Practice set 3

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1. Get the basic salary from the employee and display the net salary by calculating the following conditions: Applicable TA 4%, DA 30%, HRA 15% on basic salary. Applicable 3% tax, 12% PF on basic salary.

```
# sal=int(input('enter salary:'))
# a=sal+4/100+30/100+15/100
# print(a)
# b=a-3/100-12/100
# print(b)

salary =int(input('enter salary:'))
ta=(salary*4)/100
da=(salary*30)/100
hra=(salary*15)/100
gs=(salary+ta+da+hra)
print(gs)
tax=(gs*3)/100
pf=(gs*12)/100
deduct=(gs-tax-pf)
net=(gs-deduct)
print(net)
```

Output:

```
D:\python>python Exercise3.py
enter salary:50000
74500.0
11175.0
```

2. Get the marks of 5 subjects at the command line and display the total of marks, and percentage.

```
import sys
sub1=int(sys.argv[1])
sub2=int(sys.argv[2])
sub3=int(sys.argv[3])
sub4=int(sys.argv[4])
sub5=int(sys.argv[5])
total=sub1+sub2+sub3+sub4+sub5
average = total / 5
print('total is:',average)
percentage=(average / 500) * 100
print(percentage)
```

Output:

```
D:\python>python Exercise3.py 34 33 50 60 70
total is: 49.4
9.879999999999999
```

3. Rajkot Corporation wants to make simple application to calculate Water Bill of Rajkotians. Water is being delivered by the Corporation on per litre charges as below:

Upto 90 liters – Rs. 0/ltr
Upto 150 litres – Rs. 2/ltr
Upto 250 litres – Rs. 5/ltr
More than 250 – Rs. 10/ltr

```
litre=int(input("enter the number of litres:"))
if litre<=90:
        charge=0
        print('no charges',charge)
elif litre<=150:
        charge=(litre+2)
        print('you need to pay',charge)
elif litre<=250:
        charge=(litre+5)
        print('you need to pay',charge)
elif litre>250:
```

```
        charge=(litre+10)
        print('you need to pay',charge)
```

Output:

```
D:\python>python Exercise3.py
enter the number of litres:80
no charges 0

D:\python>python Exercise3.py
enter the number of litres:140
you need to pay 142

D:\python>python Exercise3.py
enter the number of litres:200
you need to pay 205

D:\python>python Exercise3.py
enter the number of litres:500
you need to pay 510
```

4. A tuition class owner wants to make a simple application to allocate grade to the students on
the basis of marks student have scored. Accept marks from the students.
Marks more than 90 – A1 grade
Marks 80 or less than or equal 90 – A grade
Marks 70 or less than or equal 80 – B1
Marks 60 or less than or equal 70 – B
Marks 50 or less than or equal 60 – Can do Better!
Marks <50 – Need to work hard.

```
marks=int(input('Enter a number:'))
if marks>90:
        print('A1 Grade')
elif marks>=80 and marks<=90:
        print('A Grade')
elif marks>=70 and marks<=80:
        print('B1 Grade')
elif marks>=60 and marks<=70:
        print('B Grade')
```

```
elif marks>=50 and marks<=60:
        print('You can do better')
else:
        print('Need to work hard')
```

Output:

```
D:\python>python Exercise3.py
Enter a number:95
A1 Grade

D:\python>python Exercise3.py
Enter a number:85
A Grade

D:\python>python Exercise3.py
Enter a number:78
B1 Grade

D:\python>python Exercise3.py
Enter a number:66
B Grade

D:\python>python Exercise3.py
Enter a number:54
You can do better

D:\python>python Exercise3.py
Enter a number:35
Need to work hard
```

