Qno:1

```c
#include<stdio.h>

int main(){
    int n;
    printf("Type a number: ");
    scanf("%d",&n);
    int sum=0;
    for (int i=0; i<=n;i++){
        printf("%d ",i);
        sum+=i;
    }
    printf("\nThe sum of n natural number is:%d",sum);
    return 0;
}
```

```c
#include<stdio.h>

int main(){
    int n;
    printf("Type a number: ");
    scanf("%d",&n);
    int sum=0;
    int i=0;
    while ( i<=n){
        printf("%d ",i);
        i++;
        sum+=i;
    }
    printf("\nThe sum of n natural number is:%d",sum);
    return 0;
}
```

```c
#include<stdio.h>

int main(){
    int n;
    printf("Type a number: ");
    scanf("%d",&n);
    int sum=0;
    int i=0;
    do{
     printf("%d ",i);
        sum+=i;
        i++;}
    while ( i<=n);
    printf("\nThe sum of n natural number is:%d",sum);
    return 0;
}
```

```
Type a number: 8
0 1 2 3 4 5 6 7 8
The sum of n natural number is:36
```

Qno:2

```c
#include <stdio.h>

int main() {
    int rows, i, j, space;

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

    for (i = 1; i <= rows; i++) {
        for (space = 1; space <= rows - i; space
        ++) {
            printf(" ");
        }

        for (j = 1; j <= 2 * i - 1; j++) {
            printf("*");
        }

        printf("\n");
    }

    return 0;
}
```

```
Enter the number of rows: 6
     *
    ***
   *****
  *******
 *********
***********
```

Qno:3

```c
#include <stdio.h>
int main(){
    char str1[10], str2[10];
    int i, response=0;
    printf("Enter first string: ");
    scanf("%s", str1);
    printf("Enter second string: ");
    scanf("%s", str2);
    for(i = 0; str1[i] != '\0' && str2[i] != '\0'; i++) {
        if(str1[i] != str2[i]) { response = 1;}}
    if(response ==0 && str1[i]=='\0' && str2[i]=='\0')
    {printf("The Strings are equal.");}
        else{printf("The Strings are unequal.");}
    return 0;
}
```

```
Enter first string: malaika
Enter second string: mustafa
The Strings are unequal.
```

Qno:4

```c
#include<string.h>
int main()
{
    char str[100];
    int i;
    printf("Enter the sentence: ");
    gets(str) ;
    for(i=0;i<strlen(str);i++)
    {
        if(str[i]>=65 && str[i]<=90)
            str[i]=str[i]+32;
        else if(str[i]>=97 && str[i]<=122)
            str[i]=str[i]-32;
    }
    printf("New sentence: %s",str);
    return 0;
}
```

```
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Enter the sentence: my name is malaika.
New sentence: MY NAME IS MALAIKA.
```

Qno:5

```c
#include <stdio.h>

int main() {
    int arr[8]={1,2,2,3,4,1,5,5};


     int i , j;
    printf("Unique elements in the array are: ");
    for (i = 0; i < 8; i++) {
        int count = 0;
        for (j = 0; j < 8; j++) {
            if (arr[i] == arr[j] && i != j) {
                count++;
                break;
            }
        }
        if (count == 0) {
            printf("%d ", arr[i]);
        }
    }

    return 0;
}
```

```
PS C:\Users\Lenovo\Desktop\C world> gcc new.c
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Unique elements in the array are: 3 4
```

Qno:6

```c
#include<stdio.h>
struct Distance
{
    int feet;
    int inch;
} d1, d2, result;

int main()
{
    printf("Enter first distance in feet and inch:\n");
    scanf("%d %d", &d1.feet, &d1.inch);
    printf("Enter second distance in feet and inch:\n");
    scanf("%d %d", &d2.feet, &d2.inch);
    // Add distances
    result.feet = d1.feet + d2.feet;
    result.inch = d1.inch + d2.inch;

    // If inch is greater than or equal to 12, convert it to feet
    if(result.inch >= 12)
    {
        result.feet += result.inch/12;
        result.inch = result.inch%12;
    }
    printf("Total distance is %d feet %d inch.", result.feet, result.inch);

    return 0;
}
```

```
PS C:\Users\Lenovo\Desktop\C world> gcc new.c
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Enter first distance in feet and inch:
34
45
Enter second distance in feet and inch:
23
46
Total distance is 64 feet 7 inch.
```