Q1.Write a program to calculate the sum of numbers stored in an array of size 10. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], sum = 0;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        sum = sum + arr[i];
    }

    printf("\n\nSum = %d", sum);

    return 0;
}
```

Q2.Write a program to calculate the average of numbers stored in an array of size 10. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], sum = 0;
    float average;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        sum = sum + arr[i];
    }

    printf("\n\nAverage = %.2f", sum / 10.0);

    return 0;
}
```

Q3.Write a program to calculate the sum of all even numbers and sum of all odd numbers, which are stored in an array of size 10.
Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], even =0, odd = 0;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (arr[i] % 2 == 0)
            even = even + arr[i];
        else
            odd = odd + arr[i];
    }

    printf("\n\nSum of even = %d", even);
    printf("\nSum of odd = %d", odd);

    return 0;
}
```

Q4.Write a program to find the greatest number stored in an array of size 10. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], greatest = 0;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (greatest < arr[i])
            greatest = arr[i];
    }

    printf("\n\nGreatest number = %d", greatest);

    return 0;
}
```

Q5.Write a program to find the smallest number stored in an array of size 10. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], smallest = 0, j = 0;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (i > 0)
            if (arr[j] > arr[i])
                j = i;
    }

    printf("\n\nSmallest = %d", arr[j]);

    return 0;
}
```

Q6.Write a program to sort elements of an array of size 10. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10], tmp;

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (i > 0)
        {
            for (int k = 0; k < i;k++)
            {
                if (arr[k]> arr[i])
                {
                    tmp = arr[i];
                    arr[i] = arr[k];
                    arr[k] = tmp;
                }
            }
        }
    }

    for (int i = 0; i < 10; i++)
    {
        printf("%d ", arr[i]);
    }


    return 0;
}
```

Q7.Write a program to find second largest in an array.Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10];

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (i > 1)
        {
            for (int j = 0; j < i; j++)
            {
                if (arr[j] > arr[i])
                {
                    int tmp = arr[i];
                    arr[i] = arr[j];
                    arr[j] = tmp;
                }
            }
        }
    }

    printf("\n\nSecond largest = %d",arr[8]);

    return 0;
}
```

Q8.Write a program to find the second smallest number in an array.Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int arr[10];

    for (int i = 0; i < 10; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d", &arr[i]);

        if (i>1)
        {
            for (int j  = 0; j <i; j++)
            {
                if (arr[i]<arr[j])
                {
                    int tmp = arr[i];
                    arr[i]=arr[j];
                    arr[j]=tmp;
                }
            }
        }
    }

    printf("\n\nSecond smallest = %d",arr[1]);

    return 0;
}
```

Q9.Write a program in C to read n number of values in an array and display it in reverse order. Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int num;

    printf("Enter size of array = ");
    scanf("%d",&num);

    int arr[num];

    for (int i = 0; i < num; i++)
    {
        printf("Enter value of a[%d] = ", i);
        scanf("%d",&arr[i]);
    }

    for (num = num-1; num > -1; num--)
        printf("%d ", arr[num]);

    return 0;
}
```

Q10.Write a program in C to copy the elements of one array into another array.Take array values from the user.

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int num;

    printf("Enter array size = ");
    scanf("%d",&num);

    int arr[num];

    for (int i = 0; i < num; i++)
    {
        printf("Enter value of a[%d] = ",i);
        scanf("%d",&arr[i]);
    }

    int brr[num];

    for (int i = 0; i < num; i++)
        brr[i] = arr[i];

    return 0;
}
```