Assignment:17

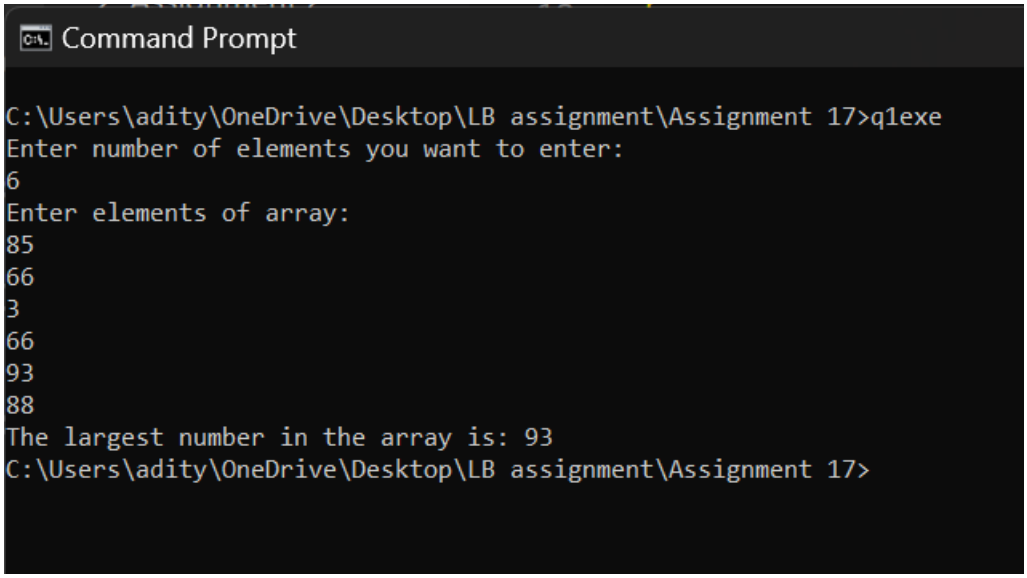
Q.1 Accept n numbers and return the largest number.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

int CheckLargest(int Arr[],int iSize)
{
    int iCnt=0,iLarge=0;

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]>iLarge)
        {
            iLarge=Arr[iCnt];
        }
    }
    return iLarge;
}

int main()
{
    int *ptr=NULL;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    if(ptr==NULL)
    {
        printf("Can not alloacte memory...");
    }

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)\
    {
        scanf("%d",&ptr[iCnt]);
    }
```

```
    int iRet=CheckLargest(ptr,iLength);

    printf("The largest number in the array is: %d",iRet);

    free(ptr);

    return 0;
}
```

OUTPUT:



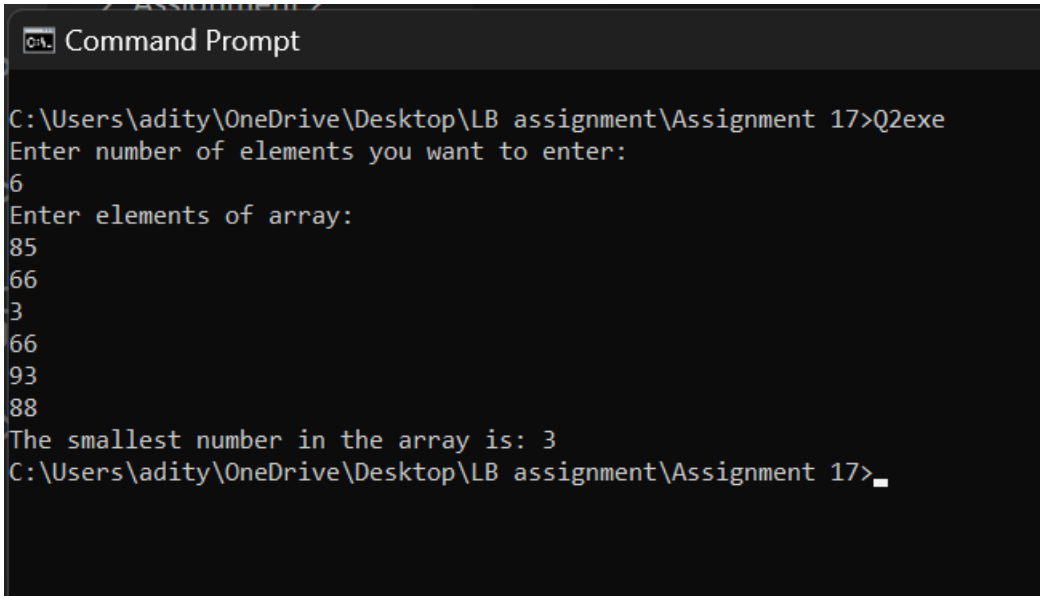
Q.2 Accept n number from user and return smallest number.

Ans.

