Assignment no.12

//1.program to print minimum and maximum number in arry using pointer

```c
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *a,size,i,max,min;
    printf("Enetr size of array:");
    scanf("%d",&size);
    printf("Enter element in array:");
    a=(int*)malloc(size * sizeof (int) );
    for(i=0;i<size;i++)
    {
     scanf("%d",&a[i]);
      }
```

```c
    max=a[0];
    for(i=0;i<size;i++)
    {
        if(a[i]>max)
        {
            max=a[i];
        }
    }
        printf("Maximum element of array: %d\n",max);
        min=a[0];

        for(i=0;i<size;i++)
        {
            if(a[i]<min)
            {
                min=a[i];
            }
        }
```

```c
        printf("Minimum elemnt of array: %d\n",min);

        //free allocated memory
    free(a);
}


    //2.program to print search the given number in array

#include<stdio.h>
#include<stdlib.h>
int main()
{
    int i,search,flag=1;
    int *arr[10]={11,33,55,67,78,23,12,23,45,67};
    arr[10]=(int*)malloc(10*sizeof(int));
    printf("Enter number to search: ");
    scanf("%d",&search);
    for(i=0;i<10;i++)
```

```c
    {
        if(arr[i] == search)
        {
            flag==1;
            break;
        }
    }
    if(flag==1)
    {
        printf("The number is found at position: ",search);
        printf("%d",i);
    }
    else
    {
        printf("Number is not found:");
    }
    //free array memmory
    free(arr);
```

```
}


//3.program to find sum off all numbers in array
using pointer

#include<stdio.h>
#include<stdlib.h>
void sum(int*,int,int );
int main()
{
    int size,result=0;
        int *arr[10]={1,2,3,4,5,6,7,8,9};
        arr[10]=(int*)malloc(10 * sizeof(int));
        sum(arr,10,result);
}
void sum(int *arr,int size,int result)
{
        for(int i=0;i<size;i++)
```

```c
    {
        result=result+arr[i];
    // printf("The sum of all numbers
is:%d\n",result);
    }
    printf("The sum of all numbers
is:%d\n",result);
    free(arr);
}


//4.program to find even and odd number in array
using pointer.

#include<stdio.h>
#include<stdlib.h>
void calculateEvenOdd(int*,int,int,int);
void main()
{
    int *arr[10],e=0,o=0,size;
```

```c
    printf("Enetr element in array:");
    arr[10]=(int*)malloc(10 * sizeof(int));
  for(int i=0;i<10;i++)
    {
      scanf("%d",&arr[i]);
    }
  calculateEvenOdd(arr,10,e,o);
}

void calculateEvenOdd(int *arr,int size,int e,int o)
{
      for(int i=0;i<size;i++)
  if(arr[i]%2==0)
  {
      e=e+arr[i];
      printf("The number is even:%d\n",arr[i]);
    }
    else
    {
```

```c
            o=o+arr[i];
            printf("The number is odd number:%d\n",arr[i]);
        }
        printf("The sum of the even number is :%d\n",e);
        printf("The sum of the odd number is odd:%d\n",o);
        free(arr);
}
```

//5.program to print alternate number in array

```c
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *a[10],i,n;
    printf("How many elements you have want= \n");
```

```c
    scanf("%d",&n);
    *a[10]=(int*)malloc(10 * sizeof(int));
    for(i=0;i<n;i++)
    {
        printf("Enter element in array: \n");
        scanf("%d",&a[i]);
    }
    printf("Altermate number in array: \n");
    for(i=0;i<n;i=i+2)
    {
        printf("The alternate number in array is: %d\n",a[i]);
    }
    free(a);
}


//6.accept array and print only prime number from array
```

```c
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *a[20],i,n,j,count=0;
    printf("How many element you have want: \n");
    scanf("%d",&n);
    *a[10]=(int*)malloc(10 * sizeof(int));
    for(i=0;i<n;i++)
    {
        printf("Enter element in array: \n");
        scanf("%d",&a[i]);
    }
    for(i=0;i<n;i++)
    {
    for(j=2;j<a[i];j++)
    {
      if(a[i] % j==0)
```

```c
            {
                count++;
                break;
            }
        }
        if(count==0)
        printf("The %d is prime: \n",a[i]);
    }
    free(a);
}
```

//7.Take to array and add sum in third array

```c
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *a[5],*b[5],*sum[5],n,i;
    printf("Enter first array: \n");
```

```c
*a[5]=(int*)malloc(5 * sizeof(int));

for(i=0;i<5;i++)
{

    printf("Enter element in array: \n");
     scanf("%d",&a[i]);



}
printf("Enter element in second array:\n");
*b[5]=(int*)malloc(5 * sizeof(int));
for(i=0;i<5;i++)
{

    printf("Enter an element\n");
    scanf("%d",&b[i]);
```

```c
        }
        *sum[5]=(int*)malloc(5 * sizeof(int));
        for(i=0;i<5;i++)
        {

            *sum[i]=*a[i]+*b[i];
            printf("%d",sum[i]);
        }
        free(a);
        free(b);
        free(sum);


}
```

//8.program to merge two array

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

```c
int main()
{
    int *arr1[10],*arr2[5],*arr3[15],n,i,j=0;
    *arr1=(int*)malloc(10 * sizeof(int));
    printf("Enter first array: ");
    for(i=0;i<10;i++)
    {

        scanf("%d",&arr1[i]);
    }
    *arr2=(int*)malloc(5 * sizeof(int));
    printf("Enter second array: \n");
    for(i=0;i<5;i++)
    {

        scanf("%d",&arr2[i]);
    }
    //copy array
     *arr3=(int*)malloc(15 * sizeof(int));
```

```c
    for(i=0;i<10;i++)
    {
        arr3[j]=arr1[i];
        j++;
    }
    for(i=0;i<5;i++)
    {
        arr3[j]=arr2[i];
        j++;
    }
    printf("Element of array: ");
    for(i=0;i<15;i++)
    {
        printf("%d",arr3[i]);
    }
    free(arr1);
    free(arr2);
    free(arr3);
}
```

```c
//9.program to reverse the given array

#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *arr[5],n,i;
    printf("Enter element in array: ");
    *arr=(int*)malloc(5 * sizeof(int));
    for(i=0;i<=4;i++)
    {

        scanf("%d",&arr[i]);
    }
    printf("Element of reverse array: ");
    for(i=4;i>=0;i--)
    {
        printf("%d",arr[i]);
```

```c
    }
    free(arr);
}


//10.program to sort the array

#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *arr[10],n,i,j,temp;
    printf("Enter element in array: ");
    *arr=(int*)malloc(10 * sizeof(int));
    for(i=0;i<10;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(i=0;i<5;i++)
    {
```

```c
        for(j=i+1;j<5;j++)
        {
            if(arr[i]>arr[j])
            {
                temp=arr[i];
                arr[i]=arr[j];
                arr[j]=temp;

            }
        }
    }
    printf("Print sort array :");
    for(i=0;i<5;i++)
    {
        printf("%d",arr[i]);
    }
    free(arr);
}
```