### Week 10

## Q1)

```
[] ⟨ ⟨ occ Share
                                                                                     Run
main.c
                                                                                                Output
 1 #include <stdio.h>
                                                                                               Enter a number: 2 4 3
                                                                                               Sum of digits: 2
 3 - int sumOfDigits(int num) {
 4 -
      if (num == 0) {
 5
          return 0;
                                                                                               === Code Execution Successful ===
 6
 7
       return (num % 10) + sumOfDigits(num / 10);
 8 }
 9
10 - int main() {
11
       int number;
12
       printf("Enter a number: ");
13
      scanf("%d", &number);
14
15
       int result = sumOfDigits(number);
       printf("Sum of digits: %d\n", result);
16
17
18
       return 0;
19 }
```

# **Q2)**

```
[] ( c Share
                                                                                       Run
                                                                                                  Output
 main.c
 1 #include <stdio.h>
                                                                                                Enter a string: attacool
 2 #include <string.h>
                                                                                                Reversed string: loocatta
 4 - void reverseString(char str[], int start, int end) {
 5 * if (start >= end) {
                                                                                                === Code Execution Successful ===
 6
 7
      }
      char temp = str[start];
str[start] = str[end];
 8
 9
     str[end] = temp;
       reverseString(str, start + 1, end - 1);
11
12 }
13
14 - int main() {
     char str[100];
15
       printf("Enter a string: ");
16
       scanf("%s", str);
17
18
19
      int len = strlen(str);
20
       reverseString(str, 0, len - 1);
21
22
       printf("Reversed string: %s\n", str);
23
24
        return 0;
25 }
```

Q3)

```
[] ( c Share
                                                                                      Run
main.c
                                                                                                  Output
 1 #include<stdio.h>
                                                                                                How many seats are available?: 5
                                                                                                Enter flight number: 22
2 #include<string.h>
3 typedef struct flight
                                                                                                Enter destination city: karachi
4 - {
                                                                                                Enter departure city: lahore
       int flight_number;
                                                                                                Enter date : 22/12/24
6
                                                                                                Flight booked succesfully!
       char dest[30];
       char dep[30];
       char date[30];
                                                                                                Flight Number: 22
8
                                                                                                Destination City: karachi
       int seats;
10 }flight;
                                                                                                Departure City: lahore
11 int book_a_seat(flight* f)
                                                                                                Date:22/12/24
                                                                                                Seats available: 4
12 - {
13
       if(f->seats==0)
                                                                                                === Code Execution Successful ===
14 -
15
       printf("All seats are booked");
16
       return 0;
17
18
       else
19 -
       {
20
       printf("Enter flight number: ");
       scanf("%d",&f->flight_number);
21
22
     printf("Enter destination city: ");
23
      scanf(" %[^\n]",f->dest);
24
       printf("Enter departure city: ");
      scanf(" %[^\n]",f->dep);
25
26
     printf("Enter date : ");
27
       scanf(" %[^\n]",f->date);
28
       printf("Flight booked succesfully!\n\n");
29
       f->seats-=1:
30
       return 1;
31
32 }
```

```
void display(flight f)
 34 - {
         printf("Flight Number: %d\n",f.flight_number);
 35
         printf("Destination City: %s\n",f.dest);
 36
 37
         printf("Departure City: %s\n",f.dep);
         printf("Date:%s \n",f.date);
 38
 39
         printf("Seats available: %d",f.seats);
 40
 41
     int main()
 42 - {
 43
         flight f1;
         printf("How many seats are available?: ");
 44
         scanf("%d", &f1.seats);
 45
         if(book_a_seat(&f1)!=0)
 46
 47 -
             display(f1);
 48
 49
         }
Ε0
```