```
#include<stdio.h>
#include<stdlib.h>

int CheckSmallest(int Arr[],int iSize)
{
    int iCnt=0,iSmall=Arr[0];

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]<iSmall)
```

```
        {
            iSmall=Arr[iCnt];
        }
    }
    return iSmall;
}

int main()
{
    int *ptr=NULL;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    if(ptr==NULL)
    {
        printf("Can not alloacte memory...");
    }

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)\
    {
        scanf("%d",&ptr[iCnt]);
    }

    int iRet=CheckSmallest(ptr,iLength);

    printf("The smallest number in the array is: %d",iRet);

    free(ptr);

    return 0;
}
```

OUTPUT:



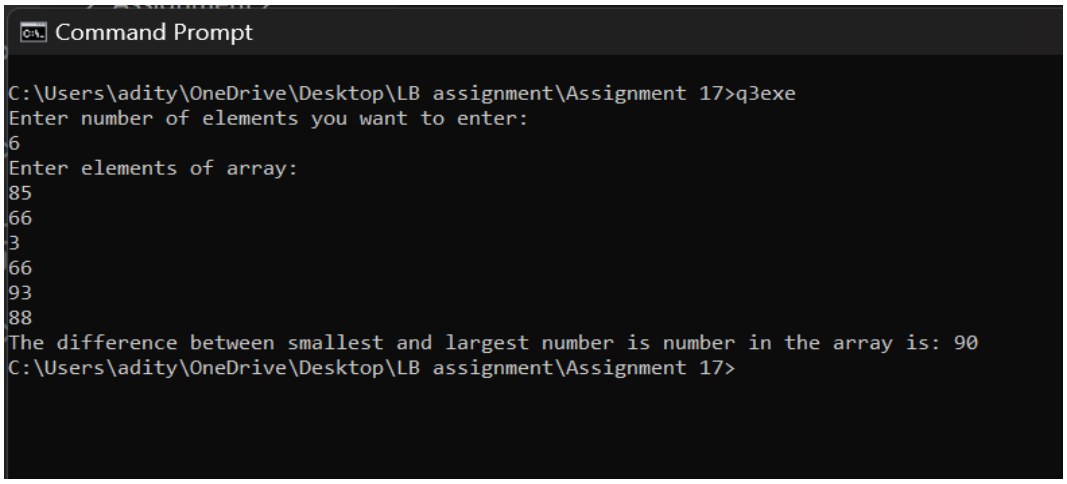
Q.3 Accept n numbers from user and return difference between smallest and largest number.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

int DiffLS(int Arr[],int iSize)
{
    int iCnt=0,iSmall=Arr[0],iLarge=Arr[0];

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]>iLarge)
        {
            iLarge=Arr[iCnt];
        }
        if(Arr[iCnt]<iSmall)
        {
            iSmall=Arr[iCnt];
        }
    }
    return iLarge-iSmall;
```

```
}

int main()
{
    int *ptr=NULL;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    if(ptr==NULL)
    {
        printf("Can not alloacte memory...");
    }

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)\
    {
        scanf("%d",&ptr[iCnt]);
    }

    int iRet=DiffLS(ptr,iLength);

    printf("The difference between smallest and largest number is number in
the array is: %d",iRet);

    free(ptr);

    return 0;
}
```

