Problem 01:

```
Lab-10_24k-2000 > C problem_01.c > ...
                                                                     PS C:\Users\DELL\OneDrive\De
      #include <stdio.h>
                                                                     sktop\lab10> cd "c:\Users\DE
      // recursive function that takes an array and
                                                                     LL\OneDrive\Desktop\lab10\La
       // its size as input and prints all the element
                                                                     b-10_24k-2000\"; if ($?) {
       void printArray(int arr[], int size, int index)
                                                                     gcc problem 01.c -o problem
  5
                                                                     01 } ; if ($?) { .\problem_0
                                                                    1 }
           if (index == size)
  6
                                                                    Array elements: 1 2 3 4 5
               return;
                                                                    PS C:\Users\DELL\OneDrive\De
  8
           printf("%d ", arr[index]);
                                                                     sktop\lab10\Lab-10 24k-2000>
           printArray(arr, size, index + 1);
  9
 10
 11
       int main()
 12
 13
 14
           int arr[] = \{1, 2, 3, 4, 5\};
           int size = sizeof(arr) / sizeof(arr[0]);
 15
           printf("Array elements: ");
 16
           printArray(arr, size, 0);
 17
 18
           return 0;
 19
```

Problem 02:

```
rs c. lusers lucct luneurive luesktup liau
     #include <stdio.h>
                                                                                                10> cd "c:\Users\DELL\OneDrive\Deskto
     #include <math.h>
                                                                                                p\lab10\Lab-10 24k-2000\"; if ($?) {
     // structure to represent a point in 2D space with x and y coordinates. Impl
                                                                                                 gcc problem_02.c -o problem_02 } ; i
                                                                                                f ($?) { .\problem_02 }
     // functions to calculate the distance between two points and to check if a
                                                                                                Input x co-ordinate of point p1: 2
     // a specific rectangular boundary
                                                                                                Input y co-ordinate of point p1: 3
     typedef struct
                                                                                                Input x co-ordinate of point p2: 1
                                                                                                Input y co-ordinate of point p2: 4
         float x;
                                                                                                Distance between p1 and p2: 1.41
         float y;
                                                                                                Point 1 is within boundary.
10
     } point;
                                                                                                Point 2 is within boundary.
11
                                                                                                PS C:\Users\DELL\OneDrive\Desktop\lab
12
     float calc_dis(point p1, point p2)
                                                                                                10\Lab-10 24k-2000>
13
         return sqrt(pow(p2.x - p1.x, 2) + pow(p2.y - p1.y, 2));
15
     int boundary_check(point p, point topleft_corner, point bottomright_corner)
17
18
19
         return (p.x >= topleft_corner.x && p.x <= bottomright_corner.x &&
20
                 p.y >= bottomright_corner.y && p.y <= topleft_corner.y);</pre>
21
22
     int main()
23
24
25
         point p1, p2;
         point topleft_corner = {0, 5};
26
         point bottomright_corner = {5, 0};
27
28
         printf("Input x co-ordinate of point p1: ");
29
         scanf("%f", &p1.x);
30
         printf("Input y co-ordinate of point p1: ");
31
         scanf("%f", &p1.y);
32
         printf("Input x co-ordinate of point p2: ");
33
```

```
Lab-10_24k-2000 > C problem_02.c > O main()
                                                                                                 PS C:\Users\DELL\OneDrive\Desktop\lab
 23
      int main()
                                                                                                 10> cd "c:\Users\DELL\OneDrive\Deskto
          printf("Input x co-ordinate of point p2: ");
 33
                                                                                                 p\lab10\Lab-10_24k-2000\"; if ($?) {
                                                                                                  gcc problem 02.c -o problem 02 }; i
 34
          scanf("%f", &p2.x);
                                                                                                 f ($?) { .\problem 02 }
          printf("Input y co-ordinate of point p2: ");
                                                                                                 Input x co-ordinate of point p1: 2
          scanf("%f", &p2.y);
                                                                                                 Input y co-ordinate of point p1: 3
                                                                                                 Input x co-ordinate of point p2: 1
          printf("Distance between p1 and p2: %.2f\n", calc_dis(p1, p2));
                                                                                                 Input y co-ordinate of point p2: 4
          if (boundary_check(p1, topleft_corner, bottomright_corner))
                                                                                                 Distance between p1 and p2: 1.41
                                                                                                 Point 1 is within boundary.
              printf("Point 1 is within boundary.\n");
                                                                                                 Point 2 is within boundary.
 42
                                                                                                 PS C:\Users\DELL\OneDrive\Desktop\lab
          else
                                                                                                 10\Lab-10 24k-2000>
              printf("Point 1 is not within boundary.\n");
          if (boundary check(p2, topleft corner, bottomright corner))
              printf("Point 2 is within boundary.\n");
 52
          else
              printf("Point 2 is not within boundary.\n");
 54
          return 0;
```