#### Q4)

```
☐ G Share Run
main.c
                                                                                                   Output
                                                                                                  Choose from following:
 1 #include<stdio.h>
 2 #include<string.h>
                                                                                                  1. Add Record
 3 #define mcount 100
                                                                                                 2. Search by Genre
 4 typedef struct movie
                                                                                                 3. Display all records
 5 - {
                                                                                                 Any other key to exit
        char title[50]:
                                                                                                 choice: 1
 6
        char genre[20];
                                                                                                 Enter the title of the movie: Conjuring
 8
        char director[30];
                                                                                                 Enter the genre of the movie: Horror
        int release_year;
 9
                                                                                                 Director of the movie: Naheel
                                                                                                 Enter the release year of the movie: 2016
       float rating;
                                                                                                 Enter the ratings of the movie: 8.8
11 }movie:
12 void add_movies(movie* m,int* ind)
                                                                                                 movie added succesfully!
13 - {
                                                                                                 Choose from following:
        if(*ind>=mcount)
14
15 -
                                                                                                  1. Add Record
            printf("maximum movies added!");
                                                                                                 2. Search by Genre
16
17
                                                                                                 3. Display all records
18
                                                                                                 Any other key to exit
                                                                                                 choice: 2
19
        else
20 -
                                                                                                 Search by genre: Horror
        printf("Enter the title of the movie: ");
21
22
        scanf(" %[^\n]",m[*ind].title);
                                                                                                 Record 1
23
       printf("Enter the genre of the movie: ");
                                                                                                 Title: Conjuring
       scanf(" %[^\n]",m[*ind].genre);
24
                                                                                                 Genre: Horror
25
        printf("Director of the movie: ");
                                                                                                 Director: Naheel
26
       scanf(" %[^\n]",m[*ind].director);
                                                                                                 Release Year: 2016
27
       printf("Enter the release year of the movie: ");
                                                                                                 Ratings: 8.800000
28
       scanf("%d",&m[*ind].release_year);
       printf("Enter the ratings of the movie: ");
29
30
        scanf("%f",&m[*ind].rating);
                                                                                                 Choose from following:
31
        printf("movie added succesfully! ");
                                                                                                 1. Add Record
32
        (*ind)++;
                                                                                                 2. Search by Genre
                                                                                                 3. Display all records
33
34 }
                                                                                                 Any other key to exit
35 void display(movie* m,int ind)
                                                                                                 choice: 3
```

```
37
        int i:
38
        for(i=0;i<ind;i++)</pre>
39 +
           printf("\nRecord %d",i+1);
40
41
           printf("\nTitle: %s\n",m[i].title);
            printf("Genre: %s\n",m[i].genre);
42
43
            printf("Director: %s\n",m[i].director);
44
            printf("Release Year: %d\n",m[i].release_year);
45
            printf("Ratings: %f\n",m[i].rating);
46
47 }
48 void updatebygenre(movie* m,int ind)
49 - {
50
        int i,found;
51
        char g[20];
52
        printf("Search by genre: ");
53
        scanf(" %[^\n]",g);
        \quad \text{for(i=0;i<ind;i++)} \quad
54
55 +
56
            found=0:
57
            if(strcmp(m[i].genre,g)==0)
58 -
            {
59
                found=1:
60
            }
61
        if(found)
62 -
63
            printf("\nRecord %d",i+1);
            printf("\nTitle: %s\n",m[i].title);
64
65
            printf("Genre: %s\n",m[i].genre);
66
            printf("Director: %s\n",m[i].director);
67
            printf("Release Year: %d\n",m[i].release_year);
68
            printf("Ratings: %f\n",m[i].rating);
69
```

```
70 }
 71
     if(!found)
 72
      printf("Record not found!\n");
73 }
74 int main()
75 ₹ {
       int ind=0;
 76
 77
       movie m[mcount];
78    int ch;
79    while(1)
 ₹ 08
     printf("Choose from following: \n");
 81
82 printf("1. Add Record\n");
 83
    printf("2. Search by Genre\n");
 84 printf("3. Display all records\n");
 85 printf("Any other key to exit\n");
 86 printf("choice: ");
       scanf("%d",&ch);
 87
 88
       if(ch<1 || ch>3)
 89 +
     {
 90
          break;
 91
      }
 92
      switch(ch)
 93 - {
 94
      case 1:
 95
      add_movies(m,&ind);
96
       printf("\n\n");
97
       break;
       case 2:
98
         updatebygenre(m,ind);
99
100
       printf("\n\n");
101
         break;
102
         case 3:
103
         display(m,ind);
104
       printf("\n\n");
```

