

**NATIONAL UNIVERSITY**  
**of Computer & Emerging Sciences**

Course: CL1002 – Programming Fundamentals Lab.

Instructor: Sir Muhammad Usman

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Roll no. 22P-9106

Class: BS-BSE-1A (Fall 2022)

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Department of Computer Science

## Exercise 01

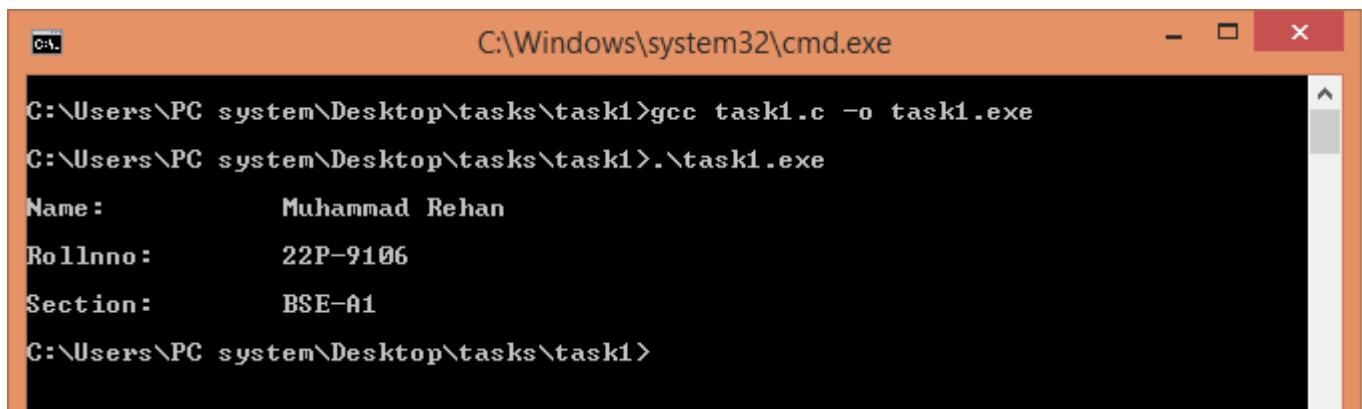
Problem 01: Write a C program to print your name, roll no and section in separate lines.

Code:

```
#include <stdio.h>

int main()
{
    printf("\nName:\t\tMuhammad Rehan\n\nRollno:\t22P-9106\n\nSection:\tBSE-A1\n");
    return 0;
}
```

Screenshot:



```
C:\Windows\system32\cmd.exe
C:\Users\PC\system\Desktop\tasks\task1>gcc task1.c -o task1.exe
C:\Users\PC\system\Desktop\tasks\task1>.\task1.exe
Name:      Muhammad Rehan
Rollno:    22P-9106
Section:    BSE-A1
C:\Users\PC\system\Desktop\tasks\task1>
```

