

main.py

```
1 #Keshav Mathur_21107049_Q1
2 #Python program for the average of three numbers either integer or decimal numbers
3
4 #Ask the user for the first number
5 a=float(input("The first number is: "))
6
7 #Ask the user for the second number
8 b=float(input("The second number is: "))
9
10 #Ask the user for the third number
11 c=float(input("The third number is: "))
12
13 #Formula for the average of three numbers
14 z=(a+b+c)/3
15
16 if z%3==0:
17     print("The average of three numbers is:" , z)
18 else:
19     print("The average of three numbers is:" , f"{z:.4f}")
```

input

```
The first number is: 3
The second number is: 4
The third number is: 7
The average of three numbers is: 4.6667

...Program finished with exit code 0
Press ENTER to exit console.
```

```

main.py
1  #Keshav Mathur_21107049_Q2
2  #Python program for income tax of family
3
4  #Ask user for their Gross income
5  income=int(input("What is the Gross Income of the family? ").strip())
6
7  #Ask user for their family size including him/her
8  size=int(input("How many people are their in your family? ").strip())
9
10 StandardDeduction= 10000
11 DependentDeduction= 3000
12 Dependents= (size-1)
13
14 #Formula to calculate income tax
15 taxableincome= income- StandardDeduction-((DependentDeduction)*(Dependents))
16
17 tax= (taxableincome*20)/100
18
19 #condition for negative tax
20 if income> StandardDeduction + ((DependentDeduction)*(Dependents)):
21     print(f"The income tax of your family is: {tax:,.} $")
22 else:
23     print("The income tax of your family is: 0 $")
    
```

```

What is the Gross Income of the family?      9000000
How many people are their in your family?    6
The income tax of your family is: 1,795,000.0 $

...Program finished with exit code 0
Press ENTER to exit console.
    
```

main.py

```
1 #Keshav Mathur_21107049_Q3
2 #Python program to convert many seconds into minutes and seconds
3
4 #Ask the user how many seconds to calculate
5 Totaltime= int(input("How many seconds to calculate: "))
6 mins= Totaltime//60
7 secs= Totaltime%60
8 print(Totaltime , "seconds" , "is:" , mins , "minutes and" , secs , "seconds")
```

input

```
How many seconds to calculate: 200
200 seconds is: 3 minutes and 20 seconds

...Program finished with exit code 0
Press ENTER to exit console.
```

main.py

```
1 #Keshav Mathur_21107049_Q4
2 #Python program for the addition of three numbers : 25, '25', 25.0 to result of 75 as string
3
4 a= 25
5 b= '25'
6 c= 25.0
7
8 z=int(a) + int(b) + int(c)
9
10 print("The addition of three numbers and the type of result is:", str(z), end="")
11 print(", " , type(z))
```

input

The addition of three numbers and the type of result is: 75, <class 'int'>

...Program finished with exit code 0
Press ENTER to exit console.

```

main.py
1 #Keshav Mathur_21107049_Q5
2 #Python program for different values of sine and cos in angles ranging for (0-345 degrees)
3 #First we need to import math library of python in our code
4 import math
5
6 #To print required output we need to do the following code
7 for n in range(0, 24):
8     deg=15*n
9     rad = (deg*math.pi)/180
10    print(deg , end="")
11    print("°", "---" , f"{(math.sin(rad)):.4f}", ", end="")
12    print(f"{(math.cos(rad)):.4f}")

```

input

```

0° --- 0.0000, 1.0000
15° --- 0.2588, 0.9659
30° --- 0.5000, 0.8660
45° --- 0.7071, 0.7071
60° --- 0.8660, 0.5000
75° --- 0.9659, 0.2588
90° --- 1.0000, 0.0000
105° --- 0.9659, -0.2588
120° --- 0.8660, -0.5000
135° --- 0.7071, -0.7071
150° --- 0.5000, -0.8660
165° --- 0.2588, -0.9659
180° --- 0.0000, -1.0000
195° --- -0.2588, -0.9659
210° --- -0.5000, -0.8660
225° --- -0.7071, -0.7071
240° --- -0.8660, -0.5000
255° --- -0.9659, -0.2588
270° --- -1.0000, -0.0000
285° --- -0.9659, 0.2588
300° --- -0.8660, 0.5000
315° --- -0.7071, 0.7071
330° --- -0.5000, 0.8660
345° --- -0.2588, 0.9659

```