**PatternExercise**

1. **Star pattern programs - Write a C program to print the given star patterns.**

**Pyramid Star Pattern**

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#include<stdio.h>

#include<math.h>

int main()

{

int i,j;

printf("This is program of star printing\n" );

for (i=0;i<=5;i++)

{

for(j=0;j<2\*i-1;j++)

{

printf("\*");

}

printf("\n");

}

return 0;

}

**Hollow Pyramid Star Pattern**

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**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,s,j;**

**printf("This is program of Hollow star pattern printing\n");**

**for(i=1;i<=5;i++)**

**{**

**for(s=5;s>i;s--)**

**printf(" ");**

**for(j=1;j<=9;j++)**

**{**

**if(i==5||j==1||j==2\*i-1)**

**printf("\*");**

**else**

**printf(" ");**

**}**

**printf("\n");**

**}**

**return 0;**

**}**

**Inverted Pyramid Star Pattern**

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**#include <stdio.h>**

**int**

**main ()**

**{**

**int i, j, space;**

**printf ("Enter the number of rows:\n");**

**for (i = 5; i >= 1; --i)**

**{**

**for (space = 0; space <5 - i; ++space)**

**printf (" ");**

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

**printf ("\* ");**

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

**printf ("\* ");**

**printf ("\n");**

**}**

**return 0;**

**}**

***Hollow Inverted Pyramid Star Pattern***

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**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,s,j;**

**printf("This is program of Hollow star pattern printing\n");**

**for(i=5;i>=1;i--)**

**{**

**for(s=5;s>i;s--)**

**printf(" ");**

**for(j=1;j<=9;j++)**

**{**

**if(i==5||j==1||j==2\*i-1)**

**printf("\*");**

**else**

**printf(" ");**

**}**

**printf("\n");**

**}**

**return 0;**

**}**

**Half Diamond Star Pattern**

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**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,s,n,j,x,z;**

**printf("This is program of half diamond star pattern\n");**

**for(i=1;i<=5;i++)**

**{**

**for(s=5;s>i;s--)**

**printf(" ");**

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

**printf("\* ");**

**printf("\n");**

**}**

**for(x=1;x<=4;x++)**

**{**

**for(z=1;z<=x;z++)**

**printf(" ");**

**for(n=4;n>=x;n--)**

**printf("\* ");**

**printf("\n");**

**}**

**return 0;**

**}**

**Mirrored Half Diamond Star Pattern**

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**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,s,n,j,x,z;**

**printf("This is program of half diamond star pattern\n");**

**for(i=1;i<=5;i++)**

**{**

**for(s=5;s>i;s--)**

**printf(" ");**

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

**printf("\* ");**

**printf("\n");**

**}**

**for(x=1;x<=4;x++)**

**{**

**for(z=1;z<=x;z++)**

**printf(" ");**

**for(n=4;n>=x;n--)**

**printf("\* ");**

**printf("\n");**

**}**

**return 0;**

**}**

1. ***Number pattern programs - Write a C program to print the given number patterns***

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**Number pattern 1**

**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,j;**

**printf("This is program of Number pattern 1\n");**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**printf("1");**

**printf("\n");**

**}**

**return 0;**

**}**

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**Number pattern 2**

**#include<stdio.h>**

**#include<math.h>**

**int**

**main ()**

**{**

**int i, j, z;**

**printf ("This is program of Number pattern 1\n");**

**for (i = 1; i <= 5; i++)**

**{**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**printf ("\n");**

**}**

**return 0;**

**}**

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**Number pattern 3**

**#include<stdio.h>**

**#include<math.h>**

**int main()**

**{**

**int i,j,z;**

**printf("This is program of Number pattern 1\n");**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(j==1||j==3||j==5)**

**printf("0");**

**else**

**printf("1");**

**}**

**printf("\n");**

**}**

**return 0;**

**}**

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**Number pattern 4**

**#include<stdio.h>**

**#include<math.h>**

**int**

**main ()**

**{**

**int i;**

**printf ("This is program of number pattern\n");**

**for (i = 1; i <= 5; i++)**

**{**

**printf ("1");**

**if (i == 1 || i == 5)**

**printf ("111");**

**else**

**printf ("000");**

**printf ("1");**

**printf ("\n");**

**}**

**}**

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**Number pattern 5**

**#include<stdio.h>**

**#include<math.h>**

**int**

**main ()**

**{**

**int i;**

**printf ("This is program of number pattern\n");**

**for (i = 1; i <= 5; i++)**

**{**

**printf ("11");**

**if (i == 3)**

**printf ("0");**

**else**

**printf ("1");**

**printf ("11");**

**printf ("\n");**

**}**

**}**

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Numaber Pattern 6:

**#include<stdio.h>**

**#include<math.h>**

**int**

**main ()**

**{**

**int i, j, z;**

**printf ("This is program of Number pattern 1\n");**

**for (i = 1; i <= 5; i++)**

**{**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("0");**

**else**

**printf ("1");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("0");**

**else**

**printf ("1");**

**if (i == 1 || i == 3 || i == 5)**

**printf ("1");**

**else**

**printf ("0");**

**printf ("\n");**

**}**

**return 0;**

**}**