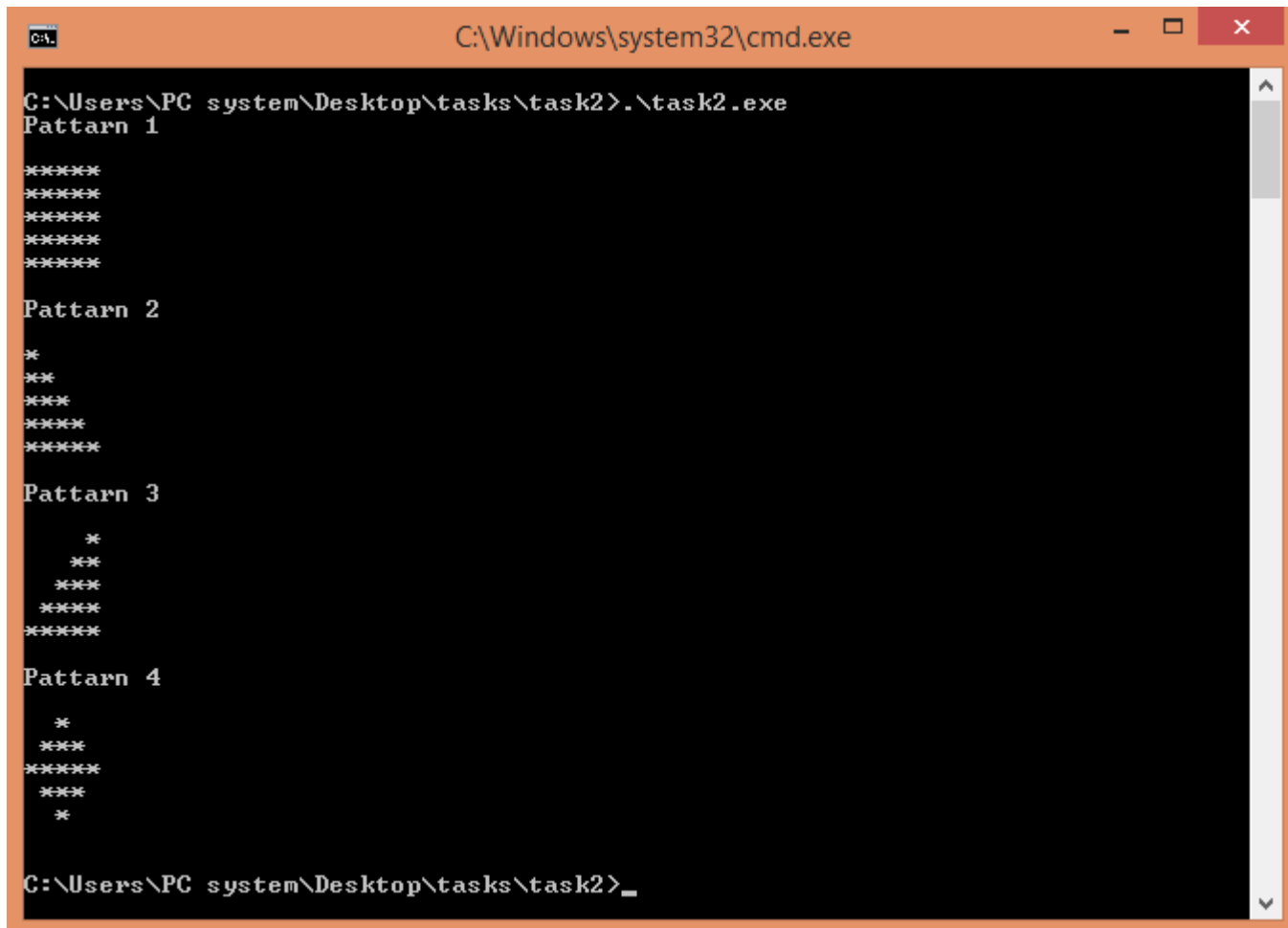
Problem 02: Write a program that prints the following patterns using printf statement.

Code:

```
#include <stdio.h>

int main()
{
    printf("Pattern 1\n\n*****\n*****\n*****\n*****\n*****\n\n");
    printf("Pattern 2\n\n*\n**\n***\n****\n*****\n\n");
    printf("Pattern 3\n\n *\n  **\n ***\n  ****\n *****\n\n");
    printf("Pattern 4\n\n * \n *** \n *****\n *** \n * \n\n");
    return 0; }
}
```

## Screenshot:



```
C:\Windows\system32\cmd.exe

C:\Users\PC system\Desktop\tasks\task2>.\task2.exe
Pattern 1

*****
*****
*****
*****
*****

Pattern 2

*
**
***
****
*****

Pattern 3

  *
 **
 ***
 ****
 *****

Pattern 4

 *
***
*****
***
 *
```

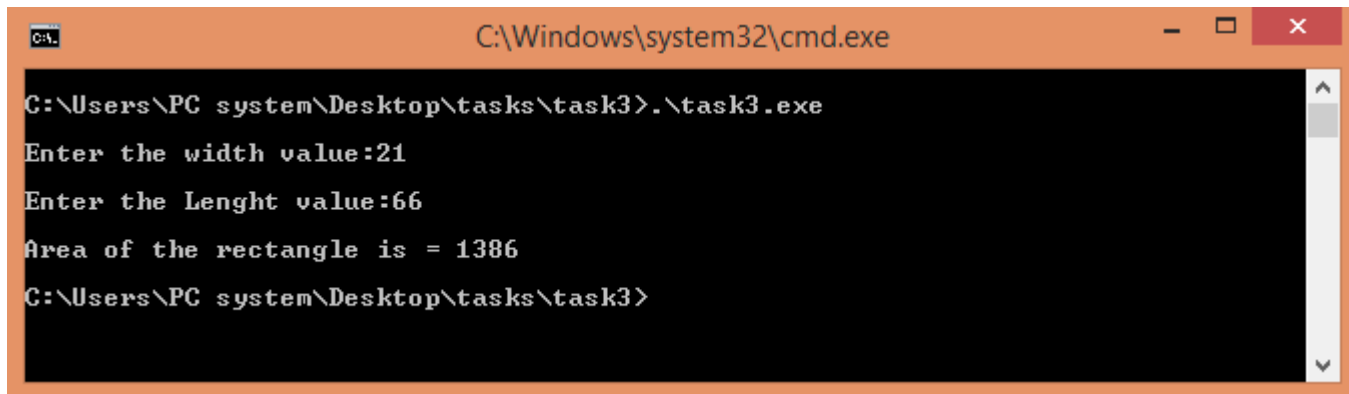
Problem 03: Write a program that calculates the area of a rectangle and print the result on screen.

