

Assignment - 8

A Job Ready Bootcamp in C++, DSA and IOT MySirG Pattern Problems

Write a program to draw the following patterns:

1.

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

2.

```
#include<stdio.h>
int main()
{
    int i, j, n;
    for ( i = 0; i <= 5; i++)
    {
        for ( j = 0; j < 5; j++)
        {
            if (j>=5-i)
```

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

3.

```
#include<stdio.h>  
int main()  
{  
    int i, j, n;  
    for ( i = 0; i <= 5; i++)  
    {  
        for ( j = 0; j <= 5; j++)  
        {  
            if (j>=1 && j<=5-i)  
            {  
                printf("*");  
            }  
            else  
            {  
                printf(" ");  
            }  
        }  
        printf("\n");  
    }  
}
```

4.

```
#include<stdio.h>  
int main()
```

```

{
    int i, j, n;
    for ( i = 0; i <= 5; i++)
    {
        for ( j = 0; j < 5; j++)
        {
            if (j>=i)
            {
                printf(" *");
            }
            else
            {
                printf("  ");
            }
        }
        printf("\n");
    }
}

```

5.

```

#include<stdio.h>
int main()
{
    int i, j, n;
    for ( i = 0; i <= 5; i++)
    {
        for ( j = 0; j <= 9; j++)
        {
            if (j>5-i && j<5+i)
            {
                printf(" *");
            }
            else
            {
                printf("  ");
            }
        }
        printf("\n");
    }
}

```

```
}
```

```
}
```

6.

```
#include<stdio.h>
int main()
{
    int i, j, n;
    for ( i = 0; i <= 5; i++)
    {
        for ( j = 0; j <= 9; j++)
        {
            if (j>i && j<10-i)
            {
                printf("*");
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
}
```

7.

```
#include<stdio.h>
int main()
{
    int i, j, n;
    for ( i = 1; i <= 5; i++)
    {
        for ( j = 1; j <= 9; j++)
        {
            if (j<=6-i || j>=4+i)
            {
                printf("*");
            }
        }
    }
}
```

```
        }
    else
    {
        printf(" ");
    }
}
printf("\n");
}
```

8.

```
#include<stdio.h>
int main()
{
    int i, j, k;
    for ( i = 1; i <=4; i++)
    {
        k=1;
        for ( j = 1; j <= 7; j++)
        {
            if (j>=5-i && j<=3+i)
            {
                printf("%d",k);
                j<4?k++:k--;
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
}
```

9.

```
#include<stdio.h>
int main()
```

```
{  
    int i, j, k;  
    for ( i = 1; i <= 4; i++)  
    {  
        k=1;  
        for ( j = 1; j <= 7; j++)  
        {  
            if (j>=i && j<=8-i)  
            {  
                printf("%d",k);  
                j<4?k++:k--;  
            }  
            else  
            {  
                printf(" ");  
            }  
        }  
        printf("\n");  
    }  
}
```

10.

```
#include<stdio.h>  
int main()  
{  
    int i, j, k;  
    for ( i =1 ; i <= 4 ; i++)  
    {  
        k =1;  
        for ( j = 1; j <= 7; j++)  
        {  
            if (j<=5-i || j>=3+i)  
            {  
                printf("%d",k);  
                j<4?k++:k--;  
            }  
            else  
            {
```

```
        printf(" ");
        j<4?k++:k--;
    }
    printf("\n");
}
}
```

11.

```
#include<stdio.h>
int main()
{
    int i, j;
    char k;
    for ( i = 1; i <=5; i++)
    {
        k='A';
        for ( j = 1; j <= 9; j++)
        {
            if (j>=6-i && j<=4+i)
            {
                printf("%c",k);
                j<5?k++:k--;
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
}
```

12.

```
#include<stdio.h>
int main()
{
```

```

int i, j;
char k;
for ( i = 1; i <= 4; i++)
{
    k='A';
    for ( j = 1; j <= 7; j++)
    {
        if (j>=i && j<=8-i)
        {
            printf("%c",k);
            j<4?k++:k--;
        }
        else
        {
            printf(" ");
        }
    }
    printf("\n");
}
}

```

13.

```

#include<stdio.h>
int main()
{
    int i, j;
    char k;
    for ( i =1 ; i <= 7 ; i++)
    {
        k ='A';
        for ( j = 1; j <= 13; j++)
        {
            if (j<=8-i || j>=6+i)
            {
                printf("%c",k);
                j<=6?k++:k--;
            }
        }
    }
}

```

```

        else
        {
            printf(" ");
            j<=6?k++:k--;
        }
    }
    printf("\n");
}
}

```

14.

```

#include<stdio.h>
int main()
{
    int i, j, k;
    for ( i = 1; i <= 5; i++)
    {
        for ( j = 1; j <= 5; j++)
        {
            if (j<=1 || j==i)
            {
                printf("*");
                if (i==5)
                {
                    for ( j = 1; j <= 5; j++)
                    {
                        printf("*");
                    }
                }
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
}

```

15.

```
#include<stdio.h>
int main()
{
    int i, j, k;
    for ( i = 1; i <= 5; i++)
    {
        for ( j = 1; j <= 5; j++)
        {
            if (j==6-i || j==5)
            {
                printf("★");
                if (i==5)
                {
                    for ( j = 1; j <= 5; j++)
                    {
                        printf("★");
                    }
                }
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
}
```

16.

```
#include<stdio.h>
int main()
{
    int i, j;
    for ( i = 1; i <=5; i++)
    {
```

```

for ( j = 1; j <= 9; j++)
{
    if (j==6-i || j==4+i)
    {
        printf("*");
        if (i == 5)
        {
            for(j=1; j<=9; j++)
            {
                printf("*");
            }
        }
    }
    else
    {
        printf(" ");
    }
}
printf("\n");
}
}

```

17.

```

#include<stdio.h>
int main()
{
    int i, j;
    for ( i = 1; i <=5; i++)
    {
        for ( j = 1; j <= 9; j++)
        {
            if (i == 1)
            {
                for(j=1; j<=9; j++)
                {
                    printf("*");
                }
            }
        }
    }
}

```

```

    if  (j==i || j==10-i)
    {
        printf("★");
    }
    else
    {
        printf(" ");
    }
}
printf("\n");
}
}

```

18.

```

#include<stdio.h>
int main()
{
    int i, j, k;
    for ( i = 1; i <= 5; i++)
    {
        for ( j = 1; j <= 9; j++)
        {
            if (j>5-i && j<5+i)
            {
                printf("★");
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }
    for ( i = 1; i <= 5; i++)
    {
        for ( j = 1; j <= 9; j++)
        {
            if (j>=i+1 && j<=9-i)

```

```

    {
        printf("★");
    }
    else
    {
        printf(" ");
    }
}
printf("\n");
}
}

```

19.

```

#include<stdio.h>
int main()
{
    int i, j, k;
    for ( i = 1; i <=3; i++)
    {
        for ( j = 1; j <=19; j++)
        {
            if (j>=4-i && j<=6+i || j>=14-i && j<=16+i)
            {
                printf("★");
            }
            else
            {
                printf(" ");
            }
        }
        printf("\n");
    }

    for ( i = 1; i <=9; i++)
    {
        for ( j = 1; j <=19; j++)
        {

```

```
if (i==1 && j==7)
{
    printf("MySirG");
}

if (i==1 && j>=7 && j<=12)
{
    continue;
}

if (j>=i+1 && j<=19-i)
{
    printf("*");
}
else
{
    printf(" ");
}
printf("\n");
}
```

}