### Q5)

```
[] 🕓 🗬 Share Run
                                                                                                  Output
 main.c
                                                                                                 Enter the size of the array: 3
 1 #include <stdio.h>
                                                                                                 Enter 3 elements: 2 4 5 3 6
 3 - void printArrayRecursive(int arr[], int size) {
                                                                                                Array elements are: 2 4 5
 4 -
        if (size == 0) {
 5
           return;
                                                                                                 === Code Execution Successful ===
 6
        printf("%d ", arr[0]);
 7
 8
        printArrayRecursive(arr + 1, size - 1);
 9 }
10
11 - int main() {
12
        int size;
13
        printf("Enter the size of the array: ");
        scanf("%d", &size);
14
15
        int arr[size];
16
17
        printf("Enter %d elements: ", size);
        for (int i = 0; i < size; i++) {
18 -
19
          scanf("%d", &arr[i]);
20
21
22
        printf("Array elements are: ");
23
        printArrayRecursive(arr, size);
24
25
        return 0;
26 }
```

## **Q6)**

```
[] Share Run
main.c
                                                                                                 Output
                                                                                                Enter coordinates of x and y for point 1: 2 4
1 #include<stdio.h>
 2 #include<string.h>
                                                                                                Enter coordinates of x and y for point 2: 3 7
3 #include<math.h>
                                                                                                Distance: 3.162278
4 typedef struct points
                                                                                                Enter test point(x,y): 5 3
                                                                                                Enter bottom left (x,y): 2 6
5 + {
6
       float x:
                                                                                                Enter top right (x,y): 1 4
       float y;
7
                                                                                                point (5.00,3.00) does not lies in the rectangular boundary
8 }points;
9 float distance(points p1,points p2)
                                                                                                === Code Execution Successful ===
10 - {
11
       float dist=sqrt(pow(p1.x-p2.x,2)+pow(p1.y-p2.y,2));
12
       return dist;
13 }
14 void check(points test, points bottom, points top)
15 - {
        float xmax,xmin;
16
17
       float ymax,ymin;
       if(bottom.x>=top.x)
18
19 -
           xmax=bottom.x:
20
21
           xmin=top.x;
22
       else if(bottom.x<=top.x)</pre>
23
24 +
25
           xmin=bottom.x;
26
           xmax=top.x;
27
28
29
       if(bottom.y>=top.y)
30 +
31
           ymax=bottom.y;
32
           ymin=top.y;
33
34
       else if(bottom.y<=top.y)</pre>
35 +
```

```
ymin=bottom.y;
36
37
            ymax=top.y;
38
        }
39
40
        if((test.x>=xmin && test.x<=xmax)&&(test.y>=ymin && test.y<=ymax))</pre>
41 -
42
            printf("point (%.2f,%.2f) lies in the rectangular boundary\n",test.x,test.y);
43
        }
44
        else
45 -
        {
            printf("point (\%.2f,\%.2f)) does not lies in the rectangular boundary\n",test.x,test
46
47
        }
48
49 }
50 int main()
51 ₹ {
52
        points p1,p2;
53
        points test,bottom,top;
54
        printf("Enter coordinates of x and y for point 1: ");
55
        scanf("%f %f",&p1.x,&p1.y);
56
        printf("Enter coordinates of x and y for point 2: ");
57
        scanf("%f %f",&p2.x,&p2.y);
58
        printf("Distance: %f\n", distance(p1,p2));
59
        printf("Enter test point(x,y): ");
60
        scanf("%f %f",&test.x,&test.y);
61
        printf("Enter bottom left (x,y): ");
62
        scanf("%f %f",&bottom.x,&bottom.y);
63
        printf("Enter top right (x,y): ");
        scanf("%f %f",&top.x,&top.y);
64
65
     check(test,bottom,top);
```

## **Q7)**

```
[] ⟨ ⟨ Share Run
 main.c
                                                                                                  Output
 1 #include<stdio.h>
                                                                                                 How many temperatures do you want to enter?: 3
 2 #define MAX_TEMP 100
                                                                                                 Enter temps:
 3 int check()
                                                                                                 98 100 102
 4 - {
 5
        static int count=0;
                                                                                                 1 times temperature exceeded the max temperature
 6
        count++;
        return count;
                                                                                                 === Code Execution Successful ===
 8 }
 9 int main()
 10 - {
11
 12
        int n,i,store=0;
13
        printf("How many temperatures do you want to enter?: ");
        scanf("%d",&n);
14
15
        float arr[n];
16
        printf("Enter temps:\n");
17
        for(i=0;i<n;i++)</pre>
18 -
            scanf("%f",&arr[i]);
19
20
            if(arr[i]>MAX_TEMP)
21 -
            {
22
                store=check();
23
24
25
        printf("\n%d times temperature exceeded the max temperature",store);
        return 0;
27 }
```