Code:

```
#include <stdio.h>

int main()
{
    int W;
    int L;
    printf("\nEnter the width value:");
    scanf("%d",&W);
    printf("\nEnter the Lenght value:");
    scanf("%d",&L);
    int area= W*L;
    printf("\nArea of the rectangle is = %d\n",area);    return 0; }
```

Screenshot:

A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\system32\cmd.exe'. The command prompt shows the following text:

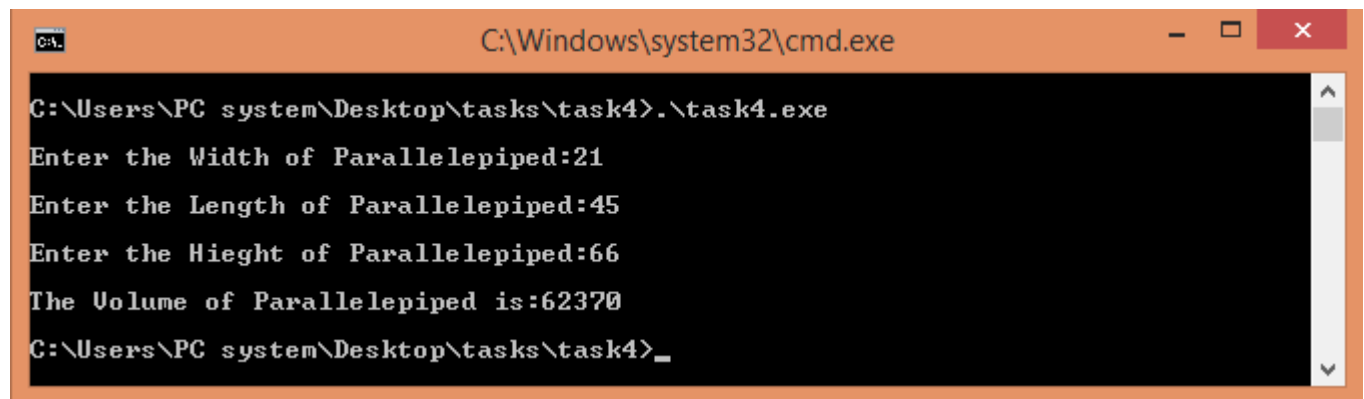
```
C:\Users\PC system\Desktop\tasks\task3>.\task3.exe
Enter the width value:21
Enter the Lenght value:66
Area of the rectangle is = 1386
C:\Users\PC system\Desktop\tasks\task3>
```

Problem 04: Write a program that takes the length, width and height of a parallelepiped from user and finds its volume.

Code:

```
#include <stdio.h>
int main()
{
    int Width;
    int Length;
    int Hieght;
    printf("\nEnter the Width of Parallelepiped:");
    scanf("%d",&Width);
    printf("\nEnter the Length of Parallelepiped:");
    scanf("%d",&Length);
    printf("\nEnter the Hieght of Parallelepiped:");
    scanf("%d",&Hieght);
    int volume = Width*Length*Hieght;
    printf("\nThe Volume of Parallelepiped is:%d\n",volume);
    return 0; }
```

Screenshot:



```
C:\Windows\system32\cmd.exe

C:\Users\PC system\Desktop\tasks\task4>.\task4.exe
Enter the Width of Parallelepiped:21
Enter the Length of Parallelepiped:45
Enter the Hieght of Parallelepiped:66
The Volume of Parallelepiped is:62370
C:\Users\PC system\Desktop\tasks\task4>_
```

The screenshot shows a Windows command prompt window with an orange title bar. The title bar text is "C:\Windows\system32\cmd.exe". The window contains the following text: "C:\Users\PC system\Desktop\tasks\task4>.\task4.exe", "Enter the Width of Parallelepiped:21", "Enter the Length of Parallelepiped:45", "Enter the Hieght of Parallelepiped:66", "The Volume of Parallelepiped is:62370", and "C:\Users\PC system\Desktop\tasks\task4>\_". A vertical scrollbar is visible on the right side of the command prompt area.