Assignment 14 Solution

Q.1

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

#include<stdio.h>

int main()
{
    int size=10,setOfNumber[size],sum=0;
    printf("Enter 10 number:");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&setOfNumber[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        sum=setOfNumber[i]+sum;
    }
    printf("\nSum of all elements of array is:%d ",sum);
    return 0;
}
```

Q.2

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

#include<stdio.h>

int main()
{
    int size=10,array[size],sum=0;
    printf("Enter 10 number:");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&array[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        sum=sum+array[i];
    }
    printf("Average of 10 number in array is %d",sum/size);
    return 0;
```

```
}
```

Q.3

```c
/*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*/

#include<stdio.h>

int main()
{
    int EvenSum=0,OddSum=0,size=10,arr[size];
    printf("Enter 10 numbers");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        if(arr[i]%2==0)
        {
            EvenSum=EvenSum+arr[i];
        }
        else
        {
            OddSum=OddSum+arr[i];
        }
    }
    printf("\nSum of Even number in array is %d",EvenSum);
    printf("\nSum of Odd number in array is %d",OddSum);
    return 0;
}
```

Q.4

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

#include<stdio.h>

int main()
{
```

```c
    int size=10,arr[size],hold=0;
    printf("Enter 10 numbers:");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        if(arr[i]>arr[i+1])
        {
            if(hold<arr[i]){hold=arr[i];}
        }
    }
    printf("Greatest number in array id %d",hold);
    return 0;
}
```

Q.5

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

#include<stdio.h>
int main()
{
    int size=10,arr[size],hold=0;
    printf("Enter 10 numbers:");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        if(i==0){hold=arr[i];}
        if(arr[i]<arr[i+1])
        {
            if(hold>arr[i])
            {
                hold=arr[i];
            }
        }
    }
    printf("Smallest number in a array is %d",hold);
    return 0;
```

```
}
```

Q.6

```c
/*Write a program to sort elements of an array of size 10. Take array values
from the
user.
*/
#include<stdio.h>
int main()
{
    int size=10,arr[size],hold=0;
    printf("Enter 10 numbers");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        for(int j=i+1;j<=size-1;j++)
        {
            if(arr[i]>arr[j])
            {
                hold=arr[i];
                arr[i]=arr[j];
                arr[j]=hold;
            }
        }
    }
    printf("\nSorted array is:");
    for(int i=0;i<=size-1;i++)
    {
        printf("%d, ",arr[i]);
    }
    return 0;
}
```

Q.7

```c
/*Write a program to find second largest in an array.Take array values from
the user.
*/
```

```c
#include<stdio.h>
int main()
{
    int size=10,arr[size],hold=0;
    printf("Enter 10 number:");
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        for(int j=i+1;j<=size-1;j++)
        {
            if(arr[i]<arr[j])
            {
                hold=arr[i];
                arr[i]=arr[j];
                arr[j]=hold;
            }
        }
    }
    for(int i=0;i<=size-1;i++)
    {
        if(arr[i+1]<arr[i])
        {
            hold=arr[i+1];
            break;
        }
    }
    printf("Second largest number in array is %d",hold);
    return 0;
}
```

Q.8

```c
/*Write a program to find the second smallest number in an array.Take array
values
from the user.
*/

#include<stdio.h>
int main()
{
    int size=10,arr[size],hold=0;
    printf("Enter 10 numers:");
    for(int i=0;i<=size-1;i++)
```

```c
    {
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        for(int j=i+1;j<=size-1;j++)
        {
            if(arr[i]<arr[j])
            {
                hold=arr[i];
                arr[i]=arr[j];
                arr[j]=hold;
            }
        }
    }
    for(int i=0;i<=size-1;i++)
    {
        if(arr[i]>arr[i+1])
        {
            hold=arr[i+1];
            break;
        }
    }
    printf("Seconf smallest number in array is %d",hold);
    return 0;
}
```

Q.9

```c
/*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
*/
#include<stdio.h>
int main()
{
    int size=0,arr[10000];
    printf("Enter the size of array:");
    scanf("%d",&size);
    printf("Enter %d number :",size);

    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("Element of array in normal order:");
```

```c
    for(int i=0;i<=size-1;i++)
    {
        printf(" %d,",arr[i]);
    }
    printf("\n");
    printf("Element of array in reverse order:");
    for(int i=size-1;i>=0;i--)
    {
        printf(" %d,",arr[i]);
    }

    return 0;
}
```

Q.10

```c
/*Write a program in C to copy the elements of one array into another
array.Take array
values from the user
*/

#include<stdio.h>

int main()
{
    int arr[100],array[100],size=0;
    printf("Enter size of array:");
    scanf("%d",&size);
    printf("Enter %d number:",size);
    for(int i=0;i<=size-1;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("\nElement of first array:");
    for(int i=0;i<=size-1;i++)
    {
        printf("%d, ",arr[i]);
    }
    for(int i=0;i<=size-1;i++)
    {
        array[i]=arr[i];
    }
    printf("\n\nElement of second array:");
    for(int i=0;i<=size-1;i++)
    {
        printf("%d, ",array[i]);
```

```
    }
    return 0;
}
```