

OPERATING SYSTEMS

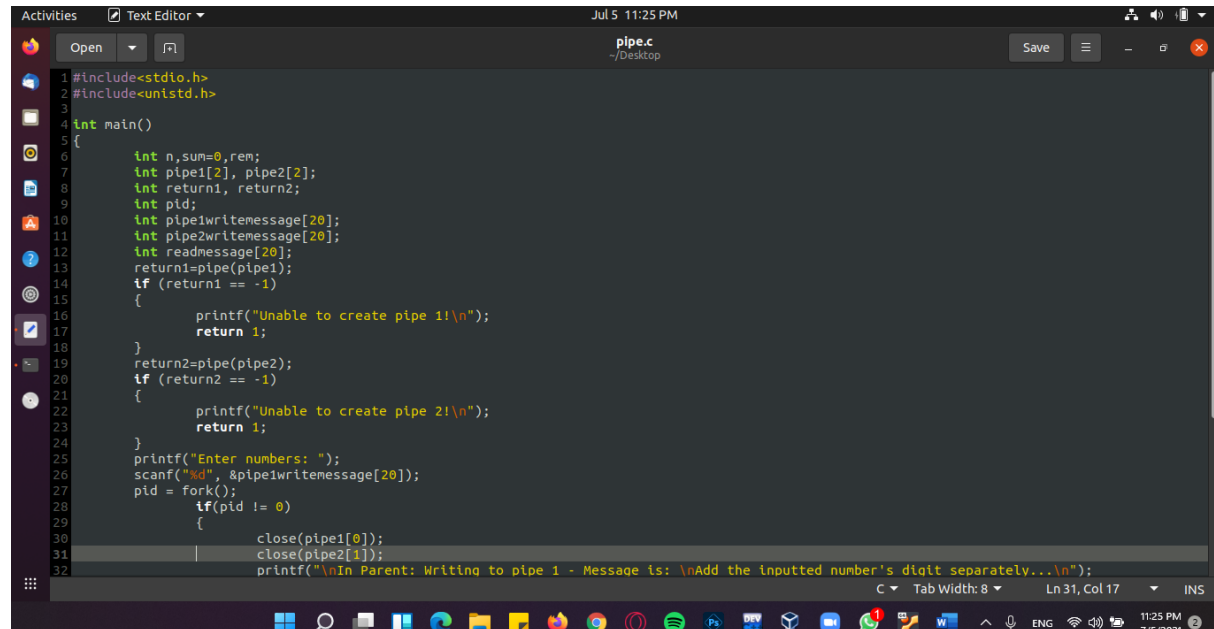
LAB TASK – 09

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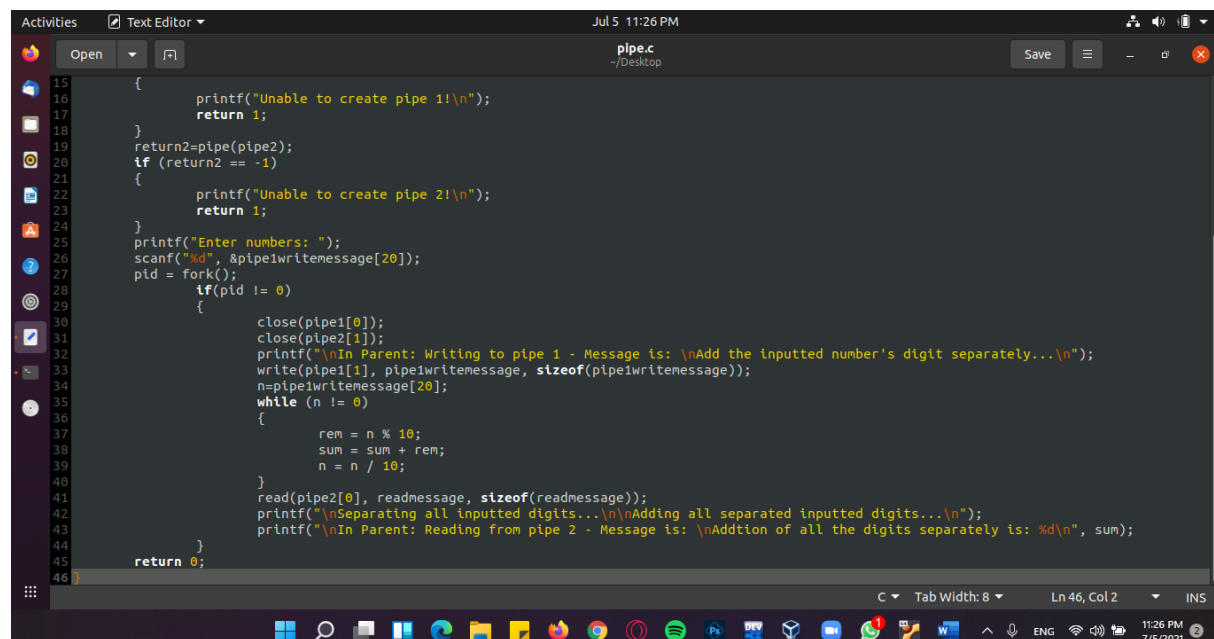
S.ID: 11070

