



JAIN
DEEMED-TO-BE UNIVERSITY

Programming in C
Lab File

Experiments No.: 24 to 28

Subject Code: 16BCA1C05L
Class: I Year I Semester (BCA)

Prepared By
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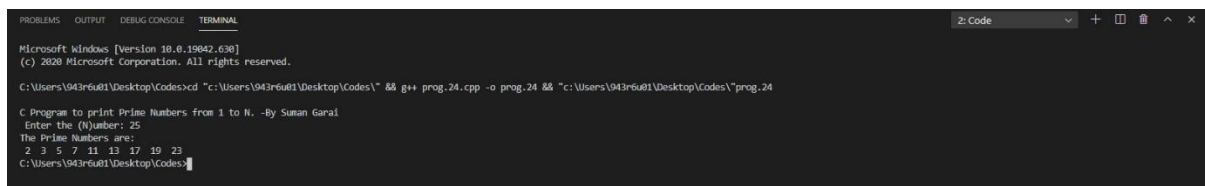
Experiment 24:

C Program to print Prime Numbers from 1 to N.

Code:

```
#include<stdio.h>
main()
{
    int n,i,flag,j;
    printf("\nC Program to print Prime Numbers from 1
    to N. -By Suman Garai");
    printf("\n Enter the (N)umber: ");
    scanf("%d",&n);
    printf("The Prime Numbers are: \n");
    for(i=1; i<=n; i++)
    {
        flag=0;
        for(j=1; j<=n; j++)
        {
            if(i%j==0)
                flag++;
        }
        if(flag==2)
            printf(" %d ",i);
    }
}
```

Output:



The screenshot shows a Windows terminal window with the following content:

```
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943r6u01\Desktop\Codes>cd "c:\Users\943r6u01\Desktop\Codes\" && g++ prog.24.cpp -o prog.24 && "c:\Users\943r6u01\Desktop\Codes\"prog.24

C Program to print Prime Numbers from 1 to N. -By Suman Garai
Enter the (N)umber: 25
The Prime Numbers are:
2 3 5 7 11 13 17 19 23
C:\Users\943r6u01\Desktop\Codes>
```

Experiment 25a:

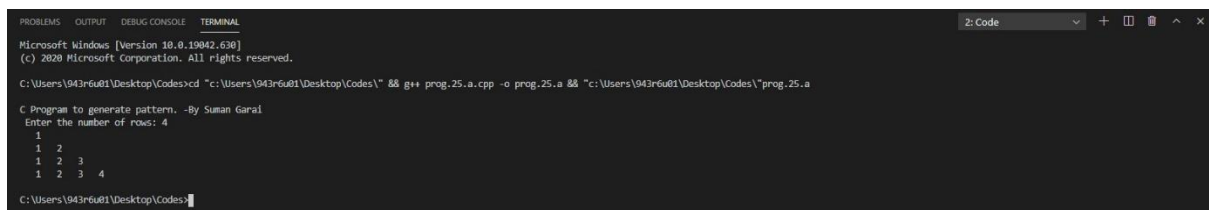
C Program to generate pattern: -

```
1
1 2
1 2 3
1 2 3 4
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%4d", j);
        } printf("\n");
    }
}
```

Output:



The screenshot shows a Windows Command Prompt window with the following text:

```
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943r6u01\Desktop\Codes>cd "c:\Users\943r6u01\Desktop\Codes\" && g++ prog.25.a.cpp -o prog.25.a && "c:\Users\943r6u01\Desktop\Codes\"prog.25.a

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
1
1 2
1 2 3
1 2 3 4

C:\Users\943r6u01\Desktop\Codes>
```

Experiment 25b:

C Program to generate pattern: -

```
1
2   2
3   3   3
4   4   4   4   4
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%4d", i);
        } printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943r6u81\Desktop\Codes>cd "c:\Users\943r6u81\Desktop\Codes\" && g++ prog.25.b.cpp -o prog.25.b && "c:\Users\943r6u81\Desktop\Codes\"prog.25.b

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
1
2   2
3   3   3
4   4   4   4

C:\Users\943r6u81\Desktop\Codes>
```

Experiment 26a:

