Logic Building

Assignment Part 7

Problems on Pattern Printing

Logic Building Assignment 7

While writing the program follow some instructions as:-

- First write algorithm for given problem statement.
- Write appropriate function name using camel case. Ex. MaxTwoNumber( )
- Write proper name for variables. Ex. int iNumber= 0; float fValue= 0.0;
- Use proper indentations.
- Use proper comments for important statements.
- Remove all warnings after compilation.
- Reuse the variables if possible.
- Write header for every function which contains
    - Function name
    - Input parameters
    - Output value
    - Description of function
- After writing the program write input and expected output.
- Use proper loop checking conditions to avoid segmentation faults.
- After writing function check it for all scenarios.
- For each and every problem statement write separate main and separate function.
- Do not use any hard coded value in program while printing the pattern

Logic Building Assignment 7

Demo Program :

```
////////////////////////////////////////////////////////////////////////////////////
//
//      Write a program which display following pattern
//
//      *
//      *       *
//      *       *       *
//      *       *       *       *
//      *       *       *       *       *
//
////////////////////////////////////////////////////////////////////////////////////


// Algoritham
//
// START
//
// Accept number of rows as RowNo
//
// Counter1 := 1
// Counter2 := 1
//
// while (Counter1 != RowNo)
//      while(Counter2 != Counter1)
//              print '*'
//              increment Counter2
//      continue
//      print new line
// continue
//
// STOP
```

Logic Building Assignment 7

```
//////////////////////////////////////////////////////////////////////////////////////
//
//      Function Name           :       PatternDisplay1
//      Parameters              :
//                                      [IN]int no.
//                                      Holds the entry which is to be added.
//
//      Description             :       This function displays perticular pattern.
//
//      Returns                 :       void
//
//////////////////////////////////////////////////////////////////////////////////////

void
PatternDisplay1 (
                        int iNo
                )
{
        int iRow, iCol;

        // Loop used to traverse rows in pattern
        for(iRow = 1; iRow < iNo; iRow++)
        {
                // Loop used to traverse columns in pattern
                for(iCol = 1; iCol <= iRow; iCol++)
                {
                        printf(" * ");
                }
                Printf("\n");
        }
}

int main()
{
        int iNo=0;

        printf("Enter number of rows that we want to print\n");
        scanf("%d",&iNo);

        PatternDisplay1(iNo);

        return 0;
}
```

Logic Building Assignment 7

Write the programs to print following patterns

1. Accept number of elements to be print from user and print following pattern

   * * * * * *

2. Accept number of elements to be print from user and print following pattern

   1 1 1 1 1 1

3. Accept number of elements to be print from user and print following pattern

   1 2 3 4 5 6

4. Accept number of elements to be print from user and print following pattern

   1 3 5 7 9 10

5. Accept number of elements to be print from user and print following pattern

   a a a a a a

6. Accept number of elements to be print from user and print following pattern

   A A A A A A

7. Accept number of elements to be print from user and print following pattern

   a b c d e f

8. Accept number of elements to be print from user and print following pattern

   a c e g i k

9. Accept number of elements to be print from user and print following pattern

   A B C D E F

10. Accept number of rows from user and print following pattern

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

Logic Building Assignment 7

11.Accept number of rows from user and print following pattern

```
a   a   a   a
a   a   a   a
a   a   a   a
a   a   a   a
```

12.Accept number of rows from user and print following pattern

```
a   b   c   d
a   b   c   d
a   b   c   d
a   b   c   d
```

13.Accept number of rows from user and print following pattern

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

14.Accept number of rows from user and print following pattern

```
1   2   3   4
5   0   0   6
7   0   0   8
9   10  11  12
```

15.Accept number of rows from user and print following pattern

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

16.Accept number of rows from user and print following pattern

```
*
*   *
*   -   *
*   -   -   *
*   -   -   -   *
```

Logic Building Assignment 7

17. Accept number of rows from user and print following pattern. (- is blank space)

```
*   *   *   *   *
*   -   -   -   *
*   -   -   -   *
*   -   -   -   *
*   *   *   *   *
```

