Q1

```
// 1. Find minimum and maximum number in array.
#include <stdio.h>
#include <stdlib.h>

void find_max(int *arr, int size) {
   int max = arr[0];
   for (int i = 1; i < size; i++) {
      if (arr[i] > max)
         max = arr[i];
   }
   printf("\nThe maximum element is %d.", max);
}

void find_min(int *arr, int size) {
   int min = arr[0];
   for (int i = 1; i < size; i++) {
      if (arr[i] < min)
         min = arr[i];
   }
   printf("\nThe minimum element is %d.", min);
}

int main() {
   int size;
   printf("Enter the number of elements: ");
   scanf("%d", &size);

   int *arr = (int*)malloc(size * sizeof(int));

   printf("Enter %d elements: ", size);
   for (int i = 0; i < size; i++) {
```

```
        scanf("%d", &arr[i]);
    }

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

    find_max(arr, size);
    find_min(arr, size);

    free(arr);
    return 0;
}
```

Q2

```
// 2. Search the given number in array.
#include<stdio.h>
#include<stdlib.h>

int Search(int *arr,int num,int size){
    for(int i=0;i<size;i++)
    if(arr[i]==num)
     return i;

     return -1;
}

int main(){
    int num, size;
    printf("Enter the number of elements: ");
```

```
    scanf("%d", &size);

    int *arr = (int *)malloc(size * sizeof(int));

    printf("Enter %d elements: ", size);
    for (int i = 0; i < size; i++) {
        scanf("%d", &arr[i]);
    }

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

    printf("\nEnter number you want to search in array :");
    scanf("%d",&num);

    int index= Search(arr,num,size) ;
    if(index !=-1)
    printf("\nThe given number %d is present at index %d: ",num,index);
    else
    printf("Not present in array");

    free(arr);
    return 0;
}
```

Q3

```
// 3. Find sum of all numbers.
#include<stdio.h>
#include<stdlib.h>
```

```
int sum(int *arr,int size){
    int sum=0;
    for(int i=0;i<size;i++)
     sum += arr[i];
     return sum;
}

int main(){
    int size;
    printf("Enter the size of array :");
    scanf("%d",&size);

    int *arr = (int*)malloc(size * sizeof(int));

    printf("Enter %d elements in array : ",size);
    for(int i=0;i<size;i++)
    scanf("%d",&arr[i]);

    printf("Original array : ");
    for(int i=0;i<size;i++)
     printf("%d ",arr[i]);

    printf("\nTotal sum of above array is %d.",sum(arr,size));
    free(arr);
    return 0;
}
```

// 6. Accept array and print only prime numbers of array.

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

```
int isPrime(int num){
   if(num<2)
   return 0;

   for(int i=2;i<num;i++){
      if(num%i==0)
      return 0;
   }
   return 1;
}

void printPrime(int *arr,int size){
   printf("\nPrime numbers in the array: ");
   for(int i=0;i<size;i++)
   if(isPrime(arr[i]))
    printf("%d ", arr[i]);
}

int main(){
   int size;

   printf("Enter the size of array :");
   scanf("%d",&size);

   int* arr = (int*)malloc (sizeof(int)*size);

   printf("Enter %d elements in array :",size);
   for(int i=0;i<size;i++)
   scanf("%d",&arr[i]);

   printf("Original array : ");
   for(int i=0;i<size;i++)
```

```
    printf("%d ",arr[i]);

    printPrime(arr,size);
    free(arr);

    return 0;
}

// 7. Take two array and add sum in third array
// Example-
// arr[5]= {1,2, 3, 4,5}
// brr[5]={10,20,30, 40, 50}
// crr[5]={11,22,33,44,55}

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

void sum(int *arr, int *brr,int size1,int size2){
  int result[5];
  printf("\nResultant array :");
  for(int i=0;i<size1;i++){
  result[i]=arr[i]+brr[i];
  printf("%d ",result[i]);
}
}
int main(){
   int size1,size2;

   printf("Enter the size of first array :");
   scanf("%d",&size1);

   int* arr = (int*)malloc (sizeof(int)*size1);
```

```
    printf("Enter %d elements in array :",size1);
    for(int i=0;i<size1;i++)
    scanf("%d",&arr[i]);

    printf("First array : ");
    for(int i=0;i<size1;i++)
     printf("%d ",arr[i]);

    printf("\nEnter the size of second array :");
    scanf("%d",&size2);

    int* brr = (int*)malloc (sizeof(int)*size2);

    printf("Enter %d elements in array :",size2);
    for(int i=0;i<size2;i++)
    scanf("%d",&brr[i]);

    printf("Second array : ");
    for(int i=0;i<size2;i++)
     printf("%d ",brr[i]);

    sum(arr,brr,size1,size2);
    free(arr);
    free(brr);
    return 0;
}
```

// 8. Merge two arrays

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

```
void merge(int *arr1,int *arr2,int size1,int size2){
   int arr[size1+size2];
   int i,j;
   for( i=0;i<size1;i++)
      arr[i]=arr1[i];

   for( j=0;j<size2;j++)
    arr[i+j] = arr2[j];

    printf("\nArray after merging :");
    for(i=0;i<(size1+size2);i++)
    printf("%d ",arr[i]);
}

int main(){
   int size1,size2;

   printf("Enter the size of first array :");
   scanf("%d",&size1);

   int* arr = (int*)malloc (sizeof(int)*size1);

   printf("Enter %d elements in array :",size1);
   for(int i=0;i<size1;i++)
   scanf("%d",&arr[i]);

   printf("First array : ");
   for(int i=0;i<size1;i++)
    printf("%d ",arr[i]);

   printf("\nEnter the size of second array :");
```

```
    scanf("%d",&size2);

    int* brr = (int*)malloc (sizeof(int)*size2);

    printf("Enter %d elements in array :",size2);
    for(int i=0;i<size2;i++)
    scanf("%d",&brr[i]);

    printf("Second array : ");
    for(int i=0;i<size2;i++)
     printf("%d ",brr[i]);

  merge(arr,brr,size1,size2);
  free(arr);
  free(brr);

 return 0;
}
// 9. Reverse the given array.
#include<stdio.h>
#include<stdlib.h>

void reverse(int *arr,int size){
    printf("\nReversed array :");
    for(int i=size-1;i>=0;i--)
    printf("%d ",arr[i]);
}
int main(){
    int size;

    printf("Enter size of array :");
    scanf("%d",&size);
```

```
    int *arr = (int*)malloc(sizeof(int)*size);

    printf("Add %d elements in array :",size);
    for(int i=0;i<size;i++)
        scanf("%d",&arr[i]);

    printf("Original Array :");
    for(int j=0;j<size;j++)
    printf("%d ", arr[j]);

    reverse(arr,size);
    free(arr);
    return 0;
}
// 10. Sort the array.

#include <stdio.h>
#include<stdlib.h>
void sortArray(int *arr,int size) {
    for(int i=0;i<size;i++){
        for(int j=0;j<size-i;j++){
         if(arr[j]>arr[j+1]){
            int temp = arr[j];
            arr[j]=arr[j+1];
            arr[j+1]=temp;
         }
        }
    }
}

int main() {
```

```
    int size;

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

    int *arr = (int*)malloc(sizeof(int)*size);

    printf("Add %d elements in array :",size);
    for(int i=0;i<size;i++)
        scanf("%d",&arr[i]);

    printf("Original Array :");
    for(int j=0;j<size;j++)
    printf("%d ", arr[j]);

    sortArray(arr,size);

    printf("\nSorted array is :");
    for(int i=0;i<5;i++)
    printf("%d ",arr[i]);

    return 0;
}
```