Pattern Printing in C

Output :

```
 *  *  *  *  *
 *  *  *  *  *
 *  *  *  *  *
 *  *  *  *  *
 *  *  *  *  *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 1

#include <stdio.h>
#include <conio.h>
void main()
{
     int i,j;
     clrscr();
     for(i=0; i<5; i++)
     {
          for(j=0; j<5; j++)
          {
               printf(" * ");
          }
          printf("\n");
     }
     getch();
}
```

Output :

```
 *
 *  *
 *  *  *
 *  *  *  *
 *  *  *  *  *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 2

#include <stdio.h>
#include <conio.h>
void main()
{
     int i,j;
     clrscr();
     for(i=0; i<5; i++)
     {
          for(j=0; j<=i; j++)
```

```
                {
                        printf(" * ");
                }
                printf("\n");
        }
        getch();
}
```

Output :

```
        *
       * *
      * * *
     * * * *
    * * * * *_
```

Program :

```
/*  Program to print pyramid pattern in C : Pattern 3

#include <stdio.h>
#include <conio.h>
void main()
{
        int i,j,k;
        clrscr();
        for(i=1; i<=5; i++)
        {
                for(j=5; j>=i; j--)
                {
                        printf(" ");
                }
                for(k=1; k<=i; k++)
                {
                        printf("*");
                }
                printf("\n");
        }
        getch();
}
```

Output :

```
  * * * * *
    * * * *
     * * *
      * *
       *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 4

#include <stdio.h>
#include <conio.h>
void main()
{
        int i,j,k,samp=1;
        clrscr();
        for(i=5; i>=1; i--)
        {
                for(k=samp; k>=0; k--)
                {
                        printf(" "); // only 1 space
                }
                for(j=i; j>=1; j--)
                {
                        printf("*");
                }
                samp = samp + 1;
                printf("\n");
        }
        getch();
}
```

or

```c
#include <stdio.h>
#include <conio.h>
void main()
{
        int i,j,k;
        clrscr();
        for(i=1; i<=5; i++)
        {
                for(j=5; j>=i; j--)
                {
                        printf("*");
                }
                for(k=1; k<=i; k++)
                {
                        printf(" ");
                }
                printf("\n");
        }
        getch();
}
```

Output :

```
 * * * * *
 * * * *
 * * *
 * *
 *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 5


#include <stdio.h>
#include <conio.h>
void main()
{
      int i,j;
      clrscr();
      for(i=5; i>=1; i--)
      {
            for(j=1; j<=i; j++)
            {
                  printf(" * ");
            }
            printf("\n");
      }
      getch();
}
```

Output :

```
    *
   * *
  * * *
 * * * *
* * * * *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 6


#include <stdio.h>
#include <conio.h>
void main()
{
      int i,j,k,t=0;
      clrscr();
      for(i=1; i<=5; i++)
      {
            for(k=t; k<5; k++)
            {
                  printf(" ");
            }
            for(j=0; j< i; j++)
            {
                  printf(" * ");
                  t = t + 1;
            }
            printf("\n");
      }
      getch();
```

```
}
```

Output :

```
        *
       * *
      * * *
     * * * *
    * * * * *
     * * * *
      * * *
       * *
        *_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 7

Creation Date : 01:13 AM 22/11/2010

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
      int i,j,k,samp=1;
      clrscr();
      for(i=1; i<=5; i++)
      {
            for(k=samp; k<=5; k++)
            {
                  printf(" ");
            }
            for(j=0; j< i; j++)
            {
                  printf("*");
            }
            samp = samp + 1;
            printf("\n");
      }
      samp = 1;
      for(i=4; i>=1; i--)
      {
            for(k=samp; k>=0; k--)
            {
                  printf(" ");
            }
            for(j=i; j>=1; j--)
            {
                        printf("*");
            }
            samp = samp + 1;
            printf("\n");
      }
      getch();
```

```
}
```

Output :

```
Enter number of rows: 5

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

Program :

```
/*  Program to print pyramid pattern in C : Pattern 8

Creation Date : 02:39 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
        int rw, c, no=1 ,len;
        clrscr();
        printf("Enter number of rows: ");
        scanf("%d," &len);
        for(rw=1; rw<=len; rw++)
        {
                printf("\n");
                for(c=1; c<=rw; c++)
                {
                        printf(" %2d ", no);
                        no++;
                }
        }
        getch();
}
```

Output :

```
Enter number of rows: 5

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

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 9

Creation Date : 03:19 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
        int no,i,y,x=35;
        clrscr();
        printf("Enter number of rows: ");
        scanf("%d," &no);
        for(y=0;y<=no;y++)
        {
                goto(x,y+1);
                for(i=0-y; i<=y; i++)
                {
                        printf(" %3d ", abs(i));
                        x=x-3;
                }
        }
        getch();
}
```

Output :

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

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 10

Creation Date : 03:14 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
        int i, j=5, k, x;
        clrscr();
        for(i=1;i<=5;i++)
        {
                for(k=1;k<=j;k++)
                {
                        printf(" ");
                }
                for(x=1;x<=i;x++)
```

```
            {
                    printf("%d",i);
                    printf(" ");
            }
            printf("\n");
            j=j-1;
        }
        getch();
}
```

Output :

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

Program :

```
/*  Program to print pyramid pattern in C : Pattern 11

Creation Date : 03:24 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
        int rw,c,no,spc;
        clrscr();
        printf("Enter number of rows : ");
        scanf("%d", &no);
        for(rw=1; rw<=no; rw++)
        {
                for(spc=no; spc>=rw; spc--)
                {
                        printf(" ");
                }
                for(c=1; c<=rw; c++)
                {
                        printf("%2d",c);
                }
                printf("\n");
        }
        getch();
}
```

