

```

#include<stdio.h>
int main()
{
    int a[10],b[10],n,i,j=0;
    printf("Enter no of elements: ");
    scanf("%d",&n);
    printf("Enter elements: ");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(i=n-1;i>=0;i--)
    {
        b[j]=a[i];
        j++;
    }
    printf("The reversed array: ");
    for(i=0;i<n;i++)
    {
        printf("%d ",b[i]);
    }
    return 0;
}

```

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

```
// Function prototypes
```

```
void linearSearch(int arr[], int size, int key);
```

```
void binarySearch(int arr[], int size, int key);
```

```
void sortArray(int arr[], int size);
```

```
int main() {
```

```
    int choice, n, key, i;
```

```
    printf("Enter the number of elements: ");
```

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

```
int arr[n];

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

printf("Enter the element to search: ");
scanf("%d", &key);

printf("\nChoose search method:\n");
printf("1. Linear Search\n");
printf("2. Binary Search (array must be sorted)\n");
printf("Enter your choice (1 or 2): ");
scanf("%d", &choice);

switch (choice) {
    case 1:
        linearSearch(arr, n, key);
        break;
    case 2:
        sortArray(arr, n); // Sorting the array before binary search
        binarySearch(arr, n, key);
        break;
    default:
        printf("Invalid choice! Please select 1 or 2.\n");
}

return 0;
}
```

```
// Function to perform Linear Search
```

```
void linearSearch(int arr[], int size, int key) {  
    int i;  
    for (i = 0; i < size; i++) {  
        if (arr[i] == key) {  
            printf("Element %d found at index %d (Position %d)\n", key, i, i + 1);  
            return;  
        }  
    }  
    printf("Element %d not found in the array.\n", key);  
}
```

```
// Function to perform Binary Search (array must be sorted)
```

```
void binarySearch(int arr[], int size, int key) {  
    int low = 0, high = size - 1, mid;  
  
    while (low <= high) {  
        mid = low + (high - low) / 2;  
  
        if (arr[mid] == key) {  
            printf("Element %d found at index %d (Position %d)\n", key, mid, mid + 1);  
            return;  
        } else if (arr[mid] < key) {  
            low = mid + 1;  
        } else {  
            high = mid - 1;  
        }  
    }  
    printf("Element %d not found in the array.\n", key);  
}
```

```
// Function to sort the array using Bubble Sort

void sortArray(int arr[], int size) {

    int i, j, temp;

    for (i = 0; i < size - 1; i++) {

        for (j = 0; j < size - i - 1; j++) {

            if (arr[j] > arr[j + 1]) {

                temp = arr[j];

                arr[j] = arr[j + 1];

                arr[j + 1] = temp;

            }

        }

    }

    printf("Array sorted successfully for Binary Search.\n");

}
```