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**Class- MSc CS – I**

**Roll No.- 536**

**Subject – Bioinformatics**

**Topic – Fingerprint**

## Practical No: 9

**Aim:** Enter six protein sequence of different organism and write a program to find a fingerprint of sequence.

**Code:**

```
def solve_fingerprint(seq_list, no_of_col):
   seq_dict=dict()
   for colnum in range(no_of_col):
      counta,countc,countt,countg=0,0,0,0
      for colseq in seq_list:
         if colseq[colnum]=='A':
            counta+=1
         elif colseq[colnum]=='T':
            countt+=1
         elif colseq[colnum]=='C':
            countc+=1
         elif colseq[colnum]=='G':
            countg+=1
      seq_dict[colnum]=[counta,countc,countt,countg]
   display_results(seq_dict)


def display_results(seq_dict):
   print("\tA \tC \tT \tG")
   for key in seq_dict:
      print("\n",*seq_dict[key],sep="\t")
no_of_seq=int(input("Enter the number of sequence: "))
print("Enter all the sequences")
seq_list=[]
for _ in range(no_of_seq):
   seq_list.append(list(map(str, input("").split())))
solve_fingerprint(seq_list,len(seq_list[0]))
```

**Output:**

IDLE Shell 3.10.5

File Edit Shell Debug Options Window Help

```
Python 3.10.5 (tags/v3.10.5:f377153, Jun  6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/DELL/Desktop/neha folders/fingerprint.py ==========
Enter the number of sequence: 4
Enter all the sequences
A C T G A T G
A T C A G A A
A T A A G C A
A G T T A G C
        A       C       T       G

        4       0       0       0

        0       1       2       1

        1       1       2       0

        2       0       1       1

        2       0       0       2

        1       1       1       1

        2       1       0       1
>>>
```

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