24BIT167 - VANDITA NAWANI Aim : Two write simple python programs to perfrom basic arithematic operations, unit coversion and other mathematical calculations

Hardware and Software requirements : hardware-16GB RAM, Intel Processor(i9), software: Python (Version 3.x.), Google Colab

System Configration : Operating System: Windows 11, IDE: Google Colab

Theory : All the programs follow basic python syntax, using functions like input(), int(), print() and arithematic operators (+,-,*,/)

```
a = int(input("ENTER A NUMBER:"))
b = int(input("ENTER THE SECOND NUMBER:"))
if(a>b):
  sub = a-b
else:
  sub = b-a
print(sub)
```

```
ENTER A NUMBER:4
ENTER THE SECOND NUMBER:3
1
```

Add two numbers

```
a = int(input("ENTER A NUMBER:"))
b = int(input("ENTER THE SECOND NUMBER:"))
sum = a+b
print(sum)
```

```
ENTER A NUMBER:5
ENTER THE SECOND NUMBER:6
11
```

Subtract two numbers

Double-click (or enter) to edit

Multiply two numbers

```
a = int(input("ENTER A NUMBER:"))
b = int(input("ENTER THE SECOND NUMBER:"))
mul = a*b
print(mul)
```

```
ENTER A NUMBER:5
ENTER THE SECOND NUMBER:6
30
```

Divide two numbers

```
a = int(input("ENTER A NUMBER:"))
b = int(input("ENTER THE SECOND NUMBER:"))
div = a/b
print(div)
```

```
ENTER A NUMBER:6
ENTER THE SECOND NUMBER:3
2.0
```

Convert hours into minutes

```
hrs = int(input("ENTER THE NUMBER OF HOURS "))
min = hrs*60
print(min)
```

```
ENTER THE NUMBER OF HOURS 6
360
```

minutes to hours

```
min = int(input("ENTER THE NUMBER OF MINUTES:"))
hrs = min/60
print(hrs)
```

```
ENTER THE NUMBER OF MINUTES:720
12.0
```

Dollars into rupees

```
dollars = int(input("ENTER THE AMOUNT IN DOLLARS:"))
rupees = dollars*48
print(rupees)
```

```
ENTER THE AMOUNT IN DOLLARS:56
2688
```

Convert dollar to pounds

```
dollars = int(input("ENTER THE AMOUNT OF DOLLARS:"))
rupees = dollars*48
pound = rupees/70
print(pound)
```

```
ENTER THE AMOUNT OF DOLLARS:56
38.4
```

Convert grams into kgs

```
gms = int(input("ENTER THE WEIGHT IN GRAMS:"))
kgs = gms/1000
print(kgs)
```

```
ENTER THE WEIGHT IN GRAMS:30000
30.0
```

Convert kgs into grams

```
kgs = int(input("ENTER THE WEIGHT IN KGS:"))
grams = kgs*1000
print(grams)
```

```
ENTER THE WEIGHT IN KGS:34
34000
```

convert bytes into KB, MB & GB

```
byt = int(input("ENTER THE NUMBER OF BYTES:"))
KB = byt/1000
MB = KB/1024
GB = MB/1024
print("THE NUMBER OF KILOBYTES:", KB)
print("THE NUMBER OF MEGABYTES:", MB)
print("THE NUMBER OF GIGABYTES:", GB)
```

```
ENTER THE NUMBER OF BYTES:12318624
THE NUMBER OF KILOBYTES: 12318.624
THE NUMBER OF MEGABYTES: 12.02990625
```

```
THE NUMBER OF GIGABYTES: 0.011747955322265625
```

Convert celcius to fahrenhiet

```
cel = int(input("ENTER THE TEMPERATURE IN CELCIUS:"))
fah = (9/5 * cel) +32
print("THE TEMPERATURE IN FAHRIENHIET IS :", fah)
```

```
ENTER THE TEMPERATURE IN CELCIUS:37
THE TEMPERATURE IN FAHRIENHIET IS : 98.60000000000001
```

Conert Fahrenhiet into celcius

```
fah = int(input("ENTER THE TEMPERATURE IN FAHRENHEIT:"))
cel = 5/9*(fah - 32)
print(cel)
```

```
ENTER THE TEMPERATURE IN FAHRENHEIT:104
40.0
```

calculate simple intrest

```
p = int(input("ENTER PRINCIPLE AMOUNT:"))
r = int(input("ENTER rate of intrest:"))
t = int(input("ENTER TIME IN YEARS:"))
SI = (p*r*t)/100
print(SI)
```

```
ENTER PRINCIPLE AMOUNT:1000
ENTER rate of intrest:10
ENTER TIME IN YEARS:2
200.0
```

Calculate area and perimeter of square

```
p = int(input("ENTER LENGTH OF SQUARE:"))
ar = p**2
per = p*4
print(per)
print(area)
```

calculate the area and perimeter of rectangle

```
len = int(input("ENTER THE LENGTH OF RECTANGLE:"))
br = int(input("ENTER THE BREADTH OF RECTANGLE:"))
ar = len*br
per = 2*(len+br)
print("area", ar)
print("Perimeter", per)
```

```
ENTER THE LENGTH OF RECTANGLE:4
ENTER THE BREADTH OF RECTANGLE:3
area 12
Perimeter 14
```

calculate the area of circle

```
r = int(input("ENTER THE RADIUS OF CIRCLE:"))
ar = 3.14*(r**2)
print("AREA", ar)
```

```
ENTER THE RADIUS OF CIRCLE:4
AREA 50.24
```

Calculate the area of triangle

```
b = int(input("ENTER THE BASE OF TRIANGLE :"))
h = int(input("ENTER THE HEIGHT OF TRIANGLE :"))
ar = 0.5*b*h
print("AREA", ar)
```

```
ENTER THE BASE OF TRIANGLE :2
ENTER THE HEIGHT OF TRIANGLE :3
AREA 3.0
```

Calculate the net salary: net_salary = gross_salary + allowances - deduction Allowances are 10% while deduction are 3% of gross salary

```
gross = int(input("ENTER THE GROSS SALARY:"))
allow = gross*0.1
ded = gross*0.03
net = gross+allow-ded
print("NET SALARY", net)
```

```
ENTER THE GROSS SALARY:40000
NET SALARY 42800.0
```

Calculate net sales where net sales =gross sales -10% discount of gross sales

```
gross = int(input("ENTER THE GROSS SALES:"))
print("NET SALES", gross-gross*0.01)
```

```
ENTER THE GROSS SALES:100000
NET SALES 99000.0
```

calculate average of three subjects marks

```
sub1 = int(input("ENTER THE MARKS OF FIRST SUBJECT MARKS :"))
sub2 = int(input("ENTER THE MARKS OF SECOND SUBJECT MARKS :"))
sub3 = int(input("ENTER THE MARKS OF SECOND SUBJECT MARKS :"))
avg = (sub1+sub2+sub3)/3
print(avg)
```

```
ENTER THE MARKS OF FIRST SUBJECT MARKS :70
ENTER THE MARKS OF SECOND SUBJECT MARKS :45
ENTER THE MARKS OF SECOND SUBJECT MARKS :66
60.333333333333336
```

Swap values

```
a = int(input("ENTER THE Vaue of a :"))
b = int(input("ENTER THE Vaue of b :"))
a,b = b,a
print("AFTER SWAP", a,b)
```

```
ENTER THE Vaue of a :3
ENTER THE Vaue of b :4
AFTER SWAP 4 3
```