### Q8)

```
[] ← ← Share Run
main.c
                                                                                                    Output
 1 #include<stdio.h>
                                                                                                   Enter your choice from following:
 2 #include<string.h>
 3 #define maxind 100
                                                                                                   1. Add a record
 4 typedef struct cars
                                                                                                   2. Display Record
                                                                                                  3. Search by make or model
 5 + {
        char make[30];
                                                                                                   Any other button to exit
 7
                                                                                                  Choice: 1
        char model[30];
 8
        int year;
                                                                                                   Enter make of the car: German
 9
        float price;
                                                                                                   Enter model of the car: X
10
        float mileage;
                                                                                                   Enter release year: 2019
11 }cars;
                                                                                                   Enter price in usd: 2500
12 void add(cars* c1,int* i)
                                                                                                   Enter mileage: 450
13 + {
14
        if(*i>maxind)
                                                                                                   Enter your choice from following:
                                                                                                   1. Add a record
15 -
16
            printf("Maximum cars added!");
                                                                                                   2. Display Record
17
                                                                                                   3. Search by make or model
        }
18
        else
                                                                                                   Any other button to exit
19 -
                                                                                                   Choice: 3
20
        printf("Enter make of the car: ");
21
        scanf(" %[^\n]",c1->make);
                                                                                                   Search by
        printf("Enter model of the car: ");
                                                                                                   1.Make
22
23
        scanf(" %[^\n]",c1->model);
                                                                                                   2.Model
24
        printf("Enter release year: ");
                                                                                                   Choice: 2
        scanf("%d",&c1->year);
25
26
        printf("Enter price in usd: ");
                                                                                                   Enter model: X
27
        scanf("%f",&c1->price);
                                                                                                   Car 1 data
28
        printf("Enter mileage: ");
                                                                                                   make of the car: German
29
        scanf("%f",&c1->mileage);
                                                                                                   model of the car:X
30
        (*i)++;
                                                                                                   release vear:2019
31
                                                                                                   price in usd:2500.000
32 }
                                                                                                   mileage:450.000
```

```
33 void display(cars* c1,int ind)
34 - {
35
        int i:
        for(i=0;i<ind;i++)</pre>
36
37 -
        printf("\nCar %d data\n",i+1);
38
        printf("make of the car: %s\n",c1[i].make);
39
        printf("model of the car:%s\n",c1[i].model);
40
41
        printf("release year:%d\n",c1[i].year);
42
        printf("price in usd:%.3f\n",c1[i].price);
43
        printf("mileage:%.3f\n",c1[i].mileage);
44
45 }
46 void search(cars* c1,int ind,int ch)
47 - {
48
        int found=0,i;
49
        if(ch==1)
50 +
        {
51
            char mk[30];
52
            printf("\nEnter make: ");
53
            scanf(" %[^\n]",mk);
54
            for(i=0;i<ind;i++)</pre>
55 +
56
                if(strcmp(c1[i].make,mk)==0)
57 ₹
                {
58
                    found=1;
59
                }
60
                if(found)
61 -
                {
62
                    printf("Car %d data\n",i+1);
                    printf("make of the car: %s\n",c1[i].make);
63
                    printf("model of the car:%s\n",c1[i].model);
65
                    printf("release year:%d\n",c1[i].year);
66
                    printf("price in usd:%.3f\n",c1[i].price);
```

```
67
                     printf("mileage:%.3f\n",c1[i].mileage);
68
                 }
69
            }
70
            if(!found)
71 -
            {
72
                 printf("Make not found!\n");
73
74
75
        else if(ch==2)
76 +
        {
77
            found=0;
          char mod[30];
78
           printf("\nEnter model: ");
79
80
            scanf(" %[^\n]",mod);
81
            for(i=0;i<ind;i++)</pre>
82 -
83
                 if(strcmp(c1[i].model,mod)==0)
84 -
                 {
                     found=1;
86
              }
87
               if(found)
88 -
                   printf("Car %d data\n",i+1);
89
90
                    printf("make of the car: %s\n",c1[i].make);
                printf("model of the car:%s\n",c1[i].model);
printf("release year:%d\n",c1[i].year);
91
92
                printf("price in usd:%.3f\n",c1[i].price);
93
94
                    printf("mileage:%.3f \n",c1[i].mileage);
95
                 }
96
            }
97
            if(!found)
98 +
            {
99
                 printf("Model not found!\n");
100
```

```
101
102
        else
        printf("Invalid choice!\n");
103
104 }
105 int main()
106 - {
        cars c[maxind];
107
108
       int i=0;
109
       while(1)
110 -
111
       printf("\nEnter your choice from following:\n");
112
      printf("1. Add a record\n");
113 printf("2. Display Record\n");
     printf("3. Search by make or model\n");
114
     printf("Any other button to exit");
115
     printf("\nChoice: ");
116
117
       int choice;
118
        scanf("%d",&choice);
119
       if(choice<1 || choice>3)
120
       return 0;
121
      switch(choice)
122 -
        case 1:
123
       add(c,&i);
124
        break;
125
126
        case 2:
127
        display(c,i);
128
        break;
129
        case 3:
         printf("\nSearch by\n1.Make\n2.Model\nChoice: ");
130
          scanf("%d",&choice);
131
132
           search(c,i,choice);
133
       }
134
       }
135 return 0;
```

