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Paper Number : 204

Subject : Python Programming Language

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Paper 204: Python Programming Language

Practical Sheet - 1

Q.1. Write a Python program to input principal amount, rate of interest and number of years with

appropriate prompts. Find simple interest and display all the details in the following format:

Principal Amount : Rs. _____

Rate of Interest : ____ %

Number of Years : ____

Simple Interest : Rs. _____

Maturity Amount : Rs. _____

```
#Input
Amount = float(input("Enter the principal amount : "))
Year = float(input("Enter the number of years : "))
Rate = int(input("Enter the rate of interest : "))

#simple interest
SI = (Amount * Year * Rate)/100
#Maturity Amount
MA = Amount + SI

print("\n\n\n")
print("Principal Amount : Rs. {}".format(Amount))
print("Rate of Interest : {}".format(Rate))
print("Number of Years  : {}".format(Year))
print("Simple Interest  : Rs. {}".format(SI))
print("Maturity Amount  : Rs. {}".format(MA))
```

Q.2. Write a Python program to find area of i) Square, ii) Rectangle, iii) Circle. Take input of all the

values need to calculate these areas from the user with appropriate prompts. Display all the

values with appropriate titles.

```
while True:
print("\n ******  Menu ******\n")
print("1.Area of Square")
print("2.Area of Ractangle")
print("3.Area of Circle")
print("0.For exit")
    n = int(input())
if n>3 or n<0:
print()
print("Not a valid choice")
elifn == 1:
print()
        side = int(input("enter the side"))
        Square = side * side;
print("The area of Squere is : {}".format(Square))
elifn==2:
print()
        length = int(input("enter the length"))
        breath = int(input("enter the breath"))
ractangle = length * breath
print("The area of ractangle is : {}".format(ractangle))
elifn==3:
print()
        radius = int(input("enter the radius"))
        circle = 3.14 * radius * radius
print("The area of circle is : {}".format(circle))
elifn==0:
break
```

Q.3. Write a Python program which prompts the user to input temperature in Celsius, convert the

temperature to Fahrenheit and display both the values with appropriate titles. Use the following

formular: T(°F) = T(°C)× 9/5 + 32

```
Celsius = float(input("Enter temprature in Celsius : "))

Fahrenheit = Celsius*(9/5) + 32

print("{0:.1f} celsius is equal to {1:.1f} fahrenheit
".format(Celsius,Fahrenheit))
```

Q.4. Write a Python program to input 3 numbers and find the largest. Print all the numbers, and the

largest among them, with appropriate titles.

```
num1 = int(input("Enter Number 1 : "))
num2 = int(input("Enter Number 2 : "))
num3 = int(input("Enter number 3 : "))

if num1 > num2:
if num1 > num3:
large_number = num1
else:
large_number = num3
else :
if num2 > num3:
large_number = num2
else:
large_number = num3

print("********************")
print("Number 1 : ",num1)
print("Number 2 : ",num2)
print("Number 3 : ",num3)
print("Largest number is : ",large_number)
```

Q.5. Write a Python program to input principal amount and number of years with appropriate

prompts. Find simple interest and display all the details in the following format. Consider rate

of interest based on the following criteria. (NOTE: Use simple if..else statement to determine

the rate of interest)

Rate of interest = 5% if number of years < 1

= 5.5% if 1 <= number of years < 3

= 6 % if 3 <= number of years < 5

= 5.75% otherwise

Principal Amount : Rs. _____

Rate of Interest : ____ %

Number of Years : ____

Simple Interest : Rs. _____

Maturity Amount : Rs. _____

```
#Input
Amount = float(input("Enter the principal amount : "))
Year = int(input("Enter the number of years : "))

#Rate of interest using simple if..else
if Year <1:
    Rate = 5
if Year >= 1 and Year <3:
    Rate = 5.5
if Year >= 3 and Year <5:
    Rate = 6
if Year >= 5:
    r = 5.75

#simple interest
SI = (Amount * Year * Rate)/100
#Maturity Amount
MA = Amount + SI

print("\n\n\n")
print("Principal Amount : Rs. {}".format(Amount))
print("Rate of Interest : {}".format(Rate))
print("Number of Years  : {}".format(Year))
print("Simple Interest  : Rs. {}".format(SI))
print("Maturity Amount  : Rs. {}".format(MA))
```

Q.6. Attempt Q.5. using Nested if.

```
#Input
Amount = float(input("Enter the principal amount : "))
Year = int(input("Enter the number of years : "))

#Rate of interest using nestedif..else
if Year <1:
    Rate = 5
else:
if Year >= 1 and Year <3:
         Rate = 5.5
else:
if Year >= 3 and Year <5:
             Rate = 6
else:
             Rate = 5.75

#simple interest
SI = (Amount * Year * Rate)/100
#Maturity Amount
MA = Amount + SI

print("\n\n\n")
print("Principal Amount : Rs. {}".format(Amount))
print("Rate of Interest : {}".format(Rate))
print("Number of Years  : {}".format(Year))
print("Simple Interest  : Rs. {}".format(SI))
print("Maturity Amount  : Rs. {}".format(MA))
```

Q.7. Attempt Q.5. using shorthand if..else.

```
#Input
Amount = float(input("Enter the principal amount : "))
Year = int(input("Enter the number of years : "))

#Rate of interest using shorthandif..else
if Year <1:
    Rate = 5
elifYear >= 1 and Year <3:
    Rate = 5.5
elifYear >= 3 and Year <5:
    Rate = 6
else:
    Rate = 5.75

#simple interest
SI = (Amount * Year * Rate)/100
#Maturity Amount
MA = Amount + SI

print("\n\n\n")
print("Principal Amount : Rs. {}".format(Amount))
print("Rate of Interest : {}".format(Rate))
print("Number of Years  : {}".format(Year))
print("Simple Interest  : Rs. {}".format(SI))
print("Maturity Amount  : Rs. {}".format(MA))
```

Q.8. Write a Python program to input 3 numbers and find the largest. Print all the numbers, and the

largest among them, with appropriate titles. Display appropriate message and exit from the

program if any of these inputs is not a numeric value.

```
num1 = input("Enter Number 1 : ")
num2 = input("Enter Number 2 : ")
num3 = input("Enter number 3 : ")
try:
    num1 = int(num1)
    num2 = int(num2)
    num3 = int(num3)

if num1 > num2:
if num1 > num3:
large_number = num1
else:
large_number = num3
else:
if num2 > num3:
large_number = num2
else:
large_number = num3

print("********************")
print("Number 1 : ", num1)
print("Number 2 : ", num2)
print("Number 3 : ", num3)
print("Largest number is : ", large_number)

except:
print("Please enter all an integer number")
```

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