# Task - 1 ( a )
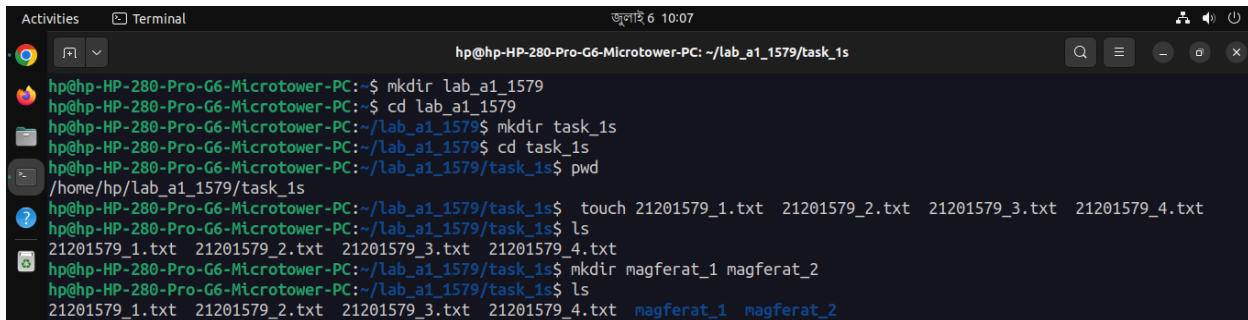
-pwd
-mkdir lab_a1_1579
-cd lab_a11579
-mkdir task_1s
-cd task_1s
- touch 21201579_1.txt          21201579_2.txt          21201579_3.txt          21201579_4.txt
- ls
-mkdir magferat_1 magferat_2
-ls



- mv 21201579_1.txt 21201579_2.txt 21201579_3.txt magferat_1
- ls
- ls magferat_1
- cp magferat_1/21201579_1.txt magferat_1/21201579_2.txt magferat_2
- ls magferat_2
- mkdir magferat_3
- cp -r magferat_1 magferat_3
- cd magferat_3/magferat_1
-ls -l
- chmod go+rx-w *

- cd ..
ls -R



- pwd
- cd /
- sudo mv /home/hp/lab_a1_1579/task_1s/magferat_3*   root
- sudo su
- cd root
- ls -R
- exit

```
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1s/magferat_3/magferat_1$ cd ..
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1s/magferat_3$ ls -R
.:
magferat_1

./magferat_1:
21201579_1.txt  21201579_2.txt  21201579_3.txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1s/magferat_3$ pwd
/home/hp/lab_a1_1579/task_1s/magferat_3
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1s/magferat_3$ cd /
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ ls
bin    cdrom  etc   lib    lib64  lost+found  mnt  proc  run   snap  sys  usr
boot   dev    home  lib32  libx32  media       opt  root  sbin  srv   tmp  var
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ ^C
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ ^C
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ mv /home/hp/lab_a1_1579/task_1s/magferat_3* root
mv: cannot stat 'root/magferat_3': Permission denied
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ sudo mv /home/hp/lab_a1_1579/task_1s/magferat_3* root
[sudo] password for hp:
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ ls /home/hp/lab_a1_1579/task_1s/magferat_3
ls: cannot access '/home/hp/lab_a1_1579/task_1s/magferat_3': No such file or directory
hp@hp-HP-280-Pro-G6-Microtower-PC:/$ sudo su
root@hp-HP-280-Pro-G6-Microtower-PC:/# cd root
root@hp-HP-280-Pro-G6-Microtower-PC:~# ls
magferat_3  snap
root@hp-HP-280-Pro-G6-Microtower-PC:~# ls magferat_3
magferat_1
root@hp-HP-280-Pro-G6-Microtower-PC:~# ls -R
.:
magferat_3  snap

./magferat_3:
magferat_1

./magferat_3/magferat_1:
21201579_1.txt  21201579_2.txt  21201579_3.txt

./snap:
```

- cd /home/hp/lab_a1_1579
- ls task_1s
- rm -r task_1s/*
- ls task_1s

```
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ pwd
/home/hp/lab_a1_1579
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ ls
task_1s
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ ls task_1s
21201579_4.txt  magferat_1  magferat_2
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ rm -r task_1s/*
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ ls task_1s
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$
```