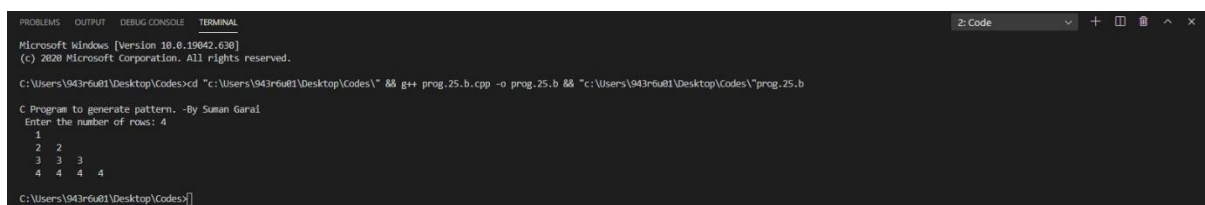
C Program to generate pattern: -

```
4   3   2   1
3   2   1
2   1
1
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=rows; i>=1; i--)
    {
        for (j=i; j>=1; j--)
        {
            printf("%4d", j);
        } printf("\n");
    }
}
```

Output:



The screenshot shows a Windows Command Prompt window with the following text:

```
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943rou01\Desktop\Codes>cd "C:\Users\943rou01\Desktop\Codes\" && g++ prog.25.b.cpp -o prog.25.b && "C:\Users\943rou01\Desktop\Codes\"prog.25.b

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
1
2 2
3 3 3
4 4 4 4

C:\Users\943rou01\Desktop\Codes>
```

Experiment 26b:

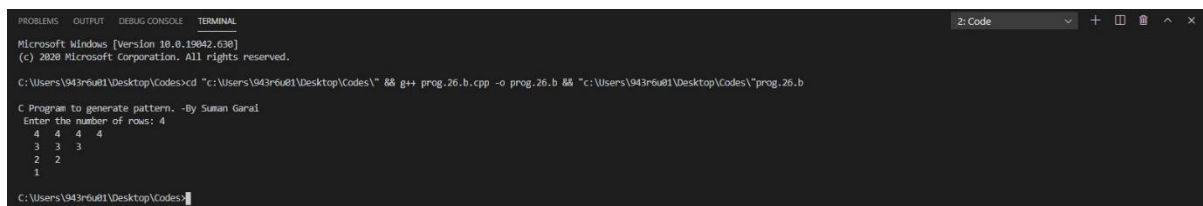
C Program to generate pattern: -

```
4      4      4      4
3      3      3
2      2
1
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=rows; i>=1; i--)
    {
        for (j=i; j>=1; j--)
        {
            printf("%4d", i);
        } printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943rou01\Desktop\Codes>cd "c:\Users\943rou01\Desktop\Codes\" && g++ prog.26.b.cpp -o prog.26.b && "c:\Users\943rou01\Desktop\Codes\"prog.26.b

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
  4  4  4  4
  3  3  3
  2  2
  1

C:\Users\943rou01\Desktop\Codes>
```

Experiment 27a:

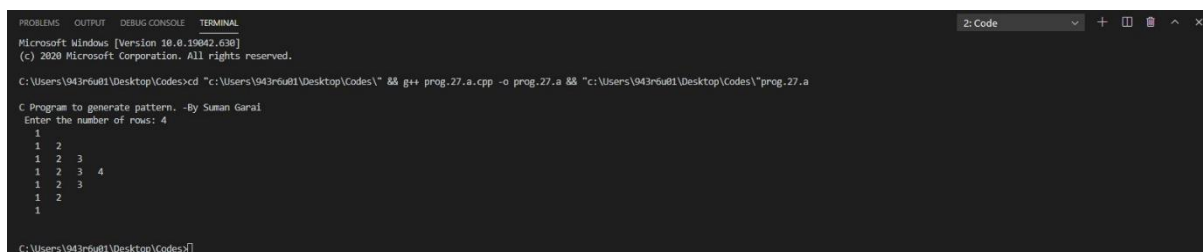
C Program to generate pattern: -

```
1
1 2
1 2 3
1 2 3 4
1 2 3
1 2
1
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%4d", j);
        } printf("\n");
    }
    for (i=rows; i>=1; i--)
    {
        for (j=1; j<i; j++)
        {
            printf("%4d", j);
        } printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
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C:\Users\943r6u81\Desktop\Codes>cd "c:\Users\943r6u81\Desktop\Codes\" && g++ prog.27.a.cpp -o prog.27.a && "c:\Users\943r6u81\Desktop\Codes\"prog.27.a

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
1
1 2
1 2 3
1 2 3 4
1 2 3
1 2
1

C:\Users\943r6u81\Desktop\Codes>
```

