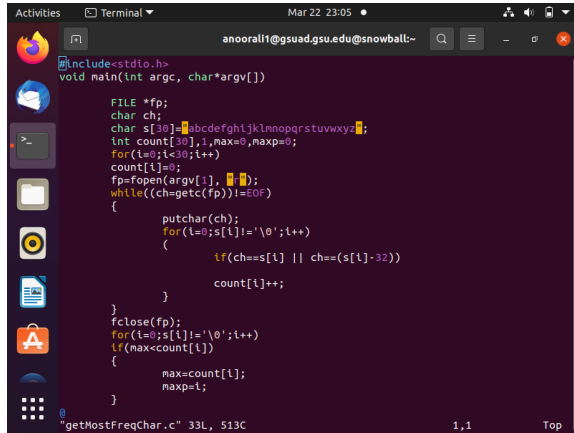


Arman Noorali

Lab 9

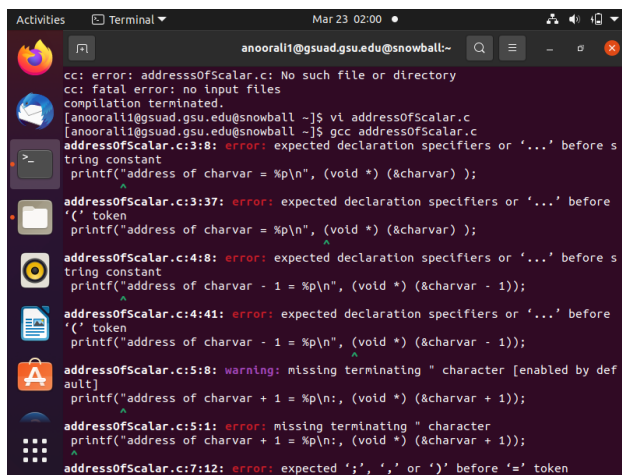
Part 1:



```
anoorali1@gsuad.gsu.edu@snowball:~  
$ gcc getMostFreqChar.c  
$ ./getMostFreqChar.c  
abcdefghijklmnopqrstuvwxyz  
a 1  
b 1  
c 1  
d 1  
e 1  
f 1  
g 1  
h 1  
i 1  
j 1  
k 1  
l 1  
m 1  
n 1  
o 1  
p 1  
q 1  
r 1  
s 1  
t 1  
u 1  
v 1  
w 1  
x 1  
y 1  
z 1  
1,1 Top
```

Part 2:

1.



```
anoorali1@gsuad.gsu.edu@snowball:~  
$ gcc addressOfScalar.c  
cc: error: addressOfScalar.c: No such file or directory  
cc: fatal error: no input files  
compilation terminated.  
[anoorali1@gsuad.gsu.edu@snowball ~]$ vi addressOfScalar.c  
[anoorali1@gsuad.gsu.edu@snowball ~]$ gcc addressOfScalar.c  
addressOfScalar.c:3:8: error: expected declaration specifiers or '...' before s  
tring constant  
printf("address of charvar = %p\n", (void *) (&charvar));  
^  
addressOfScalar.c:3:37: error: expected declaration specifiers or '...' before  
'(' token  
printf("address of charvar = %p\n", (void *) (&charvar));  
^  
addressOfScalar.c:4:8: error: expected declaration specifiers or '...' before s  
tring constant  
printf("address of charvar - 1 = %p\n", (void *) (&charvar - 1));  
^  
addressOfScalar.c:4:41: error: expected declaration specifiers or '...' before  
'(' token  
printf("address of charvar - 1 = %p\n", (void *) (&charvar - 1));  
^  
addressOfScalar.c:5:8: warning: missing terminating " character [enabled by def  
ault]  
printf("address of charvar + 1 = %p\n", (void *) (&charvar + 1));  
^  
addressOfScalar.c:5:1: error: missing terminating " character  
printf("address of charvar + 1 = %p\n", (void *) (&charvar + 1));  
^  
addressOfScalar.c:7:12: error: expected ';', ',', or ')' before '=' token  
printf("address of charvar + 1 = %p\n", (void *) (&charvar + 1));  
^
```

2.

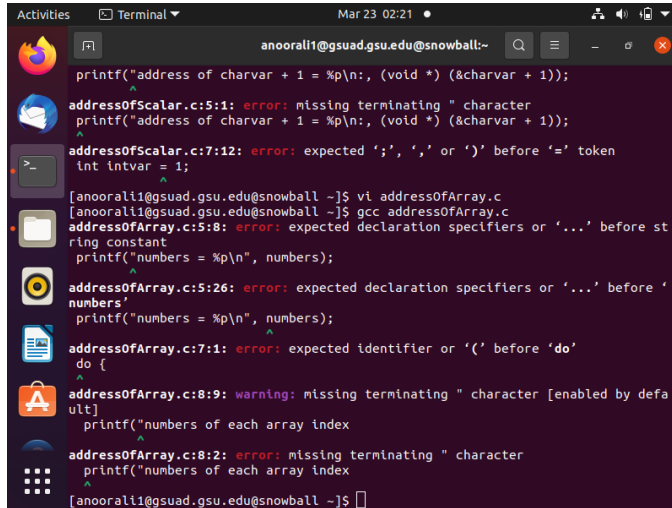
```
#include<stdio.h>
int main(){
    //initilize a char variable, print its address and the next address
    char charvar='a';
    printf("address of charvar = %p\n", (void*)&charvar);
    printf("address of charvar - 1 = %p\n", (void*)&charvar-1);
    printf("address of charvar + 1 = %p\n", (void*)&charvar+1);
    //initilize an double variable, print its address and the next address
    double doublevar=1.0;
    printf("address of doublevar = %p\n", (void*)&doublevar);
    printf("address of doublevar - 1 = %p\n", (void*)&doublevar-1);
    printf("address of doublevar + 1 = %p\n", (void*)&doublevar+1);
}
```

3.

The address of doublevar is incremented 8-bytes because the address of pointer arithmetic operation will multiply the size of the type for the value that is added or subtracted.

Part 3:

1.



```
Activities Terminal Mar 23 02:21
anooral1@gsuad.gsu.edu@snowball:~
printf("address of charvar + 1 = %p\n", (void *) (&charvar + 1));
addressOfScalar.c:5:1: error: missing terminating " character
printf("address of charvar + 1 = %p\n", (void *) (&charvar + 1));
addressOfScalar.c:7:12: error: expected ';' , ',' or ')' before '=' token
int intvar = 1;
[anooral1@gsuad.gsu.edu@snowball ~]$ vi addressOfArray.c
[anooral1@gsuad.gsu.edu@snowball ~]$ gcc addressOfArray.c
addressOfArray.c:5:8: error: expected declaration specifiers or '...' before st
ring constant
printf("numbers = %p\n", numbers);
addressOfArray.c:5:26: error: expected declaration specifiers or '...' before '
numbers'
printf("numbers = %p\n", numbers);
addressOfArray.c:7:1: error: expected identifier or '(' before 'do'
do {
addressOfArray.c:8:9: warning: missing terminating " character [enabled by defa
ult]
printf("numbers of each array index
addressOfArray.c:8:2: error: missing terminating " character
printf("numbers of each array index
[anooral1@gsuad.gsu.edu@snowball ~]$
```

2. Address is not the same. Both address are different.

3. sizeof(array name)