OUTPUT:



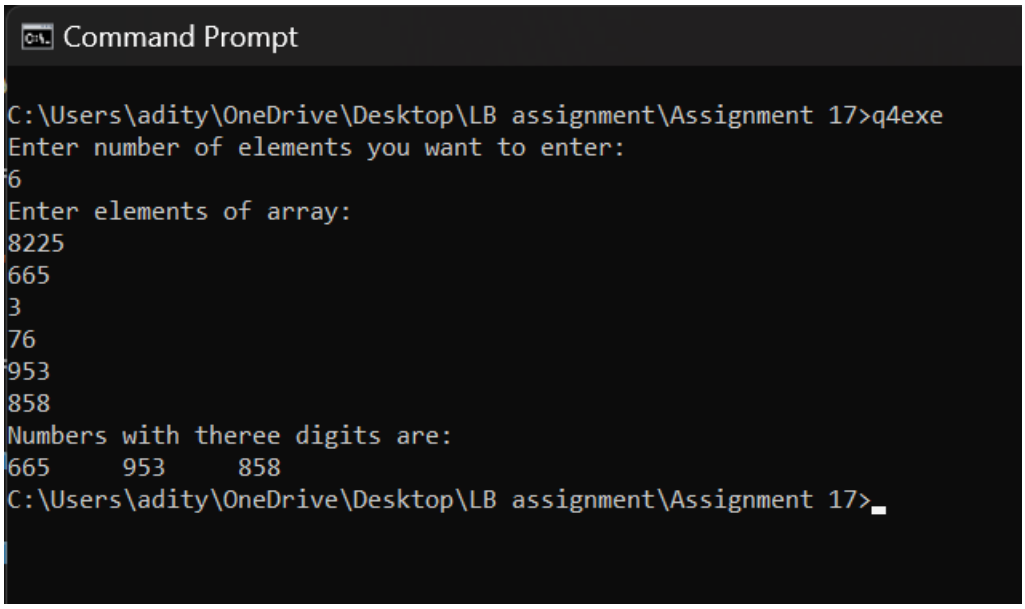
Q.4 Accept n numbers from user and print numbers that contains 3 digits.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

void Display(int Arr[],int iSize)
{
   int iCnt=0,iNum=0,iTemp=0;

    printf("Numbers with theree digits are:\n");

   for(iCnt=0;iCnt<iSize;iCnt++)
   {
        iTemp=Arr[iCnt];

    while(iTemp!=0)
     {
        iTemp/=10;
        iNum++;

     }
        if(iNum==3)
        {
            printf("%d\t",Arr[iCnt]);
        }
    iNum=0;
   }
}

int main()
{
    int *ptr=NULL;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    if(ptr==NULL)
    {
```

```
        printf("Can not alloacte memory...");
    }

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)\
    {
        scanf("%d",&ptr[iCnt]);
    }

    Display(ptr,iLength);

    free(ptr);

    return 0;
}
```

OUTPUT:



Q.5 Accept n numbers from suer and print summation for each number.

Ans.

```
#include<stdio.h>
#include<stdlib.h>

void Display(int Arr[],int iSize)
{
   int iCnt=0,iSum=0,iDigit=0,iTemp=0;

    printf("Summation of digit of each number are in order:\n");

   for(iCnt=0;iCnt<iSize;iCnt++)
   {
    while(Arr[iCnt]!=0)
     {
        iDigit=Arr[iCnt]%10;
        iSum+=iDigit;
        Arr[iCnt]/=10;
     }
     printf("%d\t",iSum);
     iSum=0;
    }
}

int main()
{
    int *ptr=NULL;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    if(ptr==NULL)
    {
        printf("Can not alloacte memory...");
    }

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)\
    {
        scanf("%d",&ptr[iCnt]);
```

```
    }

    Display(ptr,iLength);

    free(ptr);

    return 0;
}
```

OUTPUT: