Exp no 1
Date 23-7-25

Task 1. Running Python script and various expressions in an interactive Interpreter.

Aim :- To write a python program for various expressions in an interactive interpreter

1.1. Temperature converter (celsius to Fahrenheit)

Scenario :- A weather app needs to convert temperature from celsius to ~~Faher~~ Fahrenheit

Algorithm :-

step 1 :- Initialize a variable

step 2 :- Assign a value for variable

step 3 :- Calculate Fahrenheit = (celsius * 9/5) + 32

step 4 :- Execute the code

code :-

```
Celcius = 37
Fahrenheit = (celsius * 9/5) + 32
print ("Temperature in farenheit:", fahrenheit)
```

1.1 Output:-

Temperature in fahrenheit : 98.6

O/P

1.2 Simple Interest Calculator

Scenario :- A bank application calculates simple Interest for a customer.

Algorithm

step 1 :- Initialize a variable

step 2 :- Assign a value for principal, rate, time

step 3 :- Calculate ~~Interest = (Principle * rate * time~~

Interest = (principle * rate * time) /100

step 4 :- Execute the code.

Code :-

```
Principle = 10000
rate = 5
time = 3
interest = (principle * rate * time) /100
Print ("simple interest:", interest)
```

1.3 Area of circle

Scenario :- A geometry tool calculates the area of a circle from its radius

Algorithm :-

step 1 :- Initialize a variable for radius

step 2 :- Assign Pi = 3.14 & radius = 7

1.2 Output :-

Simple interest : 1500.0

o/p

1.3 output :-

area of the circle : 153.86

o/p

step 3:- calculate area = pi * (radius ** 2)

step 4:- Execute the result.

Code:-

```
radius = 7
pi = 3.14
area = pi * (radius ** 2)
print ("Area of the circle is:", area)
```

1.4 Circle Circumference

Scenario: A geometry tool calculates circumference of circle

Algorithm:-

step 1:- Initialize a variable

step 2:- Assign a value for variable & pi = 3.14

step 3:- Calculate circumference = 2 * pi * radius

step 4:- Execute the code.

Code

```
radius = 5
Pi = 3.14
circumference = 2 * pi * radius
Print("circumference:", circumference)
```

1.4 output :-

circumference of the circle : 43.96

1.5 Speed calculation

scenario: A travel app calculates average speed using distance & time.

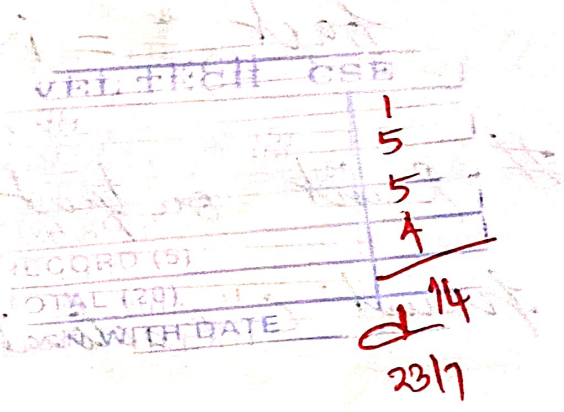
Algorithm

Step 1:- Initialize a ~~va~~ The ~~values~~ variable for distance, time, speed.

Step 2:- Assign values for distance, time, speed

Step 3:- calculate ~~distan~~ speed = distance/time

Step 4:- Execute the code.



code:-

```
distance = 300  # Km
time = 5        # hours
speed = distance / time
print ("Average speed:", speed, "Km/h").
```

Result:-

Running python script and various expressions in an interactive interpreter is verified, compiled & executed. 23/7

1.5 output :-

average speed : 60.0 km/h