Problem No. & Statement: 01

Write a 'C-Program' to print a Star Pyramid pattern using stars.

Source Code:

```c
#include <stdio.h>

int main()
{
    int n, s, i, j;
    printf("Enter number of rows: ");
    scanf("%d",&n);
    for(i = 0; i <= n; i++){
        for(s = n; s > i; s--){
            printf(" ");
        }
        for(j=0; j<i; j++){
            printf("* ");
        }

        printf("\n");
    }

    return 0;
}
```

Input: 15

Output:

```
"E:\Class\Ask.c\Solving lab codes\@2nd Semester\Bri...      —    □    ✕

Enter number of rows: 15


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


Process returned 0 (0x0)    execution
time : 1.243 s
Press any key to continue.
```

Problem No. & Statement: 02

Write a 'C-Program' to print a Inverted Star Pyramid pattern using stars.

Source Code:

```c
#include<stdio.h>
int main()
{
    int n, s, i, j;
    printf("Enter number of rows: ");
    int printf(const char*, ...)
    for(i = 0; i <= n; i++){
        for(s = 0; s < i; s++){
            printf(" ");
        }
        for(j = n; j > i; j--){
            printf("* ");
        }
        printf("\n");
    }

    return 0;
}
```

Input: 15

Output:

```
"E:\Class\Ask.c\Solving lab codes\@2nd Semest...        —     □      ✕
Enter number of rows: 15
* * * * * * * * * * * * * * *
 * * * * * * * * * * * * * *
  * * * * * * * * * * * * *
   * * * * * * * * * * * *
    * * * * * * * * * * *
     * * * * * * * * * *
      * * * * * * * * *
       * * * * * * * *
        * * * * * * *
         * * * * * *
          * * * * *
           * * * *
            * * *
             * *
              *




Process returned 0 (0x0)     execution
time : 38.664 s
Press any key to continue.
```

Problem No. & Statement: 03

Write a 'C-Program' to print a Diamond pattern using stars.

Source Code:

```
1    #include <stdio.h>
2
3    int main()
4    {
5        int n, s, i, j;
6        printf("Enter number of rows: ");
7        scanf("%d",&n);
8        for(i = 0; i <= n; i++){
9            for(s = n; s > i; s--){
10               printf(" ");
11           }
12           for(j=0; j<i; j++){
13               printf("* ");
14           }
15
16           printf("\n");
17       }
18       for(i = 1; i <= n; i++){
19           for(s = 0; s < i; s++){
20               printf(" ");
21           }
22           for(j = n; j > i; j--){
23               printf("* ");
24           }
25           printf("\n");
26       }
27   }
```

Input: 15

Output:

```
"E:\Class\Ask.c\Solving lab cod...    —    □    ✕

Enter number of rows: 15

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

Problem No. & Statement: 04

Write a 'C-Program' to print CSE and then your ID Number (Last Two digits) using star pattern.

Source Code:

```
1    #include<stdio.h>
2    int main ()
3    {
4        int i,n,j=0,k;
5        scanf("%d",&n);
6        for(i=1;i<=n;i++){
7            j++;
8            printf("*");
9            if(j==5||j==10||j==15||j==20||j==25){
10                   printf("   ");
11            }
12        }
13        printf("\n");
14        j=0;
15        for(i=1;i<=n;i++){
16            j++;
17            if(i==1||i==6||i==11||i==16||i==24){
18                printf("*");
19            }
20            else{
21                printf(" ");
22            }
23            if(j==5||j==10||j==15||j==20||j==25){
24                printf("   ");
25            }
```

```c
                }
        printf("\n");
        j=0;
        for(i=1;i<=n;i++){
                j++;
                if(i==2||i==3||i==4||i==5||i==14||i==15||i==21||i==22||i==24||i==25){
                        printf(" ");
                }
                else{
                        printf("*");
                }
                if(j==5||j==10||j==15||j==20||j==25){
                        printf("   ");
                }
        }
        printf("\n");
        j=0;
        for(i=1;i<=n;i++){
                j++;
                if(i==1||i==10||i==11||i==20||i==22){
                        printf("*");
                }
                else{
                        printf(" ");
                }
        if(j==5||j==10||j==15||j==20||j==25){
                        printf("   ");
                }
        }
        printf("\n");
        j=0;
        for(i=1;i<=n;i++){
                j++;
                if(i==22||i==23||i==24||i==25){
                        printf(" ");
                }
                else{
                        printf("*");
                }
                if(j==5||j==10||j==15||j==20||j==25){
                        printf("   ");
                }
        }
        return 0;
}
```

Input: 25

Output:

```
25
*****     *****     *****     *****     *****
*         *         *         *             *
*         *****     ***       *****        *
*             *     *             *       *
*****     *****     *****     *****      *
Process returned 0 (0x0)    execution time : 1.578 s
Press any key to continue.
```