

ASSIGNMENT-2

1. Create two C files to print "Hello World!" in two different ways:
 - a. Program containing normal statement terminator → HelloWorld1.c.
 - b. Program without any statement terminator → HelloWorld2.c.

```
sahin@sahin-VirtualBox:~$ cd MCA_ASSIGNMENT2
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ gedit hello.c
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ gcc hello.c -o hello
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ ./hello
hello world
```

```
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ gedit hello1.c
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ gcc hello1.c -o hello1
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ ./hello1
hello world
```

2. Display the contents of the files.

```
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ cat hello.c
#include<stdio.h>
void main(){
    printf("hello world\n");
}

sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ cat hello1.c
#include<stdio.h>
int main(){
    if(printf("hello world\n"))
        return 0;
}
```

3. Concatenate the two files to a third file.

```
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ cat hello.c hello1.c > program.txt
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ ls
hello hello1 hello1.c hello.c program.txt
```

4. Show the above file types.

```
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ file hello.c
hello.c: C source, ASCII text
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ file hello1.c
hello1.c: C source, ASCII text
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ file program.txt
program.txt: C source, ASCII text
```

5. Copy all the files to the home directory in an interactive manner.

```
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ cp -i hello.c hello1.c program.txt ~
sahin@sahin-VirtualBox:~/MCA_ASSIGNMENT2$ cd ~
sahin@sahin-VirtualBox:~$ ls
age.sh          Documents  hello      month.sh      sahu          vowel.sh
as.html         Downloads  hello1     Music         shan
calculator.sh   f3         hello1.c   mydir        tast
circle.sh       file       hello.c    Pictures      Templates
day.sh          file2      MCA2022   program.txt  test1
Desktop         first.html MCA_ASSIGNMENT2 Public        Videos
```

6. Create a copy of the C file in TestA-1.

```
sahin@sahin-VirtualBox:~$ cp hello1.c ~/MCA2022/Sahin_B_53/Unix_File_System/Test
A/TestA-1/
sahin@sahin-VirtualBox:~$ ls MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1
hello1.c
```

7. Copy the file to the home directory in an interactive manner.

```
sahin@sahin-VirtualBox:~$ cd ~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1
/
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ ls
hello1.c
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ cp -
i hello1.c ~
cp: overwrite '/home/sahin/hello1.c'? y
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ cd ~
sahin@sahin-VirtualBox:~$ ls
age.sh          Documents  hello      month.sh      sahu          vowel.sh
as.html         Downloads  hello1     Music         shan
calculator.sh   f3         hello1.c   mydir        tast
circle.sh       file       hello.c    Pictures      Templates
day.sh          file2      MCA2022   program.txt  test1
Desktop         first.html MCA_ASSIGNMENT2 Public        Videos
```

8. Remove the directories TestC & TestC-1.

```
sahin@sahin-VirtualBox:~$ cd ~/MCA2022/Sahin_B_53/Unix_File_System/TestC
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestC$ ls
TestC-1
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestC$ rmdir TestC-
1
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestC$ cd ..
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ rmdir TestC
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ ls
TestA TestB TestB-2-i
```

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9. Delete the file C file from TestA-1.

```
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ cd TestA/TestA-1
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ ls
hello1.c
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ rm h
ello1.c
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ ls
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$
```

10. Rename the text file in the home directory.

```
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System/TestA/TestA-1$ cd ~
sahin@sahin-VirtualBox:~$ ls
age.sh      Documents  hello      month.sh   sahu       vowel.sh
as.html     Downloads  hello1.c   Music      shan
calculator.sh f3         hello1.c   mydir      tast
circle.sh   file       hello.c    Pictures   Templates
day.sh      file2      MCA2022    program.txt test1
Desktop     first.html MCA_ASSIGNMENT2 Public      Videos
```

11. Rename the text file in the home directory.

```
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ gedit calculate.c
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ gcc calculate.c -o calculate
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ ./calculate
```

```
Menu:
1. Addition 2. Subtraction 3. Multiplication 4. Division 5. Modulo 6. Exit
Enter your choice:
1
Enter number1 and number2:
10
12
Addition: 22
```

```
Menu:
1. Addition 2. Subtraction 3. Multiplication 4. Division 5. Modulo 6. Exit
Enter your choice:
5
Enter number1 and number2:
10
5
Modulo: 0
```

```
Menu:
1. Addition 2. Subtraction 3. Multiplication 4. Division 5. Modulo 6. Exit
Enter your choice:
6
-
```

12. Show the C file in the paged manner using more and less commands.

```
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ more calculate.c
#include <stdio.h>
#include <stdlib.h>

int main() {
    int choice, num1, num2;
    while(1) {
        printf("\nMenu:\n1. Addition 2. Subtraction 3. Multiplication 4. Divis
ion 5. Modulo 6. Exit\n");
        printf("Enter your choice:\n");
        scanf("%d", &choice);
        switch(choice) {
            case 1:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Addition: %d\n", num1 + num2);
                break;
            case 2:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Subtraction: %d\n", num1 - num2);
                break;
            case 3:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Addition: %d\n", num1 + num2);
                break;
            case 4:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Subtraction: %d\n", num1 - num2);
                break;
            case 5:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Addition: %d\n", num1 + num2);
                break;
            case 6:
                printf("Enter number1 and number2:\n");
                scanf("%d %d", &num1, &num2);
                printf("Subtraction: %d\n", num1 - num2);
                break;
        }
    }
}
```

13. Count the number of lines, words and characters separately.

```
sahin@sahin-VirtualBox:~/MCA2022/Sahin_B_53/Unix_File_System$ wc calculate.c
 45 124 1471 calculate.c
```

14. Compare the two C files.

```
sahin@sahin-VirtualBox:~$ cmp hello.c hello1.c
hello.c hello1.c differ: byte 19, line 2
sahin@sahin-VirtualBox:~$
```

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15. Find what is common in two C files.

```
sahin@sahin-VirtualBox:~$ comm hello.c hello1.c
      #include<stdio.h>
      int main(){
        if(printf("hello world\n"))
        printf("hello world\n");
        return 0;
```

16. Find the difference in two C files.

```
sahin@sahin-VirtualBox:~$ diff hello.c hello1.c
2,3c2,4
< void main(){
<   printf("hello world\n");
---
> int main(){
>   if(printf("hello world\n"))
>     return 0;
5d5
<
```