18. Accept number of rows from user and print following pattern. (- is blank space)

```
*   *   *   *   *
*   *   -   -   *
*   -   *   -   *
*   -   -   *   *
*   *   *   *   *
```

19. Accept number of rows from user and print following pattern. (- is blank space)

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

Logic Building Assignment 7

20.Accept number of rows from user and print following pattern.

```
*    *    *    *    *

     *    *    *    *

          *    *    *

               *    *

                    *
```

21.Accept number of rows from user and print following pattern

```
1
1    2
1    2    3
1    2    3    4
1    2    3    4    5
```

22.Accept number of rows from user and print following pattern

```
1
1    2
1    2    3
1    2    3    4
1    2    3    4    5
1    2    3    4
1    2    3
1    2
1
```

23.Accept number of rows from user and print following pattern

```
1
0    0
1    2    3
0    0    0    0
1    2    3    4    5
```

24.Accept number of rows from user and print following pattern

```
1
1    0
1    0    3
1    0    3    0
1    0    3    0    5
```

Logic Building Assignment 7

25.Accept number of rows from user and print following pattern

```
1
1   2
1   0   3
1   0   0   4
1   0   0   0   5
```

26.Accept number of rows from user and print following pattern

```
1
1   1
1   0   1
1   0   0   1
1   0   0   0   1
```

27.Accept number of rows from user and print following pattern

```
1
2   2
3   3   3
4   4   4   4
5   5   5   5   5
```

28.Accept number of rows from user and print following pattern

```
1
1   2
1   2   3
1   2   3   4
1   2   3   4   5
```

29.Accept number of rows from user and print following pattern

```
1
2   3
4   5   6
7   8   9   10
11  12  13  14  15
```

30.Accept number of rows from user and print following pattern

```
1
4   9
16  25  36
```

Logic Building Assignment 7

31.Accept number of rows from user and print following pattern

```
1
4   9
7   7   9
13  10  9   1
```

32.Accept number of rows from user and print following pattern

```
10
20  21
30  31  32
40  41  42  43
50  51  52  53  54
```

33.Accept number of rows from user and print following pattern

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

34.Accept number of rows from user and print following pattern

```
1
1   1
1   0   1
1   0   0   1
1   0   0   0   1
1   1   1   1   1   1
```

35.Accept number of rows from user and print following pattern

```
                    1
                1   1   1
            1   0   1   0   1
        1   0   0   1   0   0   1
    1   0   0   0   1   0   0   0   1
1   1   1   1   1   1   1   1   1   1   1
```

Logic Building Assignment 7

36.Accept number of rows from user and print following pattern

```
0
1   1
2   3   5
8   13  21  34
```

37.Accept number of rows from user and print following pattern

```
1
1   1
1   2   3
1   2   3   6
1   2   3   4   10
```

38.Accept number of rows from user and print following pattern

```
1
1   2
1   2   3
1   2   3   4
4   6   6   4   0
```

39.Accept string from user and print in following format.

Input string : PIYUSH

Output :

```
P
P   I
P   I   Y
P   I   Y   U
P   I   Y   U   S
P   I   Y   U   S   H
```

40.Accept string from user and print in following format.

Input string : PIYUSH

Output :

```
P   I   Y   U   S   H
P   I   Y   U   S
P   I   Y   U
P   I   Y
P   I
P
```

Logic Building Assignment 7

41.Accept string from user and print in following format.

Input string : PIYUSH

```
P  i  Y  u  S  h
P  i  Y  u  S
P  i  Y  u
P  i  Y
P  i
P
```

42.Accept string from user and print in following format.

Input string : UNIX WIN32 SDK

```
U
U  N
U  N  I
U  N  I  X
W
W  I
W  I  N
W  I  N  3
W  I  N  3  2
S
S  D
S  D  K
```

43.Accept string from user and print in following format.

Input string : UNIX WIN32 SDK

```
U
U  N
U  N  I
U  N  I  X
            W
            W  I
            W  I  N
            W  I  N  3
            W  I  N  3  2
                        S
                        S  D
                        S  D  K
```