

Name : MUHAMMAD YASIR

ID : 15459

Final-Term: Assignment

Subject : MODERN  
PROGRAMMING LANGUAGE

Sir : FAHIMULLAH

Program : BS (CS)

**Q1:**

**Write a program to compute the frequency of the words from the user input. The output should output after sorting the key alphanumerically.**

**Suppose the following input is supplied to the program:**

**92: 2**

**also: 1**

**and: 1**

**code: 1**

**country: 1**

**in: 1**

**is: 1**

**Pakistan: 2**

**[Answer:](#)**

```
text_line = input("Type in: ")
freq_dict = {}
for i in text_line .split(' '):
    if i. isalpha():
        if i not in freq_dict:
            freq_dict[i] = 1
        elif i in freq_dict:
            freq_dict[i] = freq_dict[i] + 1
    else:
        Pass
sorted_freq_dict = sorted(freq_dict.items(), key =
operator.itemgetter(0))
print(sorted_freq_dict)
for i in sorted_freq_dict:
    print(i[0], i[1])
```

**Q2:**

**Print the following pattern using for loop (nested loop)**

**5 4 3 2 1**

**4 3 2 1**

**3 2 1**

**2 1**

**1**

**Answer:**

```
rows = 5
```

```
for i in range(rows, 0, -1):
```

```
    for j in range(0, i + 1):
```

```
        print(j, end=' ')
```

```
    print("\r")
```

**Q3:**

Write a Python function that takes a list and returns a new list with unique elements of the first list also print the returned list.

ANSWER:

```
My_list = [10, 20, 30, 40, 20, 50, 60, 40]
```

```
Print ("Original List : ",my_list)
```

```
My_set = set(my_list)
```

```
My_new_list = list(my_set)
```

```
Print ("List of unique numbers : ",my_new_list)
```

Q4) Write a Python function that that prints out the first n rows (input no of rows from user) of Pascal's triangle.

ANSWER:

```
n=int(input("Enter number of rows: "))
a=[]
for i in range(n):
    a.append([])
    a[i].append(1)
    for j in range(1,i):
        a[i].append(a[i-1][j-1]+a[i-1][j])
    if(n!=0):
        a[i].append(1)
for i in range(n):
    print("  "*(n-i),end=" ",sep=" ")
    for j in range(0,i+1):
        print('{0:6}'.format(a[i][j]),end=" ",sep=" ")
    print ()
```

Q5:

Write a recursive function to calculate the sum of numbers from 0 to 10

Answer:

```
Def recur_sum (n):  
    if n <= 1:  
        return n  
    else:  
        return n + recur_sum(n-1)
```

Num = 10

```
if Num < 0:  
    print("Enter a positive number")  
else:  
    print("The sum is", recur_sum (Num))
```