Qno:1

```c
//QNO. 01: Write a C program to display the first n odd natural numbers and
//do-while loop.
//USING FOR LOOP;
#include<stdio.h>
int main(){
int n,i,sum=0;
printf("Enter a Value;");
scanf("%d",&n);
printf("The Odd numbers upto %d are:",n);
for( i=1;i<=n;i++){if(i%2!=0){
printf(" %d",i);sum+=i;}}
printf("\nThe sum of odd natural numbers upto %d is: %d",n,sum);return 0;}
```

```c
//USING DO-WHILE LOOP;
#include<stdio.h>
int main(){
int n, i=1,sum=0;
printf("Enter a Value;");
scanf("%d",&n);
printf("The Odd numbers upto %d are:",n);
do{if(i%2!=0){
printf(" %d",i);sum+=i;}
i+=1;
}while(i<=n);
printf("\nThe sum of odd natural numbers upto %d is: %d",n,sum);return 0;}
```

```c
//USING WHILE LOOP;
#include<stdio.h>
int main(){
int n, i=1,sum=0;
printf("Enter a Value;");
scanf("%d",&n);
printf("The Odd numbers upto %d are:",n);
while(i<=n){if(i%2!=0){
printf(" %d",i);sum+=i;}
i+=1;
}
printf("\nThe sum of odd natural numbers upto %d is: %d",n,sum);return 0;}
```

```
PS C:\Users\Lenovo\Desktop\C world> gcc new.
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Enter a Value;5
The Odd numbers upto 5 are: 1 3 5
The sum of odd natural numbers upto 5 is: 9
```

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;
}
```

```
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Enter first string: Qurrat
Enter second string: ainy
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: this is not GooD.
New sentence: THIS IS NOT gOOd.
```

Qno:5

```c
#include <stdio.h>
int main()
{int arr[100], n, i,j, a=1;
    printf("Enter size of the array: ");
    scanf("%d", &n);
    for(i=0; i<n; i++)
    {printf("Enter the %dth element in array of length %d: ",i,n);
        scanf("%d", &arr[i]);
    }
    printf("Unique elements in the array: ");
    for(i=0; i<n; i++)
    { for(j=0; j<i; j++)
        { if(arr[i] == arr[j])
            {  a=0;
            }}
        for(j=i+1; j<n; j++)
        {
            if(arr[i] == arr[j]){
                a= 0;
            }}
        if(a == 1)
        {
            printf("%d ", arr[i]);
        }}
    if (a==0 ){
    printf("nil");}
    return 0;
}
```

```
PS C:\Users\Lenovo\Desktop\C world> gcc new.c
PS C:\Users\Lenovo\Desktop\C world> ./a.exe
Enter size of the array: 3
Enter the 0th element in array of length 3: 1
Enter the 1th element in array of length 3: 2
Enter the 2th element in array of length 3: 2
Unique elements in the array: 1 nil
```

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> ./a.exe
Enter first distance in feet and inch:
3
8
Enter second distance in feet and inch:
9
12
Total distance is 13 feet 8 inch.
```