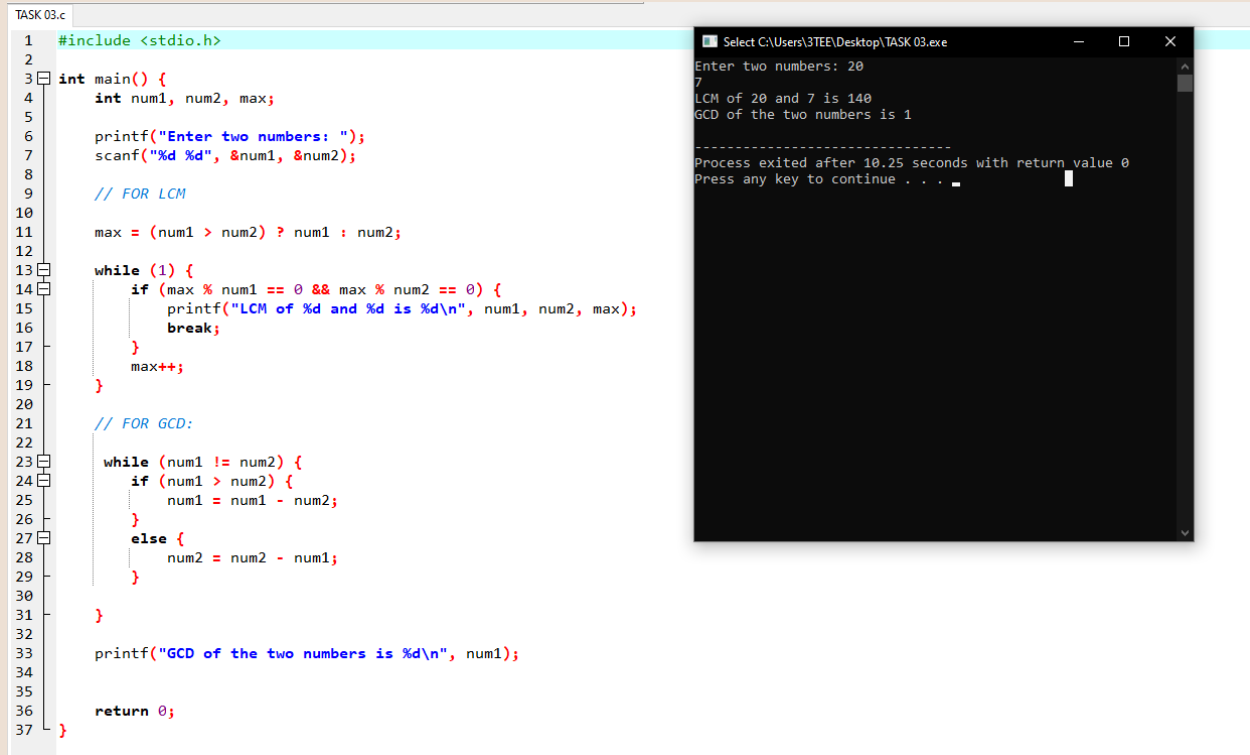


## LAB 06 ASSIGNMENT

### Task 03:



The image shows a C program in a code editor and its execution in a terminal window. The code calculates the Least Common Multiple (LCM) and Greatest Common Divisor (GCD) of two numbers. The terminal output shows the user entering 20 and 7, with the program outputting LCM of 20 and 7 is 140 and GCD of the two numbers is 1.

```
1 #include <stdio.h>
2
3 int main() {
4     int num1, num2, max;
5
6     printf("Enter two numbers: ");
7     scanf("%d %d", &num1, &num2);
8
9     // FOR LCM
10
11     max = (num1 > num2) ? num1 : num2;
12
13     while (1) {
14         if (max % num1 == 0 && max % num2 == 0) {
15             printf("LCM of %d and %d is %d\n", num1, num2, max);
16             break;
17         }
18         max++;
19     }
20
21     // FOR GCD:
22
23     while (num1 != num2) {
24         if (num1 > num2) {
25             num1 = num1 - num2;
26         }
27         else {
28             num2 = num2 - num1;
29         }
30     }
31
32     printf("GCD of the two numbers is %d\n", num1);
33
34     return 0;
35 }
36
37 }
```

```
Enter two numbers: 20
7
LCM of 20 and 7 is 140
GCD of the two numbers is 1

-----
Process exited after 10.25 seconds with return value 0
Press any key to continue . . .
```

## Task 04:

```
1  #include <stdio.h>
2  int main()
3  {
4      int a,b;
5      printf("Enter number a: \n");
6      scanf(" %d",&a);
7      printf("Enter number b: \n");
8      scanf(" %d",&b);
9
10     while(a<=b)
11     {
12         if(a<=9)
13         {
14             switch(a){
15                 case 0:
16                     printf("Zero, ");
17                     break;
18                 case 1:
19                     printf("One, ");
20                     break;
21                 case 2:
22                     printf("Two, ");
23                     break;
24                 case 3:
25                     printf("Three, ");
26                     break;
27                 case 4:
28                     printf("Four, ");
29                     break;
30                 case 5:
31                     printf("Five, ");
32                     break;
33                 case 6:
34                     printf("Six, ");
35                     break;
36                 case 7:
37                     printf("Seven, ");
38                     break;
```

```
C:\Users\3TEE\Desktop\TASK 04.exe
Enter number a:
5
Enter number b:
11
Five, Six, Seven, Eight, Nine, Even, Odd,
-----
Process exited after 3.326 seconds with return value 0
Press any key to continue . . .
```

```
39     case 8:
40         printf("Eight, ");
41         break;
42     case 9:
43         printf("Nine, ");
44         break;
45     default:
46         printf("Negative Value\n");
47     }
48 }
49
50     if(a>9)
51     {
52         if(a%2==0)
53             printf("Even, ");
54         else printf("Odd, ");
55     }
56
57     a++;
58
59 }
60 return 0;
61 }
```

## TASK 05:

The screenshot shows a C program in a code editor and its execution output in a terminal window.