# Task - 1 ( b )

```
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ mkdir task_1b
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ cd task_1b
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ touch course.txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ gedit course.txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ cat course.txt
CSE419
- PROGRAMMING lANGUAGE AND COMPETITIVE PROGRAMMING
- S : 1
- FACULTY : KKP
- CREDIT : 3

CSE425
- NEURAL NETWORKS
- S : 2
- FACULTY : MMM
- CREDIT : 3

CSE321
- OPERATING SYSTEM
- S : 13
- FACULTY : KBS
- CREDIT : 3

ECO102
- INTRODUCTION TO MACROECONOMICS
- S : 4
- FACULTY : RUA
- CREDIT : 3


TOTAL = 4 COURSE
TOTAL - CREDIT : 12

hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ ls CSE*
ls: cannot access 'CSE*': No such file or directory
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ grep -c "CSE" course.txt
3
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$
```

# Task - 1 ( c )

```
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ ls -a /root
ls: cannot open directory '/root': Permission denied
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ sudo ls -a /root
.  ..  .bash_history  .bashrc  .cache  .config  .lesshst  .local  magferat_3  .profile  snap  .sudo_as_admin_successful
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$ sudo ls -a /root | grep "^\."
.
..
.bash_history
.bashrc
.cache
.config
.lesshst
.local
.profile
.sudo_as_admin_successful
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_1b$
```

# Task - 1 ( d )

```
hp@hp-HP-280-Pro-G6-Microtower-PC: ~/lab_a1_1579

hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ touch .txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ gedit .txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ cat .txt
1 = Turkey's
2 = economy
3 ==  grew
4 ==an
5 = annual
6 =   4.5%
7 = in 2023
8 = and
9 == 4%
10 == in
11 = the
12 first
13  quarter
14  of
15 = that
16  year
17 =  despite
18 =  slowdown
19
20
21
22
23
```

```
hp@hp-HP-280-Pro-G6-Microtower-PC: ~/lab_a1_1579

hp@hp-HP-280-Pro-G6-Microtower-PC:~$ cd lab_a1_1579
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ ls -a
.  ..   task_1b  task_1s   .txt
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$ head -n 17 .txt | tail -n +5
5 = annual
6 =  4.5%
7 = in 2023
8 = and
9 == 4%
10 == in
11 = the
12 first
13  quarter
14  of
15 = that
16  year
17 =  despite
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579$
```

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2a.c
#include <stdio.h>
#include <stdlib.h>

int main() {
    int a, b;
    printf("Enter a, b: ");
    scanf("%d %d", &a, &b);

    if (a > b) {
        printf("%d\n", a - b);
    } else if (a < b) {
        printf("%d\n", a + b);
    } else {
        printf("%d\n", a * b);
    }

    return 0;
}
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```
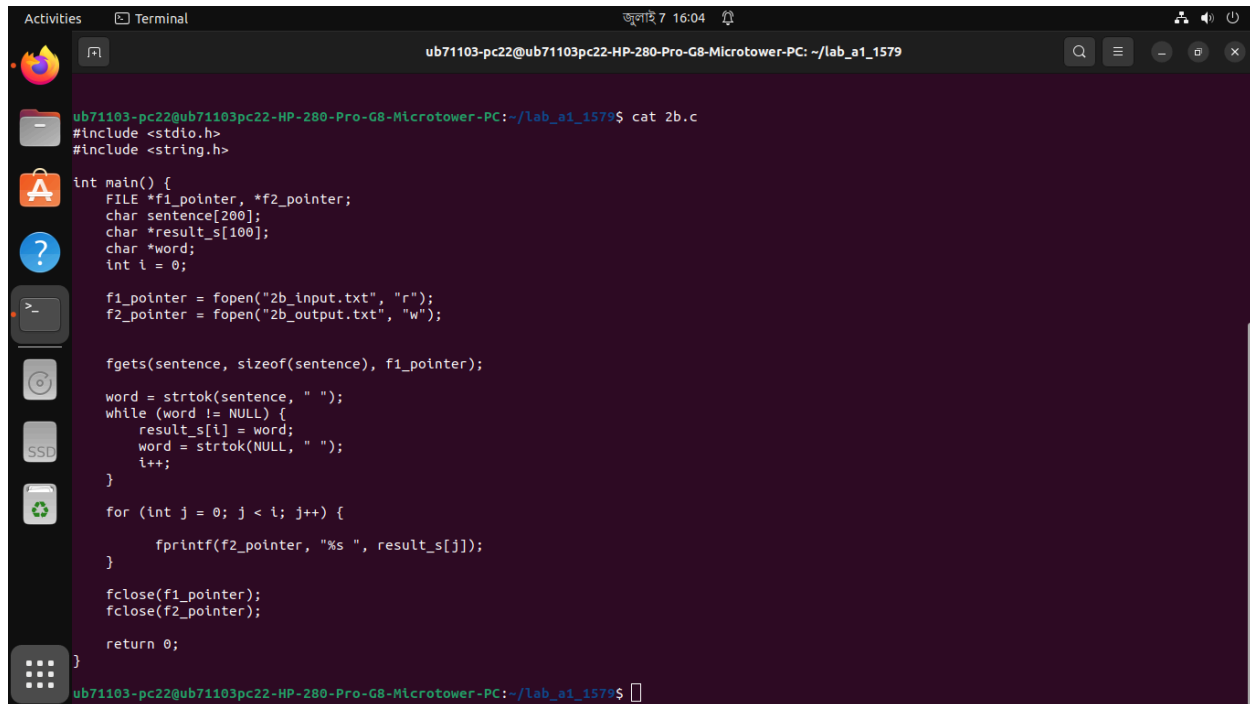
```
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ gedit 2a.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ gcc -o 2a_output 2a.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ ./2a_output
Enter a, b: 6 4
2
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ gcc -o 2a_output 2a.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ ./2a_output
Enter a, b: 4 6
10
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ ./2a_output
Enter a, b: 4*6
4
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$ ./2a_output
Enter a, b: 4 4
16
hp@hp-HP-280-Pro-G6-Microtower-PC:~/lab_a1_1579/task_2$
```

