

# Assignment Report

ELP-718 Telecom Software Lab

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# 1 Introduction

**P**ython is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It was created by Guido van Rossum during 1985- 1990. Like Perl, Python source code is also available under the GNU General Public License (GPL). This tutorial gives enough understanding on Python programming language.

## 2 Problem Statement

### Problem statement 1

- Write a Python program that can take a big string (with spaces) as input from the command line and count number of times a word occurs in the string and also print the top 3 words in terms of their frequency of count.
- Also print the next permutation of each word appearing in the string.

### Problem statement 2

- designing a Graphical user Interface (GUI) to depict the location of a mobile user in a square
- generate the user location using the random function generator function in Python to generate a number between  $[0,1)$ .

### Problem statement 3

- Need to design an addressing code for a shipping company that works all around India. The address given by the customer is split into fields of
- Name, House No/colony/landmark
- City
- District

## 3 Implementation

### 3.1 Problem 1

- Name and types of parameters  
string
- Input  
string
- Output  
word frequency
- Algorithm
  - first frequency is found for each words
  - then sorting is done to get top three
  - then word and its frequency is printed

### 3.2 Problem 2

- calculate number of points that lie inside unit radius circle in terms of percentage.
- input  
x which is no of users
- output  
displayin percentage
- algorithm  
using random function location ar4e generated  
then simply checking whether it is within unit radius or not

### 3.3 Problem 3

- design an addressing code for a shipping company that works all around India. The address given by the customer .
- input  
asking the the operation user want to do  
like add,delete ,modify
- output  
displaying the
- algorithm  
using random function location are generated  
then simply checking whether it is within unit radius or not



## **4 Test Description and Results**

The results obtained can be seen from the screenshots taken and file attached with folder.

## 5 Screenshots

### 5.1 Screenshot of output of ps1

```
dheeraj@administrator:~/Desktop/assign7$ python ps1.py
enter the srting : he is is the bo wo wo
top 3 frequent words:
is 2
wo 2
bo 1
is
si
wo
ow
bo
ob
he
eh
the
teh
hte
het
eth
eht
dheeraj@administrator:~/Desktop/assign7$
```

Figure 1: Screenshot of problem statement 1

### 5.2 Screenshot of output of ps2

```
dheeraj@administrator:~/Desktop/assign7$ python ps2.py
enter total number of user in that area: 10
0.7230662436716855: -0.13707523432868207, -0.00250957497209255: 0.935156
8766, 0.3232494800637651: 0.8266293247637015, 0.3632900107110153: 0.49005
70353336}
percentage outside 10 %
dheeraj@administrator:~/Desktop/assign7$
```

Figure 2: Screenshot of problem statement 2

### 5.3 Screenshot of output of ps3

```
dheeraj@administrator:~/Desktop/assign7$ python ps3.py
1.add 2.modify 3.delete 4.query
enter the operation you want to perform:1
enter the state name you want to add tamil
enter the code name you want to add for state:123
enter the city name you want to add:fit
enter the code name you want to add for city:189
enter the district name you want to add:thar
enter the code name you want to add for district:45
enter the customer name
dheeraj
enter the customer district
thar
enter the customer city
thar
enter the customer state
tamil
Human Readable code
({'KERALA': '011', 'NEW DELHI': '010', 'tamil': '123', 'BIHAR': '000', 'HARYANA': '001'})
dheeraj@administrator:~/Desktop/assign7$
```

Figure 3: Screenshot of problem statement 3

## References

- [1] latex  
<https://www.stackexchange.com>
- [2]
- [3] Programming Simplified  
<http://www.tutorialspoint.com/python>
- [4] Hacker Rank: C;  
<http://www.grymoire.com>

## 6 Epilogue

1. some in built functions are handy to use
2. i question no 3 ifoun difficulty