks of maths= 45

enter the marks of science=67

enter the marks of english=89

average= 67.0

percentage= 67.0

#WAP to SI.

P=int(input("enter principle="))

R=float(input("enter rate="))

T=int(input("enter time="))

SI=(P\*R\*T)/100

print("simple interest=",SI)

OUTPUT: enter principle=34

enter rate=2

enter time=4

simple interest= 2.72

#WAP to print compound interest

P=int(input("enter principal="))

R=float(input("enter rate="))

T=int(input("enter time="))

n=int(input("enter n="))

A=P\*(1+(R/n))\*\*n\*T

CI=A-P

print("compound interest=",CI)

OUTPUT: enter principal=23

enter rate=45

enter time=34

enter n=2

compound interest= 431836.5

#WAP TO CALCULATE EMI

P=int(input("enter principal="))

R=float(input("enter rate="))

n=int(input("enter n="))

EMI=((P\*R\*(1+R)\*\*n)/(1+R)\*\*n-1)

print("EMI=",EMI)

OUTPUT: enter principal=12

enter rate=3

enter n=4

EMI= 35.0

#WAP TO INPUT TEMPERATURE AND CONVERT IT INTO KELVIN

T=float(input("enter temp. in celsius="))

f=(T\*9/5)+32

print("f=",f)

OUTPUT: enter temp. in celsius=237

f= 458.6

#Math library

#import math

from math import \*

print(sqrt(8))

print(pow(2,3))

print(abs(-10))

print(ceil(7.8))

print(floor(7.8))

print(pi)

print(round(8.9978,2))

#WAP to print area of triangle using heron's formula

a=int(input("enter side 1st="))

a2=int(input("enter side 2nd="))

a3=int(input("enter side 3rd="))

s=(a+a2+a3)/2

from math import\*

area=(sqrt (s\*(s-a)\*(s-a2)\*(s-a3)))

print("area=",area)

OUTPUT: enter side 1st=45

enter side 2nd=67

enter side 3rd=89

area= 1465.8881906543895

#write a program that reads a number of seconds and prints it in form:

mins and seconds,E.g.200seconds are printed as 3 mins and 20 seconds.

a=int(input("enter time in second"))

b=a//60

c=a%60

print("it is",b,"mintues and",c,"seconds")

OUTPUT: enter time in second 5678

it is 94 mintues and 38 seconds

DAY 2:

#syntax:

if(condition):

#statements

else:

#statements

Ques1: #WAP to input a number and check whether it is positive or negative.

num=int(input("enter a number="))

if(num>0):

print("positive")

else:

print("negative")

output: enter a number=45

positive

ques2: # WAP to input and check whether it is divisible by 5 as well as 3 using if-else.

num=int(input("enter a number="))

if(num%5==0 and num%3==0):

print("divisivle")

else:

print("not divisible")

output: enter a number=15

divisible

ques3: #WAP to input a character and check whether it is a vowel or consonant.

char=input("enter a character=")

if(char=='a' or char=='e' or char=='i' or char=='o' or char=='u'):

print("character is vowel")

else:

print("character is consonant")

output: enter a character=e

character is vowel

# multiple condition statement

if(condition):

#statement

elif(condition):

#statement

elif(condition):

#statement

elif(condition):

#statemenet

marks=int(input("enter the marks"))

if(marks>=90 and marks<=100):

print("A+")

elif(marks>=80 and marks<90):

print("A")

elif(marks>=70 and marks<80):

print("B+")

elif(marks>=60 and marks<70):

print("B")

elif(marks>=50 and marks<60):

print("C")

elif(marks>=40 and marks<50):

print("D")

elif(marks>=30 and marks<40):

print("E")

else:

print("F")

output: enter the marks=78

B+

ques5: #WAP to input an operator and two numbers and based on the opertor perform the operations between the two number.

#e.g. if opertor is +, then print the addition of two numbers and so on..

op=input("enter the operator")

a=int(input("enter the first number"))

b=int(input("enter the second number"))

if(op=='+'):

print(a+b)

elif(op=='-'):

print(a-b)

else:

pass

output: op=+

enter the first number=12

enter the second number=13

25

ques6: #WAP to input three numbers and print the largest one

a=int(input("enter the a="))

b=int(input("enter the b="))

c=int(input("enter the c="))

if(a>b and a>c):

largest=a

elif(b>c):

largest=b

else:

largest=c

print(largest,"is the largest of three number”)

output:

ques7: #WAP to input a year and check whether it is leap year or not

year=int(input("enter year to be checked="))

if(year%4==0 and year%100!=0 or year%400==0):

print("the year is leap year")

else:

print("the year is not leap year”)

output:

ques8: #WAP to print the weight status of a person using bmi as shown in the following table:

