1. WAP To Print all the divisors of given no
Input: 30
Output: 1 2 3 5 6 10 15 30

```c
/*
 1. WAP To Print all the divisors of given no
        Input: 30
        Output: 1 2 3 5 6 10 15 30
 */

#include<stdio.h>

void main(){
        int x;

        printf("Enter the Number :");
        scanf("%d",&x);

        printf("Divisors of %d is \n ",x);

        for(int i = 1;i <= x;i++){
                if(x % i == 0){
                        printf("%d ",i);
                }
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program1.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program1.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the Number :30
Divisors of 30 is
 1 2 3 5 6 10 15 30 dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Seas
```

2. WAP to count digits in given no
Input: 94211
Output: digit count is 5

```c
/*
 2. WAP to count digits in given no
        Input: 94211
        Output: digit count is 5
 */

#include<stdio.h>

void main() {

        int x,rem,count = 0;

        printf("Enter the Number ::");
        scanf("%d",&x);

        while(x != 0){
                rem = x % 10;
                x = x / 10;
                count++;
        }
        printf("Digit Count is %d \n",count);
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program2.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program2.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the Number ::93211
Digit Count is 5
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

3. WAP to print all the composite numbers between a given range
Input : Enter Start 1
Enter End 15
Output:
4 6 8 9 10 12 14 15

```c
/*
 3. WAP to print all the composite numbers between a given range
Input : Enter Start 1
Enter End 15
Output:
4 6 8 9 10 12 14 15
Input : Enter Start 31
Enter End 35
Output:
32 33 34 35
 */

#include<stdio.h>

void main(){
        int start,end,count;

        printf("Enter the start Number ::");
        scanf("%d",&start);

        printf("Enter the end Number ::");
        scanf("%d",&end);

        for(int i = start;i <= end;i++){
                count = 0;
                for(int j = start;j <= i;j++){

                        if(i % j == 0){
                                count++;
                        }
                }
                if(count > 2){
                        printf("%d \n",i);
                }
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program3.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program3.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the start Number ::1
Enter the end Number ::15
4
6
8
9
10
12
14
15
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

4. take no of rows from the user
```
* - - -
- * - -
- - * -
- - - *
```

```c
/*
 4. take no of rows from the user
         * - - -
         - * - -
         - - * -
         - - - *
 */

#include<stdio.h>

void main(){
        int row;

        printf("Enter the Row ::");
        scanf("%d",&row);

        for(int i = 1;i <= row;i++){
                for(int j = 1;j <= row;j++){
                        if(i == j){
                                printf("* ");
                        }
                        else{
                                printf("- ");
                        }
                }
                printf("\n");
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program4.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program3.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program4.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the Row ::4
* - - -
- * - -
- - * -
- - - *
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

6. take no of rows from the user
D e F g
e D c B
F g H i
g F e D

```c
/*
 6. take no of rows from the user
        D e F g
        e D c B
        F g H i
        g F e D
 */

#include<stdio.h>

void main(){
        int row;

        printf("Enter number of row ::");
        scanf("%d",&row);

        char ch1 = 64 + row;
        char ch2 = 96 + row;

        for(int i = 1;i <= row;i++){
                for(int j = 1;j <= row;j++){
                        if(i % 2 ==1){
                                if(j % 2 == 0){
                                        printf("%c ",ch2);
                                        ch2++;
                                        ch1++;
                                }else{
                                        printf("%c ",ch1);
                                        ch2++;
                                        ch1++;
                                }
                        }else{
                                if(j % 2 == 1){
                                        printf("%c ",ch2);
                                        ch2--;
                                        ch1--;;
                                }else{
                                        printf("%c ",ch1);
                                        ch2--;
                                        ch1--;
                                }
                        }
                }
                ch1 = 64 + row + i;
                ch2 = 96 + row + i;
                printf("\n");
        }

}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program6.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter number of row ::4
D e F g
e D c B
F g H i
g F e D
```

7. take no of rows from the user

E D C B A

E D C B

E D C

E D

E

```c
/*
 7. take no of rows from the user
        E D C B A
        E D C B
        E D C
        E D
        E
 */

#include<stdio.h>

void main(){
        int row;

        printf("Enter the row ::");
        scanf("%d",&row);

        for(int i = 1;i <= row;i++){
                char ch = 'E';
                for(int j = row;j >= i;j--){
                        printf("%c ",ch);
                        ch--;
                }
                printf("\n");
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program7.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the row ::5
E D C B A
E D C B
E D C
E D
E
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

8. take no of rows from the user
0
1 1
2 3 5
8 13 21 34

```c
/*
 8. take no of rows from the user
0
1 1
2 3 5
8 13 21 34
 */

#include<stdio.h>

void main(){
        int row,x = 0, y = 1;

        printf("Enter the row ::");
        scanf("%d",&row);

        for(int i = 1; i <= row;i++){

                for(int j = 1;j <= i;j++){
                        printf("%d ",x);
                        y = x + y;
                        x = y - x;
                }
                printf("\n");
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program8.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program8.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the row ::4
0
1 1
2 3 5
8 13 21 34
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

9. take no of rows from the user

```
        1
      1 2
    1 2 3
  1 2 3 4
```

```c
/*
 9. take no of rows from the user
       1
     1 2
   1 2 3
 1 2 3 4
 */

#include<stdio.h>

void main(){

        int row;

        printf("Enter the row number :");
        scanf("%d",&row);

        for(int i = 1;i <= row ;i++){
                for(int sp = row -1;sp >= i;sp--){
                        printf("  ");
                }
                for(int j = 1;j <= i;j++){
                        printf("%d ",j);
                }
                printf("\n");
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program9.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program9.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the row number :4
        1
      1 2
    1 2 3
  1 2 3 4
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```

10. take no of rows from the user
D D D D
　C C C
　　B B
　　　A

```c
/*
 10. take no of rows from the user
         D D D D
           C C C
             B B
               A
 */

#include<stdio.h>

void main(){
        char ch = 'D';
        int row;
        printf("Enter the value of row:");
        scanf("%d",&row);

        for(int i = 1;i <= row; i++){
                for(int sp = 1;sp < i ;sp++){
                        printf("  ");
                }
                for(int j = row;j >= i;j--){
                        printf("%c ",ch);

                }
                ch--;
                printf("\n");
        }
}
```

```
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ vim Program10.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program9.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ cc Program10.c
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$ ./a.out
Enter the value of row:4
D D D D
  C C C
    B B
      A
dhiraj@dhiraj-HP:~/Cprogramming/Assignment/Magic Season/Magic Season1$
```