Output :

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

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 12

Creation Date : 03:24 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
      int i,j,k;
      clrscr();
      for(i=1; i<=5; i++)
      {
            for(j=1; j<=5-i; j++)
            {
                  printf("   ");
            }
            for(k=1; k<=2*i-1; k++)
            {
                  printf(" %d ",k);
            }
            printf("\n");
      }
      getch();
}
```

Output :

```
 A B C D E F G G F E D C B A
   A B C D E F F E D C B A
     A B C D E E D C B A
       A B C D D C B A
         A B C C B A
           A B B A
             A A_
```

Program :

```c
/*  Program to print pyramid pattern in C : Pattern 13

Creation Date : 04:24 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
```

```c
{
        int i,j,asci,spc;
        clrscr();
        for(i=7; i>=1; i--)
        {
                for(spc=6; spc>=i; spc--)
                {
                        printf("  ");
                }
                asci=65;
                for(j=1; j<=i; j++)
                {
                        printf("%2c",asci++);
                }
                for(j=i-1; j>=0; j--)
                {
                        printf("%2c",--asci);
                }
                printf("\n");
        }
        getch();
}
```

Output :

```
AAA AAB AAC ABA ABB ABC ACA ACB ACC BAA BAB BAC BBA BBB
BBC BCA BCB BCC CAA CAB CAC CBA CBB CBC CCA CCB CCC_
```

Program :

```c
/* Program to print all Combinations of characters

 A, B, C : Pattern 14

Creation Date : 11:33 PM 01/10/2011

Author : www.technoexam.com [Technowell, Sangli] */

#include <stdio.h>
#include <conio.h>
void main()
{
        char ch1, ch2, ch3;
        clrscr();
        for(ch1='A' ; ch1<='C' ; ++ch1)
        {
                for(ch2='A' ; ch2<='C' ; ++ch2)
                {
                        for(ch3='A' ; ch3<='C' ; ++ch3)
                        {
                        printf(" %c%c%c", ch1, ch2, ch3);
                        }
                }
        }
        getch();
```

```
}
```

- Write a C program to print the following pattern:
```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

Program:

```c
#include <stdio.h>

int main(void) {
 int i, j;
 for (i = 0; i < 4; i++) {
  for (j = 0; j <= i; j++) {
   if (((i + j) % 2) == 0) {  // Decides on as to which digit to print.
    printf("0");
    } else {
    printf("1");
    }
   printf("\t");
   }
  printf("\n");
 }
 return 0;
}
```

- Write C program to print the following pattern:
```
0
1 1
2 3 5
8 13 21
```

Program:

```c
#include <stdio.h>

int main(void) {
 int i, j, a = 0, b = 1, temp = 1;
 for (i = 1; i <= 4; i++) {
  for (j = 1; j <= i; j++) {
   if (i == 1 && j == 1) { // Prints the '0' individually first
    printf("0");
    continue;
   }
   printf("%d ", temp);  // Prints the next digit in the series
   //Computes the series
   temp = a + b;
   a = b;
   b = temp;
   if (i == 4 && j == 3) { // Skips the 4th character of the base
    break;
   }
  }
  printf("\n");
 }
 return 0;
}
```

- Write C program to print the following pattern:

```
1
121
12321
1234321
12321
121
1
```

Program:

```c
#include <stdio.h>

void sequence(int x);
int main() {
 /* c taken for columns */
 int i, x = 0, num = 7;
 for (i = 1; i <= num; i++) {
  if (i <= (num / 2) + 1) {
   x = i;
  } else {
   x = 8 - i;
  }
  sequence(x);
  puts("\n");
 }
 return 0;
}

void sequence(int x) {
 int j;

 for (j = 1; j < x; j++) {
  printf("%d", j);
 }
 for (j = x; j > 0; j--) {
  printf("%d", j);
 }
}
```

- Write a C program to print the following pattern:

```
77777777777
          7
         7
        7
       7
      7
     7
    7
   7
  7
 7
7
```

Program:

```c
#include <stdio.h>

int main(void) {
 int i, j;
 for (i = 11; i >= 1; i--) {
  for (j = 1; j <= i; j++) {
   if (i == 11) {
```

```
    printf("7");   // Makes sure the base is printed completely
    continue;
   } else if (j == i) { // Hollows the rest
    printf("7");
   } else {
    printf(" ");
   }
  }
  printf("\n");
 }
 return 0;
}
```

- Write a C program to print the following pattern:

```
1
2 4
3 6 9
2 4
1
```

Program:

```c
#include <stdio.h>
int main(void) {
    int i,j;
    for (i=1; i<=3 ; i++) {
        for (j=1; j<=i; j++)   {
            printf("%2d", (i*j));
        }
        printf("\n");
    }
    for (i=2; i>=1; i--) { // As they share the same base
        for (j=1; j<=i; j++)   {
            printf("%2d",i*j);
        }
        printf("\n");
    }
    return 0;
}
```

- Write a C program to print the following pattern:

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

Program:

```c
#include <stdio.h>
```

```
int main(void) {
    int i,j;
    for (i=1; i<=7; i++) {
        for (j=1; j<=i; j++) {
            if (j==1) {             // Applying the condition
                printf(" 1");
            } else {
                printf(" 0");
            }
        }
        printf("\n");
    }
    for (i=6; i>=1; i--) {  //As it shares the same base i=6
        for (j=1; j<=i; j++) {
            if (j==1) {    // Applying the condition
                printf(" 1");
            } else {
                printf(" 0");
            }
        }
        printf("\n");
    }
    return 0;
}
```