BMI weight status

below 18.5 underweight

18.5-24.9 normal

25.0-29.9 overweight

30.0 and above obese

note:

to calculate BMI:

input weight (kg)and height (in cm) and then apply the formulla:

weight divided by square of height

weight=int(input("enter weight in kg="))

height=float(input("enter height in m="))

BMI=weight/(height)\*\*2

print("BMI=",BMI)

if(BMI<18.5):

print("underweight")

elif(BMI>=18.5 and BMI<=24.9):

print("normal")

elif(BMI>=25 and BMI<=29.9):

print("overweight")

else:

print("obese")

output:

# nested if

if(condition): #outer-if

if(condition): #inner-if

#statements

elif(condition):

#statements

Ques9: #wap to input number and arrange them in ascending order using nested-if.

num1, num2, num3=int (input ()), int (input ()), int (input())

if (num1<num2 and num1<num3):

if(num2<num3):

print (num1, num2, num3)

else:

print (num1, num3, num2)

elif (num2<num1 and num2<num3):

if(num1<num3):

print(num2,num1,num3)

else:

print(num2,num3,num1)

else:

if(num1<num2):

print(num3,num1,num2)

else:

print(num3,num2,num1)

output:

ques10: #wap to largest number using nested -if.

a=int(input("enter 1st number="))

b=int(input("enter 2nd number="))

c=int(input("enter 3rd number="))

if(a>b):

if(a>c):

print("a is largest")

else:

print("c is largest")

elif(b>c):

if(b>a):

print("b is largest")

else:

print("a is largest")

else:

if(c>a):

print("c is largest")

else:

print("a is largest")

output:

# nested if

if(condition): #outer-if

if(condition): #inner-if

#statements

elif(condition):

#statements

Ques11: #wap to input number and arrange them in ascending order using nested-if.

num1,num2,num3=int(input()),int (input()),int (input())

if (num1<num2 and num1<num3):

if(num2<num3):

print(num1,num2,num3)

else:

print(num1,num3,num2)

elif(num2<num1 and num2<num3):

if(num1<num3):

print(num2,num1,num3)

else:

print(num2,num3,num1)

else:

if(num1<num2):

print(num3,num1,num2)

else:

print(num3,num2,num1)

output: 45

90

0

0 45 90

Ques12: #wap to largest number using nested -if.

a=int(input("enter 1st number="))

b=int(input("enter 2nd number="))

c=int(input("enter 3rd number="))

if(a>b):

if(a>c):

print("a is largest")

else:

print("c is largest")

elif(b>c):

if(b>a):

print("b is largest")

else:

print("a is largest")

else:

if(c>a):

print("c is largest")

else:

print("a is largest")

output: enter 1st number= 23

enter 2nd number=12

enter 3rd number=56

c is largest

# loops:

1. for loop-> A counting loop .

2. while loop->coundition loop.

range () function:

range(start,stop,step)

range(1,10)--> 1,2,......9

range(5,10)--> 5,6,......9

range(1,10,2)--> 1,3,5,7,9

range(10,0,-1)--> 10.....1

for variable in <sequence>:

#statement

for i in range(1,21):

print(i)

for variable in <sequence>:

#statements

Ques13: # WAP to print from 10 to 20

for i in range(10,20):

if(i%2==0):

print(i)

output: 10

12

14

16

18

ques14: # WAP to print the sum of all even and odd numbers.

Ques15: # WAP to input a number print its factorial using for loop.

s=0

for i in range(1,21):

if(i%2==0):

s=s+i

print(s)

output: 110

n=int(input("enter n number"))

i=int(input("enter i number"))

for fact in range(1):

if(i<=n):

fact=fact\*i

print(fact)

se=so=0

for i in range(10,21):

if(i%2==0):

se=se+i

else:

so=so+i

print(se,so)

output: 90 75

ques15: # WAP to print following fibonacci series using for loop:

0 1 1 2 3 5 8 13

n1,n2=0,1

print(n1)

print(n2)

for i in range(1,8):

i=n1+n2

print(i)

n1=n2

n2=i

output: 0

1

1

2

3

5

8

13

21

ques16: #WAP to print the following series:

1/1!+1/2!+1/3!+.......+1/n!

n=int(input("enter any number"))

s, fact=0,1

for i in range(1, n+1):

fact\*=i

m=1/fact

s+=m

print(s)

output: enter any number 5

1.7166666666666668