### Q9)

```
[] C C Share Run
main.c
                                                                                                   Output
 1 #include <stdio.h>
                                                                                                 Enter the size of the array: 4
                                                                                                 Enter 4 elements: 24 47 8 15
 3 - void bubbleSortRecursive(int arr[], int n) {
                                                                                                 Sorted array: 8 15 24 47
 4 +
       if (n == 1) {
5
           return;
                                                                                                 === Code Execution Successful ===
 6
 8 -
        for (int i = 0; i < n - 1; i++) {
 9 +
           if (arr[i] > arr[i + 1]) {
10
              int temp = arr[i];
11
                arr[i] = arr[i + 1];
12
                arr[i + 1] = temp;
13
14
15
        bubbleSortRecursive(arr, n - 1);
16
17 }
18
19 - int main() {
20
        int size;
        printf("Enter the size of the array: ");
21
        scanf("%d", &size);
22
23
        int arr[size];
24
        printf("Enter %d elements: ", size);
25
26 -
        for (int i = 0; i < size; i++) {
27
          scanf("%d", &arr[i]);
28
29
30
        bubbleSortRecursive(arr, size);
31
32
        printf("Sorted array: ");
33 +
        for (int i = 0; i < size; i++) {
34
           printf("%d ", arr[i]);
35
```

## Q10)

```
Output
1 #include<stdio.h>
                                                                                               Choose from the following:
2 #include<string.h>
                                                                                               1. Add records
3 #define maxind 100
                                                                                               2. Display all Records
4 typedef struct travel
                                                                                               3. Book a package
5 - {
                                                                                               Other key to exit
6
       char name[30];
                                                                                               Choice: 1
       char dest[30];
8
       float duration;
                                                                                               Enter name of the package: Premium
9
       float cost;
                                                                                               Enter destination: Las Vegas
10
      int seats;
                                                                                               Enter duration: 3
11 }travel;
                                                                                               Enter cost in usd: 110
12 void add(travel* t,int* i)
                                                                                               Enter seats available: 6
13 - {
14
       if(*i>maxind)
                                                                                               Choose from the following:
15 -
                                                                                               1. Add records
16
           printf("\nMaximum cars added!");
                                                                                              2. Display all Records
17
                                                                                               3. Book a package
18
       else
                                                                                               Other key to exit
19 -
                                                                                               Choice: 3
20
       printf("\nEnter name of the package: ");
       scanf(" %[^\n]",t->name);
                                                                                               Enter the name of package to book: Premium
       printf("Enter destination: ");
                                                                                               Package "Premium" booked
23
       scanf(" %[^\n]",t->dest);
      printf("Enter duration: ");
                                                                                               Choose from the following:
       scanf("%f",&t->duration);
                                                                                               1. Add records
      printf("Enter cost in usd: ");
                                                                                               2. Display all Records
27
       scanf("%f",&t->cost);
                                                                                               3. Book a package
      printf("Enter seats available: ");
                                                                                              Other key to exit
29
       scanf("%d",&t->seats);
                                                                                               Choice: 2
30
      (*i)++;
31
                                                                                               Package 1
32 }
                                                                                               Name of the package: Premium
33 void display(travel* t,int i)
                                                                                               Destination: Las Vegas
                                                                                               Duration: 3.000000
    int ind;
                                                                                               Cost in usd: 110.000000
```

```
36
        for(ind=0;ind<i;ind++)</pre>
37 ₹
        printf("\nPackage %d\n",ind+1);
38
39
        printf("Name of the package: %s\n",t[ind].name);
        printf("Destination: %s\n",t[ind].dest);
40
        printf("Duration: %f\n",t[ind].duration);
41
        printf("Cost in usd: %f\n",t[ind].cost);
42
        printf("Seats available: %d\n",t[ind].seats);
43
44
        }
45 }
46 void book(travel* t,int ind)
47 ₹ {
48
        char name[30];
49
        int i,found;
        printf("\nEnter the name of package to book: ");
50
51
        scanf(" %[^\n]",name);
        for(i=0;i<ind;i++)</pre>
52
53 ₹
        {
            if(strcmp(t->name,name)==0)
54
55 +
            {
                found=1;
56
                break;
57
58
            }
59
        if(found)
60
61 ₹
        if(t[i].seats==0)
62
63 +
            printf("Max seats booked!\n");
64
65
        }
66
        else
67 -
```

```
68
            t->seats-=1;
69
            printf("Package \"%s\" booked\n",t[i].name);
70
        }
71
        }
72 }
73 int main()
74 ₹ {
75
        travel t1[maxind];
76
        int index=0;
77
        int choice;
78
        while(1)
79 +
        {
             printf("\nChoose from the following:\n");
80
            printf("1. Add records\n");
81
            printf("2. Display all Records\n");
82
            printf("3. Book a package\n");
83
            printf("Other key to exit\n");
84
            printf("Choice: ");
85
            scanf("%d",&choice);
86
87
            switch(choice)
88 ₹
            {
89
                case 1:
90
                add(t1,&index);
91
                break;
                case 2:
92
93
                display(t1,index);
94
                break;
95
                case 3:
96
                book(t1,index);
97
                break;
                default:
98
                return 0;
99
100
            }
101
        }
102
        return 0;
```