QUESTION – 1

CODE:



```
1 #include<stdio.h>
2 #include<unistd.h>
3
4 int main()
5 {
6     int n,sum=0,rem;
7     int pipe1[2], pipe2[2];
8     return1, return2;
9     int pid;
10    int pipe1writemessage[20];
11    int pipe2writemessage[20];
12    int readmessage[20];
13    return1=pipe(pipe1);
14    if (return1 == -1)
15    {
16        printf("Unable to create pipe 1!\n");
17        return 1;
18    }
19    return2=pipe(pipe2);
20    if (return2 == -1)
21    {
22        printf("Unable to create pipe 2!\n");
23        return 1;
24    }
25    printf("Enter numbers: ");
26    scanf("%d", &pipe1writemessage[20]);
27    pid = fork();
28    if (pid != 0)
29    {
30        close(pipe1[0]);
31        close(pipe2[1]);
32        printf("\nIn Parent: Writing to pipe 1 - Message is: \nAdd the inputted number's digit separately...\n");
```



```
15    {
16        printf("Unable to create pipe 1!\n");
17        return 1;
18    }
19    return2=pipe(pipe2);
20    if (return2 == -1)
21    {
22        printf("Unable to create pipe 2!\n");
23        return 1;
24    }
25    printf("Enter numbers: ");
26    scanf("%d", &pipe1writemessage[20]);
27    pid = fork();
28    if (pid != 0)
29    {
30        close(pipe1[0]);
31        close(pipe2[1]);
32        printf("\nIn Parent: Writing to pipe 1 - Message is: \nAdd the inputted number's digit separately...\n");
33        write(pipe1[1], pipe1writemessage, sizeof(pipe1writemessage));
34        n=pipe1writemessage[20];
35        while (n != 0)
36        {
37            rem = n % 10;
38            sum = sum + rem;
39            n = n / 10;
40        }
41        read(pipe2[0], readmessage, sizeof(readmessage));
42        printf("\nSeparating all inputted digits...\n\nAdding all separated inputted digits...\n");
43        printf("\nIn Parent: Reading from pipe 2 - Message is: \nAddition of all the digits separately is: %d\n", sum);
44    }
45    return 0;
46 }
```

OUTPUT:

```
Activities Terminal Jul 5 11:30 PM
kamisha@kamisha11070-virtualbox: ~/Desktop
kamisha@kamisha11070-virtualbox:~/Desktop$ gcc pipe.c -o pipe
kamisha@kamisha11070-virtualbox:~/Desktop$ ./pipe
Enter numbers: 123
In Parent: Writing to pipe 1 - Message is:
Add the inputted number's digit separately...
Separating all inputted digits...
Adding all separated inputted digits...
In Parent: Reading from pipe 2 - Message is:
Addition of all the digits separately is: 6
kamisha@kamisha11070-virtualbox:~/Desktop$ ./pipe
Enter numbers: 15711
In Parent: Writing to pipe 1 - Message is:
Add the inputted number's digit separately...
Separating all inputted digits...
Adding all separated inputted digits...
In Parent: Reading from pipe 2 - Message is:
Addition of all the digits separately is: 15
kamisha@kamisha11070-virtualbox:~/Desktop$
```