**Code (TASK 05.c):**

```

1  #include <stdio.h>
2  int main() {
3
4      int i = 0;
5      for(i=0;i<7;i++)
6      {
7          if(i%2==0)
8          {
9              printf("%d\t%d\t%d\t%d",i,i,i,i);
10             }
11             else
12             printf("\t%d\t%d",i,i);
13             printf("\n",i);
14         }
15     }
16     return 0;
17 }

```

**Output (TASK 05.exe):**

```

0      0      0      0
1      1      1      1
2      2      2      2
3      3      3      3
4      4      4      4
5      5      5      5
6      6      6      6
-----
Process exited after 0.02507 seconds with return value 0
Press any key to continue . . .

```

## TASK 06:

The screenshot shows a C program in a code editor and its execution output in a terminal window.

**Code (TASK 06.c):**

```

3  int main () {
4
5      int total = 21, comp;
6
7      printf("Total matches: %d", total);
8
9      while(total >= 0) {
10         int choice;
11         if (total==1) {
12             printf("Oops! You lost!");
13             break;
14         }
15
16         printf("\nPick 1, 2, 3, or 4 sticks: ", choice);
17         scanf("%d", &choice);
18         if (choice>4 || choice<1) {
19             printf("Invalid choice!");
20             return 1;
21             break; }
22
23         total -= choice;
24         printf("\nMatches left: %d", total);
25
26         if (total == 5 || total == 10 || total == 15)
27             comp = 4;
28         else if (total == 4 || total == 9 || total == 14)
29             comp = 3;
30         else if (total == 3 || total == 8 || total == 13)
31             comp = 2;
32         else
33             comp = 1;
34
35         printf("\nComputer picked: %d matches",comp);
36         total -= comp;
37         printf("\nMatches left: %d\n", total);
38     }
39
40     return 0;
41 }

```

**Output (TASK 06.exe):**

```

Total matches: 21
Pick 1, 2, 3, or 4 sticks: 3
Matches left: 18
Computer picked: 1 matches
Matches left: 17

Pick 1, 2, 3, or 4 sticks: 2
Matches left: 15
Computer picked: 4 matches
Matches left: 11

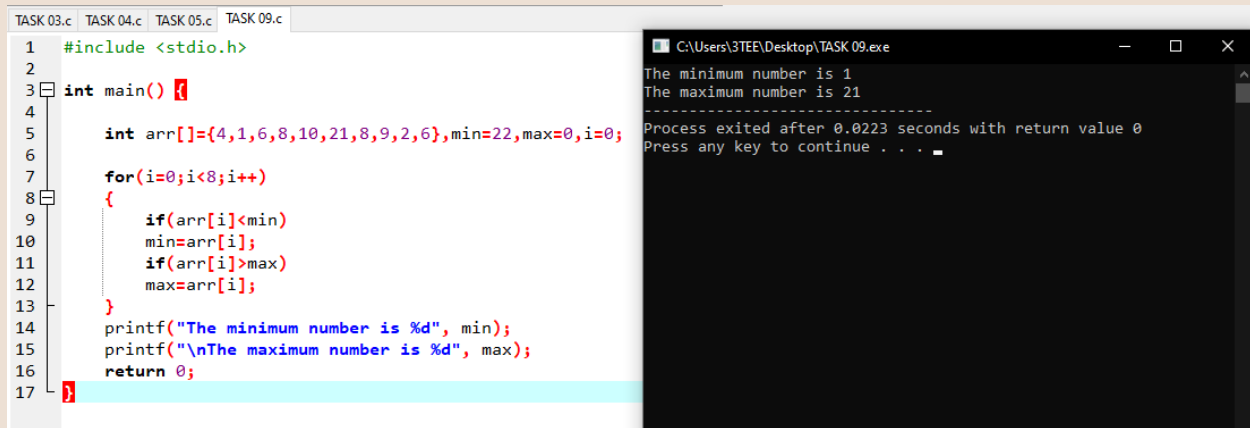
Pick 1, 2, 3, or 4 sticks: 1
Matches left: 10
Computer picked: 4 matches
Matches left: 6

Pick 1, 2, 3, or 4 sticks: 3
Matches left: 3
Computer picked: 2 matches
Matches left: 1

Oops! You lost!
-----
Process exited after 5.644 seconds with return value 0
Press any key to continue . . .

```

## TASK 09:



The image shows a C program in a code editor and its execution output in a terminal window. The code is a simple program to find the minimum and maximum values in an array. The array contains the numbers {4, 1, 6, 8, 10, 21, 8, 9, 2, 6}. The program initializes min to 22 and max to 0, then iterates through the array to find the actual min and max. The output shows the minimum number is 1 and the maximum number is 21.

```
1 #include <stdio.h>
2
3 int main() {
4
5     int arr[]={4,1,6,8,10,21,8,9,2,6},min=22,max=0,i=0;
6
7     for(i=0;i<8;i++)
8     {
9         if(arr[i]<min)
10            min=arr[i];
11        if(arr[i]>max)
12            max=arr[i];
13    }
14    printf("The minimum number is %d", min);
15    printf("\nThe maximum number is %d", max);
16    return 0;
17 }
```

C:\Users\3TEE\Desktop\TASK 09.exe

The minimum number is 1  
The maximum number is 21  
-----  
Process exited after 0.0223 seconds with return value 0  
Press any key to continue . . .