### Q11)

```
Share Run
main.c
                                                                                                Output
 3 #define conv 0.001
                                                                                               Choose from following:
 4 int mkm(int meter)
                                                                                               1. Meters to kilometers
 5 - {
                                                                                               Any other key to exit
 6
        static int count=0;
                                                                                               Choice: 1
 7
       if(meter!=0)
                                                                                               Enter distance in meters: 1500
 8 -
                                                                                               Kilometers: 1.500
       printf("Kilometers: %.3f\n",meter*conv);
 9
                                                                                               Choose from following:
10
       count++;
                                                                                               1. Meters to kilometers
                                                                                               Any other key to exit
11
12
       return count;
                                                                                               Choice:
13 }
14 int main()
15 + {
16
       int ch;
17
       int m,km;
18
       while (1)
19 -
           printf("Choose from following: \n");
20
21
           printf("1. Meters to kilometers\n");
           printf("Any other key to exit\n");
22
23
          printf("Choice: ");
24
           scanf("%d",&ch);
25
           switch(ch)
26 -
27
               case 1:
               printf("Enter distance in meters: ");
28
29
               scanf("%d",&m);
30
               mkm(m);
31
               break;
32
33
               printf("Function was called %d times",mkm(0));
34
35
36
37
      printf("Function was called %d times",mkm(0));
```

## Q12)

```
main.c
                                                                                                Output
 1 #include <stdio.h>
                                                                                               Enter the size of the array: 4
                                                                                               Enter 4 elements: 5 12 26 8
 3 - int linearSearch(int arr[], int size, int target, int index) {
                                                                                               Enter the target element to search for: 26
  4 +
        if (index >= size) {
                                                                                               Element found at index 2
  5
           return -1; // Target not found
  6
  7 -
       if (arr[index] == target) {
                                                                                               === Code Execution Successful ===
  8
            return index; // Target found
  9
 10
        return linearSearch(arr, size, target, index + 1); // Continue searching
 11 }
 12
 13 - int main() {
 14
        int size, target;
 15
        printf("Enter the size of the array: ");
        scanf("%d", &size);
 16
 17
 18
        int arr[size];
        printf("Enter %d elements: ", size);
 19
        for (int i = 0; i < size; i++) {
 20 -
         scanf("%d", &arr[i]);
21
 22
        }
 23
 24
        printf("Enter the target element to search for: ");
25
        scanf("%d", &target);
 26
27
        int result = linearSearch(arr, size, target, 0);
28 -
        if (result != -1) {
 29
            printf("Element found at index %d\n", result);\\
 30 -
        } else {
 31
           printf("Element not found in the array\n");
 32
 33
 34
35 }
```