

Program 1

```
/*Program to print the following pattern:
```

```
@  
@@  
@@@  
@@@@  
@@@@@  
@@@@@*/
```

```
#include <stdio.h>  
int main()  
{  
    for (int i = 1; i <= 5; i++)  
    {  
        for (int j = 1; j <= i; j++)  
        {  
            printf("@");  
        }  
        printf("\n");  
    }  
    printf("\n");  
}
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./pattern_a_output  
@  
@@  
@@@  
@@@@  
@@@@@
```

Program 2

/*Program to print the following pattern:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5*/
```

```
#include <stdio.h>
int main()
{
    for (int i = 1; i <= 5; i++)
    {
        for (int j = 1; j <= i; j++)
        {
            printf("%d ", j);
        }
        printf("\n");
    }
    printf("\n");
}
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./pattern1_output
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Program 3

/*Program to print the following pattern:

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

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

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./pattern2_output
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

Program 4

//Program to design a calculator using switch case

```
#include <stdio.h>
int main()
{
    float a, b, res;
    char opt;
    printf("Enter 2 numbers:\n");
    scanf("%f %f", &a, &b);
    printf("\nEnter operator:\n");
    scanf("%c %c", &opt, &opt);
    switch (opt)
    {
        case '+':
            res = a + b;
            break;
        case '-':
            res = a - b;
            break;
        case '*':
            res = a * b;
            break;
        case '/':
            res = a / b;
            break;
        default:
            printf("\nEnter valid operators only\n");
    }
    printf("\nThe result = %f\n\n", res);
}
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./calculator_output
Enter 2 numbers:
5125
50

Enter operator:
/
The result = 102.500000
```

Program 5

//Write a menu driven program to print days of week using switch case

```
#include <stdio.h>
int main()
{
    int day;
    printf("Enter day of week i.e. 1:\n");
    scanf("%d", &day);
    switch (day)
    {
        case 1:
            printf("\nDay %d is Monday\n", day);
            break;
        case 2:
            printf("\nDay %d is Tuesday\n", day);
            break;
        case 3:
            printf("\nDay %d is Wednesday\n", day);
            break;
        case 4:
            printf("\nDay %d is Thursday\n", day);
            break;
        case 5:
            printf("\nDay %d is Friday\n", day);
            break;
        case 6:
            printf("\nDay %d is Saturday\n", day);
            break;
        case 7:
            printf("\nDay %d is Sunday\n", day);
            break;
        default:
            printf("\nEnter a valid day of the week(number)");
            break;
    }
    printf("\n");
}
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./days_week_output
Enter day of week i.e. 1:
5

Day 5 is Friday
```

Program 6

//Write a menu driven program to print month of the year based on the number entered by user

```
#include <stdio.h>
int main()
{
    int Month;
    printf("Enter month number:\n");
    scanf("%d", &Month);
    switch (Month)

        case 1: printf("\nMonth %d is January\n", Month);
                  break;
        case 2: printf("\nMonth %d is February\n", Month);
                  break;
        case 3: printf("\nMonth %d is March\n", Month);
                  break;
        case 4: printf("\nMonth %d is April\n", Month);
                  break;
        case 5: printf("\nMonth %d is May\n", Month);
                  break;
        case 6: printf("\nMonth %d is June\n", Month);
                  break;
        case 7: printf("\nMonth %d is July\n", Month);
                  break;
        case 8: printf("\nMonth %d is August\n", Month);
                  break;
        case 9: printf("\nMonth %d is September\n", Month);
                  break;
        case 10: printf("\nMonth %d is October\n", Month);
                  break;
        case 11: printf("\nMonth %d is November\n", Month);
                  break;
        case 12: printf("\nMonth %d is December\n", Month);
                  break;
        default: printf("\nEnter a valid Month of the Year(number)");
                  break;
}
printf("\n");
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./month_year_output
Enter month number:
3

Month 3 is March
```

Program 7

```
/*Program to print the following pattern:  
 *  
 ***  
 *****  
 *****  
 *****/  
  
#include <stdio.h>  
int main()  
{  
    for (int i = 1; i <= 5; i++)  
    {  
        for (int j = 5 - i; j > 0; j--)  
            printf(" ");  
        for (int k = 1; k < 2 * i; k++)  
            printf("*");  
        printf("\n");  
    }  
    printf("\n");  
}
```

```
vipul@whiplash:~/Codes/Practicals/Experiment6$ ./pyramid_output  
 *  
 ***  
 *****  
 *****  
 *****
```