

LAB ASSIGNMENT – 1

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Q1. Calculate income tax for the given income by adhering to the below rules:

Taxable Income Rate (%) First 5,00,000 0 Second 7,50,000 10 Third 10,00,000 20 Remaining 30

Sample Input and output:

Enter user's salary:2500000

First 5,00,000 Tax: 0

CODE :

```
income=int(input())
tax_payable = 0
if income <= 500000:
    tax_payable = 0
elif (income > 500000 and income <= 750000):
    tax_payable = (income - 500000) * 0.10
elif (income > 750000 and income <= 1000000):
    tax_payable = tax_payable + (income - 750000) * 0.20
else:
    tax_payable = tax_payable + (income - 2500000) * 0.20
    tax_payable += tax_payable + (income - 1000000)*0.30
print(tax_payable)
```

OUTPUT :

```
Python 3.6.8 (tags/v3.6.8:3c6b436a57, Dec 24 2018, 00:16:47) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/Dileep/Documents/3-1/Data warehousing lab/lab1.1.py ===
500000
0
>>>
```

Q2. Write a code to extract each digit from an integer, in the reverse order

CODE :

```
num = int(input())
reverse = 0
while(num>0):
    a=num%10
    reverse=reverse*10+a
    num = num//10
print(reverse)
```

OUTPUT :

```
=== RESTART: C:\Users\Dileep\Documents\3-1\Data warehousing lab\lab1.2.py ===
7536
6357
>>> |
```

```
=== RESTART: C:/Users/Dileep/Documents/3-1/Data warehousing lab/lab1.2.py ===
5321469
9641235
>>> |
```

Q3. Given a list iterate it and display numbers which are divisible by 5 and if you find number greater than 150 stop the loop iteration list1 = [12, 15, 32, 42, 55, 75, 122, 132, 150, 180, 200]

Enter the number of elements in the list: 11 enter the 0th element

12

enter the 1th element 15

enter the 2th element

32

enter the 3th element 42

enter the 4th element 55

enter the 5th element

75

enter the 6th element 122

enter the 7th element 132

enter the 8th element 150

enter the 9th element

180

enter the 10th element 200

The elements are:

15 55 75 150

CODE :

```
list1 = [12, 15, 32, 42, 55, 75, 122, 132, 150, 180, 200]
```

```
for i in list1:
```

```
    if(i > 150):
```

```
        break;
```

```
    if i%5==0:
```

```
        print(i)
```

OUTPUT :

```
=== RESTART: C:\Users\Dileep\Documents\3-1\Data warehousing lab\lab1.3.py ===  
15  
55  
75  
150  
>>> |
```

Q4. Create a function showEmployee() in such a way that it should accept employee name, and it's salary and display both, and

if the salary is missing in function call it should show it as 9000

Expected Output: showEmployee("Ben", 9000) show Employee("Ben")

Should Produce:

Employee Ben salary is: 9000 Employee Ben salary is: 9000

CODE :

```
def show_employee(name, salary=9000):  
    print("Name:", name, "salary:", salary)  
  
show_employee("Ben", 9000)  
show_employee("Ben")
```

OUTPUT :

```
=== RESTART: C:/Users/Dileep/Documents/3-1/Data warehousing lab/lab1.5.py ===  
Name: Ben salary: 9000  
Name: Ben salary: 9000  
>>> |
```

Q5.Count all lower case, upper case, digits, and special symbols from a given string Given: str1 = "P@#yn26at^&i5ve"

Expected Outcome:

Total counts of chars, digits,and symbols Chars = 8 Digits = 3 Symbol = 4

CODE :

```
def find_digits_chars_symbols(sample_str):  
    char_count = 0  
    digit_count = 0  
    symbol_count = 0  
    for char in sample_str:  
        if char.isalpha():  
            char_count += 1  
        elif char.isdigit():  
            digit_count += 1  
        else:  
            symbol_count += 1  
    print("Chars =", char_count, "Digits =", digit_count, "Symbol =", symbol_count)  
sample_str = "P@#yn26at^&i5ve"  
print("total counts of chars, Digits, and symbols \n")  
find_digits_chars_symbols(sample_str)
```

OUTPUT :

```
=== RESTART: C:/Users/Dileep/Documents/3-1/Data warehousing lab/lab1.4.py ===  
total counts of chars, Digits, and symbols  
  
Chars = 8 Digits = 3 Symbol = 4  
>>> |
```