8

```
#define MAX_SIZE 100
int main()
{
int arr[MAX_SIZE];
int i, max, min, size;
printf("Enter size of the array: ");
scanf("%d", &size);
printf("Enter elements in the array: ");
for(i=0; i<size; i++)
{
scanf("%d", &arr[i]);
}
max = arr[0];
min = arr[0];
for(i=1; i<size; i++)
{
if(arr[i] > max)
{
max = arr[i];
}
if(arr[i] < min)
{
min = arr[i];
}
}
printf("Maximum element = %d\n", max);
printf("Minimum element = %d", min);
return 0;
}
```

```
Enter size of the array: 6
Enter elements in the array: 34
56
78
90
12
34
Maximum element = 90
Minimum element = 12
```

7

```
#include <stdio.h>
int binarySearch(int arr[], int left, int right, int element) {
    while (left <= right) {
        int mid = left + (right - left) / 2;
        if (arr[mid] == element) {
            return mid;
        }
        if (arr[mid] < element) {
            left = mid + 1;
        }
        else {
            right = mid - 1;
        }
    }
    return -1;
}
int main() {
    int array[] = {12, 24, 36, 48, 60, 72, 84};
    int size = sizeof(array) / sizeof(array[0]);
    int searchElement;
    printf("Enter the element to search: ");
    scanf("%d", &searchElement);
    int result = binarySearch(array, 0, size - 1, searchElement);
    if (result != -1) {
        printf("Element %d found at index %d.\n", searchElement, result);
    } else {
        printf("Element %d not found in the array.\n", searchElement);
    }
    return 0;
}
```

```
Enter the element to search: 90
Element 90 not found in the array.
```

6

```
#include <stdio.h>
int linearSearch(int arr[], int size, int element) {
    for (int i = 0; i < size; i++) {
        if (arr[i] == element) {
            return i;
        }
    }
    return -1;
}
int main() {
    int array[] = {12, 34, 56, 78, 90, 43, 67};
    int size = sizeof(array) / sizeof(array[0]);
    int searchElement;
    printf("Enter the element to search: ");
    scanf("%d", &searchElement);
    int result = linearSearch(array, size, searchElement);
    if (result != -1) {
        printf("Element %d found at index %d.\n", searchElement, result);
    } else {
        printf("Element %d not found in the array.\n", searchElement);
    }
    return 0;
}
```

```
Enter the element to search: 90
Element 90 found at index 4.
```

5

```
#include <stdio.h>
int lastIndex(int arr[], int size, int target) {
    int lastIndex = -1;
    for (int i = size - 1; i >= 0; i--) {
        if (arr[i] == target) {
            lastIndex = i;
            break;
        }
    }
    return lastIndex;
}
int main() {
    int size, target;
    printf("Enter the size of the array: ");
    scanf("%d", &size);
    int arr[size];
    printf("Enter the elements of the array:\n");
    for (int i = 0; i < size; i++) {
        printf("Element %d: ", i + 1);
        scanf("%d", &arr[i]);
    }
    printf("Enter the number to find the last occurrence: ");
    scanf("%d", &target);
    int result = lastIndex(arr, size, target);
    if (result != -1) {
        printf("The last occurrence of %d is at index %d.\n", target, result);
    } else {
        printf("%d not found in the array.\n", target);
    }
    return 0;
}
```

```
Enter the size of the array: 6
Enter the elements of the array:
Element 1: 32
Element 2: 54
Element 3: 67
Element 4: 78
Element 5: 89
Element 6: 94
Enter the number to find the last occurrence: 78
The last occurrence of 78 is at index 3.
```

4

```
#include <stdio.h>
#include <string.h>
int main()
{
char str[] = "i am in a lab currently";
char search[] = "current";
char *ptr = strstr(str, search);
if (ptr != NULL)
{
printf("'%s' contains '%s'\n", str, search);
}
else
{
printf("'%s' doesn't contain '%s'\n", str, search);
}
return 0;
}
```

```
'i am in a lab currently' contains 'current'
```

3

```
#include <stdio.h>
#define ROWS 3
#define COLS 4
int isElementPresent(int arr[ROWS][COLS], int element) {
    int i, j;
    for (i = 0; i < ROWS; i++) {
        for (j = 0; j < COLS; j++) {
            if (arr[i][j] == element) {
                return 1;
            }
        }
    }
    return 0;
}
int main() {
    int array[ROWS][COLS] = {
        {1, 2, 3, 4},
        {5, 6, 7, 8},
        {9, 10, 11, 12}
    };
    int searchElement;
    printf("Enter the element to search: ");
    scanf("%d", &searchElement);
    if (isElementPresent(array, searchElement)) {
        printf("Element %d is present in the array.\n", searchElement);
    } else {
        printf("Element %d is not present in the array.\n", searchElement);
    }
    return 0;
}
```

```
Enter the element to search: 1
Element 1 is present in the array.
```

2

```
#include <stdio.h>
#include <string.h>
int main() {
char str[5][50], temp[50];
printf("Enter 5 words: ");
for (int i = 0; i < 5; ++i) {
fgets(str[i], sizeof(str[i]), stdin);
}
for (int i = 0; i < 5; ++i) {
for (int j = i + 1; j < 5; ++j) {
if (strcmp(str[i], str[j]) > 0) {
strcpy(temp, str[i]);
strcpy(str[i], str[j]);
strcpy(str[j], temp);
}
}
}
printf("\nIn the lexicographical order: \n");
for (int i = 0; i < 5; ++i) {
fputs(str[i], stdout);
}
return 0;
}
```

```
Enter 5 words: patner
HAT
aNd
MaNGo
animE
In the lexicographical order:
HAT
MaNGo
aNd
animE
patner
```

1

```
#include<stdio.h>
int acc();
int withdrawal();
int deposit(int n);
int main()
{
    int tot;
    acc();
    printf("Enter amount\n");
    scanf("%d",&tot);

    tot= withdrawal(tot);

    deposite(tot);
    return(0);
}
 acc()
 {
  char name[10];
  int num,tot;
  printf("Enter name\n");
  scanf("%s",name);
  printf("Enter account number\n");
  scanf("%d",&num);
 }
 int withdrawal(int n)
 {
  int amt,new_tot;
  printf("Enter amount to be withdrawed\n");
  scanf("%d",&amt);
  new_tot = n - amt;
  printf("Remaining balance= %d\n",new_tot);
  return(new_tot);

}
int deposite(int n)
{
    int a;
    printf("Enter amount to be deposited\n");
    scanf("%d",&a);
    n=n+a;
    printf("Balance=%d\n",n);
```

```
}
```

```
Enter name
vinuthna
Enter account number
001
Enter amount
400000
Enter amount to be withdrawed20000
Remaining balance= 380000
Enter amount to be deposited
90000
Balance=470000
```