# TASK - 2 ( B )

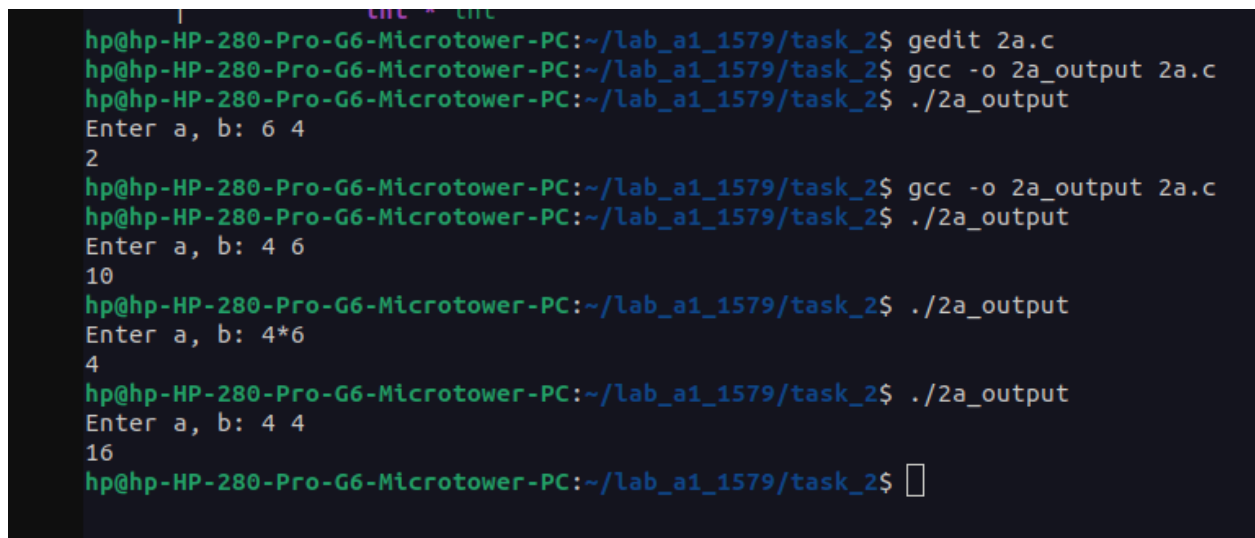ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC: ~/lab_a1_1579