Experiment 27b:

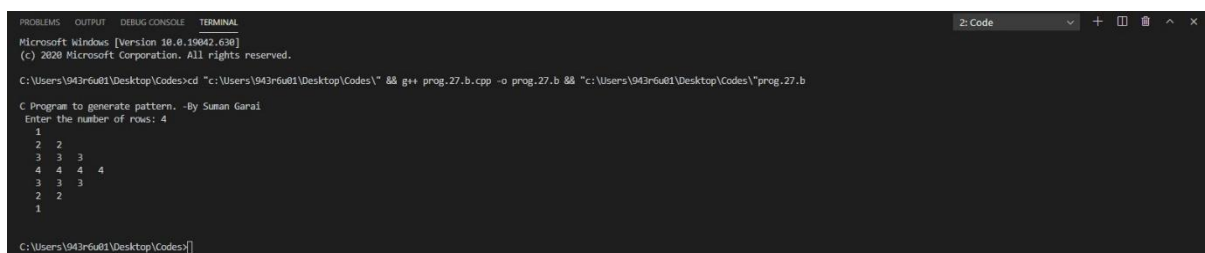
C Program to generate pattern: -

```
1
2   2
3   3   3
4   4   4   4
3   3   3
2   2   2
1
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%4d", i);
        } printf("\n");
    }
    for (i=rows; i>=1; i--)
    {
        for (j=1; j<i; j++)
        {
            printf("%4d", i-1);
        } printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943r6u01\Desktop\Codes>cd "c:\Users\943r6u01\Desktop\Codes\" && g++ prog-27.b.cpp -o prog-27.b && "c:\Users\943r6u01\Desktop\Codes\"prog-27.b

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
1
2 2
3 3 3
4 4 4 4
3 3 3
2 2
1

C:\Users\943r6u01\Desktop\Codes>
```


Experiment 28a:

C Program to generate pattern: -

1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows, n = 1;
    printf("\nC Program to generate pattern. -By Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=rows; j++)
        {
            printf("%4d", n); n++;
        } n -= (rows - 1); printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\943r6u01\Desktop\Codes>cd "c:\Users\943r6u01\Desktop\Codes\" && g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile && "c:\Users\943r6u01\Desktop\Codes\tempCodeRunnerFile

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
 1  2  3  4
 2  3  4  5
 3  4  5  6
 4  5  6  7

C:\Users\943r6u01\Desktop\Codes>
```

Experiment 28b:

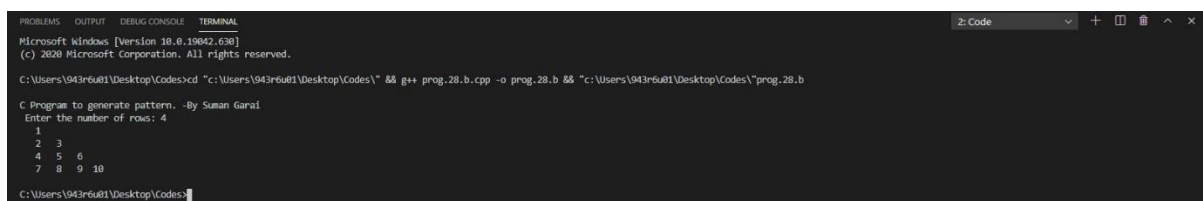
C Program to generate pattern: -

```
1
2  3
4  5  6
7  8  9  10
```

Code:

```
#include <stdio.h>
main ()
{
    int i, j, rows, n = 1;
    printf("\nC Program to generate pattern. -By
Suman Garai");
    printf("\n Enter the number of rows: ");
    scanf("%d", &rows);
    for (i=1; i<=rows; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%4d", n); n++;
        } printf("\n");
    }
}
```

Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.630]
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C:\Users\943r6u01\Desktop\Codes>cd "c:\Users\943r6u01\Desktop\Codes\" && g++ prog.28.b.cpp -o prog.28.b && "c:\Users\943r6u01\Desktop\Codes\"prog.28.b

C Program to generate pattern. -By Suman Garai
Enter the number of rows: 4
 1
2  3
4  5  6
7  8  9  10

C:\Users\943r6u01\Desktop\Codes>
```

-- THE END --