PYTHON ASSIGNMENT 1 (DS)

{Punjab Engineering College, Chandigarh}

DECEMBER 22, 2022

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BRANCH -: CSE (DATA SCIENCE)

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Python Assignment 1

```
#-------------------------------------------------------------------------------
# Name:     Manav Rai
# Branch:   Computer Science Engineering (Data Science)
# Purpose: Write a Python programme to find average of three numbers entered
#          by the user.
# Question Number -: 1
#
# Created:      30-11-2022
#-------------------------------------------------------------------------------
x = int(input("Enter number in x :"))
y = int(input("Enter number in y :"))
z = int(input("Enter number in z :"))

avg = (x+y+z)/3
print("Average of given number : ",avg)
```

Python Interpreter

```
*** Remote Interpreter Reinitialized ***
Enter number in x :60
Enter number in y :56
Enter number in z :45
Average of given number :  53.666666666666664
>>>
```

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```
#-------------------------------------------------------------------------------
# Name:     Manav Rai
# Branch:   Computer Science Engineering (Data Science)
# Purpose: Write a Python programme to compute a person's income tax.
#           Assume following tax laws:
#           . All taxpayers are charged a flat tax rate of 20%
#          . All taxpayers are allowed to $10,000 standard deduction
#           . Gross income must be entered to the nearest penny.
#           . Gross Income and the number of dependents must be asked from
#             the user.
#             .Hint:
#            Taxable income = GrossIncome - Standard deduction -
#            (Dependent deduction* No. of dependents)
#            .Tax = Taxable Income * Tax Rate
#
# Question Number -: 2
#
# Created:      30-11-2022
#-------------------------------------------------------------------------------

x = float(input("Please enter your gross index"))
y = float(input("Please enter your no. of dependents"))
print("flat tax amount",x/5)
print("standard deduction $10000")
print("additional tax due to number of dependents",3000*y)
print("Total taxable income",x-10000-(3000*y))
```

Python Interpreter

```
*** Remote Interpreter Reinitialized ***
Please enter your gross index80000
Please enter your no. of dependents4
flat tax amount 16000.0
standard deduction $10000
additional tax due to number of dependents 12000.0
Total taxable income 58000.0
>>>
```

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```
#-------------------------------------------------------------------------
# Name:     Manav Rai
# Branch:   Computer Science Engineering (Data Science)
# Purpose: Write a program that asks the user for a number of seconds and prints
#           out how many minutes and seconds that is. For instance, 200 seconds
#           is 3 minutes and 20 seconds. [Hint: Use the //operator to get minutes
#           and the % operator to get seconds.]
# Question Number -: 3
#
# Created:      30-11-2022
#-------------------------------------------------------------------------

x = int(input("enter number of seconds"))
a = x//60
b = x%60
print(a, "minutes",b,"seconds")
```

Python Interpreter

```
*** Remote Interpreter Reinitialized ***
enter number of seconds500
8 minutes 20 seconds
>>>
```

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```
#-------------------------------------------------------------------------
# Name:     Manav Rai
# Branch:   Computer Science Engineering (Data Science)
# Purpose: Write a python program to add three numbers 25+'25'+25.0 and produce
#          result 75 as string.
# Question Number -: 4
#
# Created:      30-11-2022
#-------------------------------------------------------------------------

a = 25
b = eval("25")
c = int(25.0)

sum = str(a+b+c)

print(sum)
```

Python Interpreter

```
*** Remote Interpreter Reinitialized ***
75
>>>
```

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```
#-------------------------------------------------------------------------
# Name:     Manav Rai
# Branch:   Computer Science Engineering (Data Science)
# Purpose: Write a program that prints out the sine and cosine of the angles
#           ranging from 0 to 345° in 15° increments. Each result should be
#           rounded to 4 decimal places.
# Question Number -: 5
#
# Created:      30-11-2022
#-------------------------------------------------------------------------


#Find sine and cosine of angles in degrees.

import math

for i in range(0, 345, 15):
    sine = round(math.sin(math.radians(i)),4)
    cosine = round(math.cos(math.radians(i)),4)
    print(i, " --- ", sine, cosine)
```

Python Interpreter

```
*** Remote Interpreter Reinitialized ***
0  ---  0.0 1.0
15  ---  0.2588 0.9659
30  ---  0.5 0.866
45  ---  0.7071 0.7071
60  ---  0.866 0.5
75  ---  0.9659 0.2588
90  ---  1.0 0.0
105  ---  0.9659 -0.2588
120  ---  0.866 -0.5
135  ---  0.7071 -0.7071
150  ---  0.5 -0.866
165  ---  0.2588 -0.9659
180  ---  0.0 -1.0
195  ---  -0.2588 -0.9659
210  ---  -0.5 -0.866
225  ---  -0.7071 -0.7071
240  ---  -0.866 -0.5
255  ---  -0.9659 -0.2588
270  ---  -1.0 -0.0
285  ---  -0.9659 0.2588
300  ---  -0.866 0.5
315  ---  -0.7071 0.7071
330  ---  -0.5 0.866
>>>
```