**Pattern Program**

1. Program to print solid rectangular star pattern

nEnter the number of rows : 3

nEnter the number of columns : 5

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#include <stdio.h>

/\* Function to print solid rectangle\*/

void solid\_rectangle(int n, int m)

{

int i, j;

for (i = 1; i <= n; i++)

{

for (j = 1; j <= m; j++)

{

printf("\*");

}

printf("\n");

}

}

int main()

{

int rows, columns;

printf("nEnter the number of rows : ");

scanf("%d", &rows);

printf("nEnter the number of columns : ");

scanf("%d", &columns);

solid\_rectangle(rows, columns);

return 0;

}

1. Program to print hollow rectangular star pattern

nEnter the number of rows : 4

nEnter the number of columns : 6

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/\* C program to print hollow rectangle star pattern \*/

#include <stdio.h>

/\* Function to print hollow rectangle\*/

void hollow\_rectangle(int n, int m)

{

int i, j;

for (i = 1; i <= n; i++)

{

for (j = 1; j <= m; j++)

{

if (i==1 || i==n || j==1 || j==m)

printf("\*");

else

printf(" ");

}

printf("\n");

}

}

int main()

{

int rows, columns;

printf("nEnter the number of rows : ");

scanf("%d", &rows);

printf("nEnter the number of columns : ");

scanf("%d", &columns);

printf("\n");

hollow\_rectangle(rows, columns);

return 0;

}

1. Half Pyramid star pattern

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// C program to print half pyramid pattern using stars

#include <stdio.h>

int main()

{

int i, j,n;

scanf("%d",&n);

for(i = 0; i < n; i++)

{

for(j = 0; j <= i; j++)

{

printf("\*");

}

printf("\n");

}

return 0;

}

1. Program to print inverted half pyramid pattern using stars

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#include <stdio.h>

int main()

{

int i, j,n;

scanf("%d",&n);

for(i = n; i >=1; i--)

{

for(j = 1; j <= i; j++)

{

printf("\*");

}

printf("\n");

}

return 0;

}

1. Program to print full pyramid pattern using stars

Enter the number of rows: 5

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#include <stdio.h>

int main() {

int i, space, rows, k = 0;

printf("Enter the number of rows: ");

scanf("%d", &rows);

for (i = 1; i <= rows; ++i, k = 0) {

for (space = 1; space <= rows - i; ++space) {

printf(" ");

}

while (k != 2 \* i - 1) {

printf("\* ");

++k;

}

printf("\n");

}

return 0;

}

1. Program to print inverted full pyramid

Enter the number of rows: 5

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#include <stdio.h>

int main() {

int rows, i, j, space;

printf("Enter the number of rows: ");

scanf("%d", &rows);

for (i = rows; i >= 1; --i) {

for (space = 0; space < rows - i; ++space)

printf(" ");

for (j = i; j <= 2 \* i - 1; ++j)

printf("\* ");

for (j = 0; j < i - 1; ++j)

printf("\* ");

printf("\n");

}

return 0;

}

1. Program to print hollow full pyramid

#include <stdio.h>

int main() {

int n, i, j;

printf("Enter number of lines: ");

scanf("%d", &n);

for(i = 1; i<=n; i++) {

for(j = 1; j<=(n-i); j++){

printf(" ");

}

if(i == 1 || i == n){ //for the first and last line, print the

for(j = 1; j<=i; j++) {

printf("\* ");

}

} else {

printf("\*"); //in each line star at start and end

for(j = 1; j<=2\*i-3; j++) { //print space to make hollow

printf(" ");

}

printf("\*");

}

printf("\n");

}

}