5. Income Tax department wants to make an application that calculates tax on the basis of the
income. Accept yearly income earned by the taxpayer as an input and calculate tax to be paid.
The tax slab is as below:
Income up to 8 lakhs – No tax
Income more than 8 lakh and less than 10 lakhs – 15% of income
Income more than 10 lakhs and less than 20 lakhs – 20% of income
Income more than 20 lakhs – 30% of income

```
income=int(input('Enter the income:'))
if income<=800000:
        tax=0
        print('no tax pay ',tax)
elif income>800000 and income<1000000:
        tax=(income*15)/100
        print('you need to pay 15% Of tax Rs.',tax)
elif income>=1000000 and income<2000000:
        tax=(income*20)/100
        print('you need to pay 20% Of tax Rs.',tax)
elif income>=2000000:
        tax=(income*30)/100
        print('you need to pay 30% Of tax Rs.',tax)
```

Output:

```
D:\python>python Exercise3.py
Enter the income:700000
no tax pay  0

D:\python>python Exercise3.py
Enter the income:900000
you need to pay 15% Of tax Rs. 135000.0

D:\python>python Exercise3.py
Enter the income:1500000
you need to pay 20% Of tax Rs. 300000.0

D:\python>python Exercise3.py
Enter the income:5000000
you need to pay 30% Of tax Rs. 1500000.0
```

6. Accept two integer values in separate variable, display the small value and big value out of it.

```
value1=int(input('enter a number:'))
value2=int(input('enter a number:'))
if value1>value2:
        print('Value1 is Greater')
elif value1<value2:
        print('Value1 is Smaller')
elif value1==value2:
        print('Both value is Equal')
```

```
else:
        print('Please give a values')
```

Output:

```
D:\python>python Exercise3.py
enter a number:1000
enter a number:5000
Value1 is Smaller

D:\python>python Exercise3.py
enter a number:400
enter a number:200
Value1 is Greater

D:\python>python Exercise3.py
enter a number:300
enter a number:300
Both value is Equal
```

7. Accept marks from 4 students, display which mark is highest among all.

```
student1=int(input('Enter marks of student1:'))
student2=int(input('Enter marks of student2:'))
student3=int(input('Enter marks of student3:'))
student4=int(input('Enter marks of student4:'))
if student1>student2 and student1>student3 and student1>student4:
        print('Student1 Get highest marks')
if student2>student1 and student2>student3 and student2>student4:
        print('Student2 Get highest marks')
if student3>student1 and student3>student2 and student3>student4:
        print('Student3 Get highest marks')
if student4>student1 and student4>student2 and student4>student3:
        print('Student4 Get highest marks')
```

Output:

```
D:\python>python Exercise3.py
Enter marks of student1:50
Enter marks of student2:76
Enter marks of student3:56
Enter marks of student4:87
Student4 Get highest marks
```

8. An online selling app wants to develop a application to calculate shipping charges on the
purchase. Accept amount from the user and calculate the shipping charges.
The shipping charges are as below:
Shopping amount less than 1500 – The shipping charges is Rs. 100/-
--Type the message: Please purchase (1500-amount) to avail shipping charge of Rs. 80/-
--Please pay (amount+100)
Shopping amount more than 1500 and less than 3000 – The shipping charges is Rs. 70/-
--Type the message: Please purchase (3000-amount) to avail shipping charge of Rs. 50/-
--Please pay (amount+70)
Shopping amount more than 3000 – Free shipping + 7% discount on amount
--Type a message: You saved (amount*7/100)
--Please pay (amount – discount)

```
amount=int(input('enter an amount:'))
if amount<1500:
        charges=(amount+100)
        print('Please purchase (1500-amount) to avail shipping charge of Rs. 80/- '+'please
pay',charges)
elif amount>1500 and amount<3000:
        charges=(amount+70)
        print('Please purchase (3000-amount) to avail shipping charge of Rs. 50/-'+'please
pay',charges)
elif amount>3000:
        dis=(amount*7)/100
        final=(amount-dis)
        print('You saved (amount*7/100)'+'please pay',final)
```

Output:

```
D:\python>python Exercise3.py
enter an amount:1300
Please purchase (1500-amount) to avail shipping charge of Rs. 80/- please pay 1400

D:\python>python Exercise3.py
enter an amount:2000
Please purchase (3000-amount) to avail shipping charge of Rs. 50/-please pay 2070

D:\python>python Exercise3.py
enter an amount:5000
You saved (amount*7/100)please pay 4650.0
```