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2b.c
#include <stdio.h>
#include <string.h>

int main() {
    FILE *f1_pointer, *f2_pointer;
    char sentence[200];
    char *result_s[100];
    char *word;
    int i = 0;

    f1_pointer = fopen("2b_input.txt", "r");
    f2_pointer = fopen("2b_output.txt", "w");


    fgets(sentence, sizeof(sentence), f1_pointer);

    word = strtok(sentence, " ");
    while (word != NULL) {
        result_s[i] = word;
        word = strtok(NULL, " ");
        i++;
    }

    for (int j = 0; j < i; j++) {

        fprintf(f2_pointer, "%s ", result_s[j]);
    }

    fclose(f1_pointer);
    fclose(f2_pointer);

    return 0;
}
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```
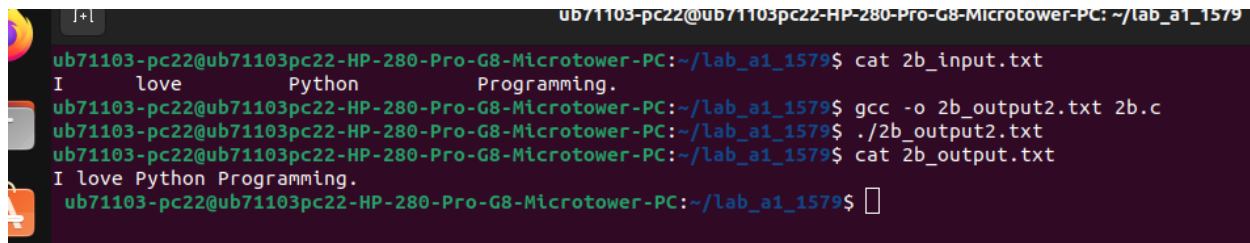
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC: ~/lab_a1_1579

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2b_input.txt
I       love            Python          Programming.
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ gcc -o 2b_output2.txt 2b.c
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2b_output2.txt
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2b_output.txt
I love Python Programming.
 ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```

# TASK - 2 ( C )

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2c.c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

void check_pass(char password[]);

int main() {
    char password[100];

    printf("Enter the password: ");
    scanf("%s", password);

    check_pass(password);

    return 0;
}

void check_pass(char password[]) {

    int digit = 0, upper = 0, lower = 0, special = 0;

    for (int i = 0; i < strlen(password); i++) {
        if (islower(password[i]))lower = 1;
        if (isupper(password[i]))upper = 1;
        if (isdigit(password[i]))digit = 1;
        if (strchr("_$#@", password[i]))special = 1;
    }

    if (digit && lower && upper && special) printf("OK ");
    else {
        if (!digit) printf("Digit missing, ");
        if (!upper) {
            printf("Uppercase character missing, ");
        }
        if (!lower) {
            printf("Lowercase character missing, ");
        }
    else {
        if (!digit) printf("Digit missing, ");
        if (!upper) {
            printf("Uppercase character missing, ");
        }
        if (!lower) {
            printf("Lowercase character missing, ");
        }
        if (!special) {
            printf("Special character missing, ");
        }
    }
}
```
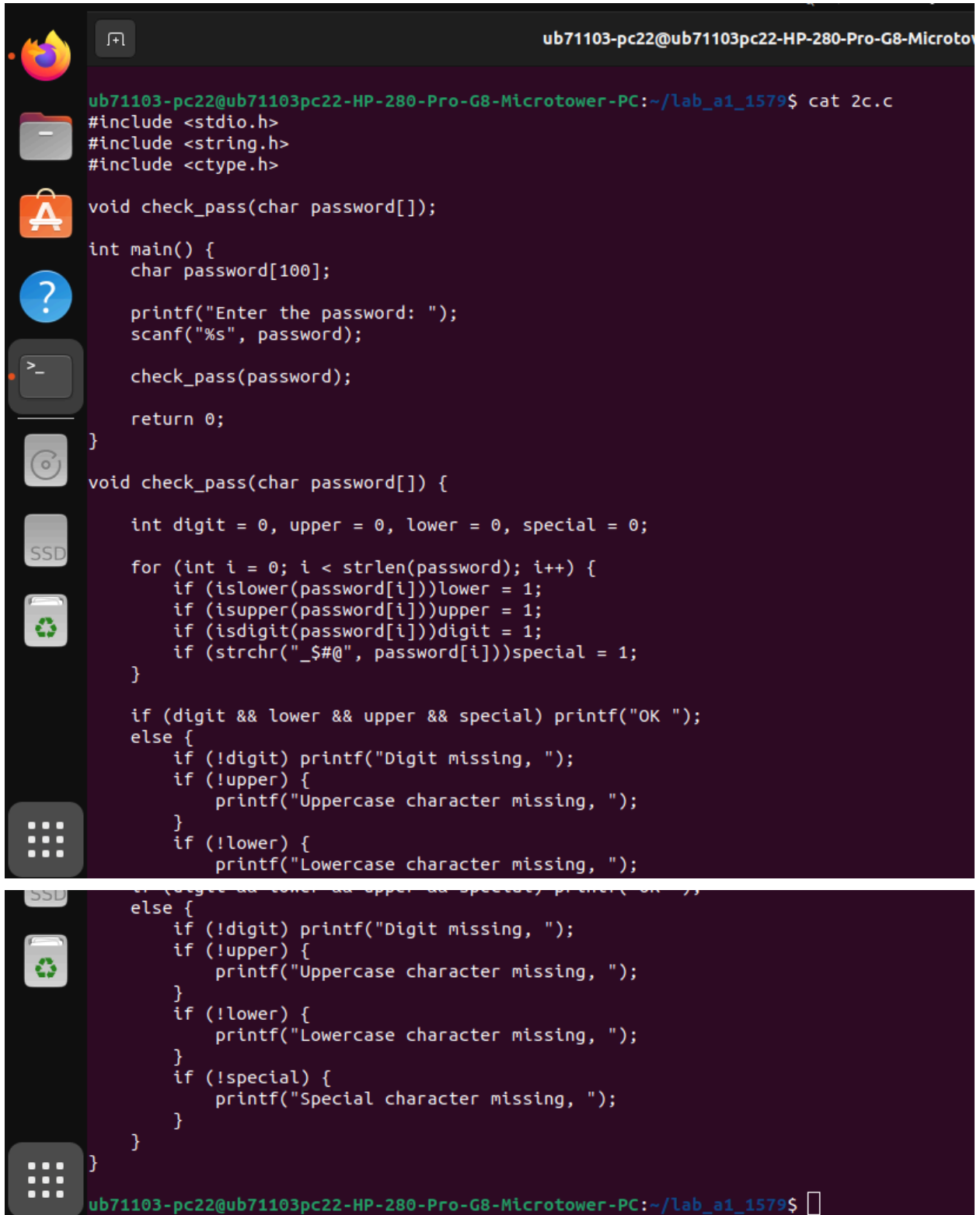
```
ties        Terminal                          জুলাই 7  14:34  🔔

