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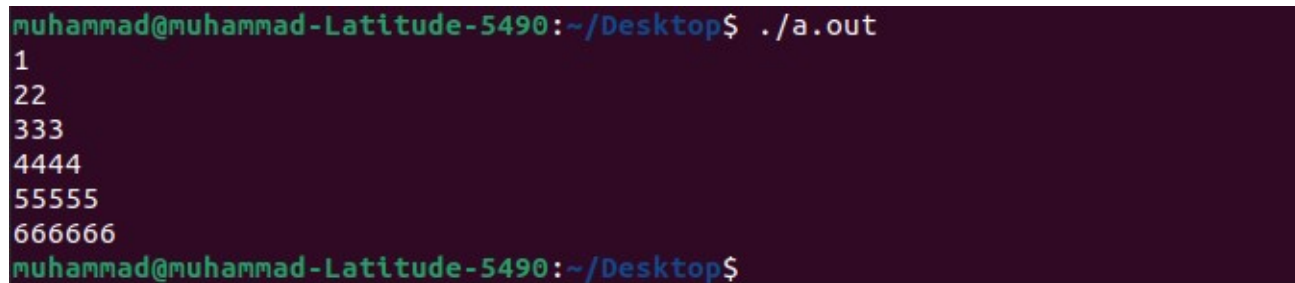# LAB TASK

Task1:

Code:

```
#include<stdio.h>

// program to print pattern
int main()
{

{
  for (int i=1; i<=6; i++)//outer loop
  {
    for (int j=1; j<=i; j++)//inner loop
    {
     printf("%d",i-1+1);// decrement or incrementiing
     }
    printf("\n");// move to next line
    }

    }
    }
```

Output:

.

Task 4:

Code:

```c
#include<stdio.h>

int table (int num); // Function to calculate table of any number

int main()
{
 int num, multiply;// initializing

 printf("Enter number:");//prompt user
 scanf("%d",&num);

 table (num); //function calling

 }

int table (int num) //function definition
{
 int multiply;

 for (int i=1; i<=10; i++)// iterates through 1 - 10 to print table
 {
  multiply = num*i; // multiply by each i
  printf("%d * %d =%d\n",num,i,multiply); //print
  }
   }
```

Output:

•

```
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
Enter number:5
5 * 1 =5
5 * 2 =10
5 * 3 =15
5 * 4 =20
5 * 5 =25
5 * 6 =30
5 * 7 =35
5 * 8 =40
5 * 9 =45
5 * 10 =50
muhammad@muhammad-Latitude-5490:~/Desktop$
```

Task 3:

code:

```c
#include<stdio.h>
 int calculate_GCD(); // Function to calculate Greatest Common Divisor
int main()
{
int i,j;


calculate_GCD(); //Function Calling


}

int calculate_GCD() // Function Definition
{

   for (int i=1; i<8; i++) // Iterates through loopm upto 8
   {
    if (8%i ==0)
    {
     printf ("%d,",i);

     }
     }
   for (int j=1; j<12; j++) // Iterates through loopm upto 12
   {
     if (12 % j ==0)
     {
       printf ("%d,",j);

     }
      printf("\n");

     }

     printf("Greatest Common divisor is  %d",4);


     }
```

Output:

```
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
1,2,4,1,
2,
3,
4,

6,



Greatest Common divisor is  4muhammad@muhammad-Latitude-5490:~/Desktop$
```

Task 2:

Code:

```c
#include<stdio.h>

int main ()
{

int m,n, count =0;
  printf("Enter m:");
  scanf("%d",&m);
  printf("Enter n:");
  scanf("%d",&n);

  for (int i=1 ;i<=m; i++)
  {
   for (int j=m; j<=n; j++)
   {
    if (m%i==0 && n%i==0)
    {
      count ++;
      }

    if (count==0)
    {


      }



  }
  printf("%d",n);
  }
  }
```