                          ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC: ~/lab_a1_1579

ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ gedit 2c.c
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ gcc -o 2c_output.txt 2c.c
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2c_output.txt
Enter the password: adafsf
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2c_output.txt
Enter the password: qwrdgd
Digit missing, Uppercase character missing, Special character missing, ub71103-pc22@ub71103pc22-HP-280-P
```

```
}
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$ cd lab_a1_1579
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2c_output.txt
Enter the password: BR@CUspring
Digit missing, ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2c_output.txt
Enter the password: bracuspring
Digit missing, Uppercase character missing, Special character missing, ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2
c_output.txt
Enter the password: BR@CU20spring22
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```

TASK - 2 ( D )

```c
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$ cat 2d.c
#include <stdio.h>
#include <string.h>

int main() {
    char email[100], domain[100];
    char *pointer;
    char old_d[] = "@kaaj.com";
    char new_d[] = "@sheba.xyz";

    printf("Email: ");
    scanf("%s", email);

    pointer = strchr(email, '@');
    strcpy(domain, pointer);

    if (strcmp(domain, old_d) == 0) {
        printf("Email address is outdated \n");
    }
    else if (strcmp(domain, new_d) == 0) {
        printf("Email address is okay \n");
    }

    return 0;
}
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$
```

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cd ..
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$ ./2d_output.txt
Email: fahmid@kaaj.com
Email address is outdated
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$ ./2d_output.txt
Email: zaki@sheba.xyz
Email address is okay
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~$
```

Task - 2 (E)

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ cat 2e.c
#include <stdio.h>
#include <string.h>
#include <ctype.h>
int main() {
    char given[100];

    printf("Enter a string: ");
    scanf("%s", given);

    int len = strlen(given);
    char right_s[len];
    int k = 0;

    for (int j = len - 1; j >= 0; j--) {
        right_s[k] = given[j];
        k++;
    }

    if (strcmp(given, right_s) == 0) {
        printf("palindrome\n");
    }
    else {
        printf("not a palindrome.\n");
    }

    return 0;
}
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```

```
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC: ~/lab_a1_1579
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ gcc -o 2e_output.txt 2e.c
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$ ./2e_output.txt
Enter a string: AABBABA
not a palindrome.
ub71103-pc22@ub71103pc22-HP-280-Pro-G8-Microtower-PC:~/lab_a1_1579$
```