Problem 03:

```
Lab-10_24k-2000 > C problem_03.c > ...
                                                                                                                     PS C:\Users\DELL\OneDrive\Desktop\lab10> cd
      #include <stdio.h>
                                                                                                                     "c:\Users\DELL\OneDrive\Desktop\lab10\Lab-10
      #define MAX_TEMP 50
                                                                                                                     _24k-2000\" ; if ($?) { gcc problem_03.c -o
      // program with a constant that defines the maximum allowable temperature (in Celsius
                                                                                                                     problem_03 } ; if ($?) { .\problem_03 }
      void checkTemperature(float temp)
                                                                                                                     Enter the number of temperatures: 2
                                                                                                                     Enter the temperatures:
                                                                                                                     Temperature 1: 36.2
          static int count = 0;
                                                                                                                     Temperature 2: 45.1
          if (temp > MAX_TEMP)
                                                                                                                     Temperature: 36.20, Exceeded Limit: 0 times
              count++;
                                                                                                                     Temperature: 45.10, Exceeded Limit: 0 times
          printf("Temperature: %.2f, Exceeded Limit: %d times\n", temp, count);
                                                                                                                     PS C:\Users\DELL\OneDrive\Desktop\lab10\Lab-
                                                                                                                     10_24k-2000>
      int main()
          int size;
          printf("Enter the number of temperatures: ");
          scanf("%d", &size);
          float temperatures[size];
          printf("Enter the temperatures:\n");
          for (int i = 0; i < size; i++)</pre>
              printf("Temperature %d: ", i + 1);
              scanf("%f", &temperatures[i]);
          for (int i = 0; i < size; i++)
              checkTemperature(temperatures[i]);
          return 0;
```

Problem 04:

```
Lab-10_24k-2000 > C problem_04.c > 分 addCar(Car [], int *)
                                                                                                                                                             PS C:\Users\DELL\OneDrive\Desktop\la
 1 #include <stdio.h>
                                                                                                                                                             b10> cd "c:\Users\DELL\OneDrive\Desk
     #include <string.h>
                                                                                                                                                              top\lab10\Lab-10_24k-2000\"; if ($?
     // structure to store details about cars in a dealership, including make, model,
                                                                                                                                                             ) { gcc problem 04.c -o problem 04 }
     // year, price, and mileage. Write a program that allows users to add new cars, display a
                                                                                                                                                              ; if ($?) { .\problem_04 }
     // list of available cars, and search for cars by make or model
     typedef struct
                                                                                                                                                             1. Add Car
                                                                                                                                                             2. List Cars
                                                                                                                                                             3. Search Cars
         char make[20];
                                                                                                                                                             4. Exit
         char model[20];
                                                                                                                                                             Choice: 1
         int year;
                                                                                                                                                             Enter car make, model, year, price,
         float price;
                                                                                                                                                             mileage: honda
         float mileage;
                                                                                                                                                             civic
      } Car;
                                                                                                                                                              2023
                                                                                                                                                              3000000
      void addCar(Car cars[], int *count)
                                                                                                                                                              24
         printf("Enter car make, model, year, price, mileage: ");
                                                                                                                                                             1. Add Car
          scanf("%s %s %d %f %f", cars[*count].make, cars[*count].model, &cars[*count].year, &cars[*count].price, &cars[*count].mileage);
                                                                                                                                                             2. List Cars
19
          (*count)++;
                                                                                                                                                             3. Search Cars
                                                                                                                                                             4. Exit
                                                                                                                                                              Choice: 2
                                                                                                                                                              honda civic 2023 $3000000.00 24.00 m
      void listCars(Car cars[], int count)
                                                                                                                                                              iles
          for (int i = 0; i < count; i++)
                                                                                                                                                             1. Add Car
                                                                                                                                                             2. List Cars
              printf("%s %s %d $%.2f %.2f miles\n", cars[i].make, cars[i].model, cars[i].year, cars[i].price, cars[i].mileage);
                                                                                                                                                             3. Search Cars
                                                                                                                                                             4. Exit
                                                                                                                                                             Choice: 3
                                                                                                                                                             Enter make to search: honda
      void searchCar(Car cars[], int count, char *make)
                                                                                                                                                              Found: honda civic 2023 $3000000.00
                                                                                                                                                              24.00 miles
          for (int i = 0; i < count; i++)
                                                                                                                                                             1. Add Car
                                                                                                                                                             2. List Cars
              if (strcmp(cars[i].make, make) == 0)
                                                                                                                                                             3. Search Cars
                                                                                                                                                             4. Exit
                  printf("Found: %s %s %d $%.2f %.2f miles\n", cars[i].make, cars[i].model, cars[i].year, cars[i].price, cars[i].mileage)
                                                                                                                                                             Choice: 4
                                                                                                                                                             PS C:\Users\DELL\OneDrive\Desktop\la
                                                                                                                                                             b10\Lab-10 24k-2000>
```

```
Lab-10_24k-2000 > C problem_04.c > 分 main()
                                                                                                                             1. Add Car
                                                                                                                             2. List Cars
      int main()
                                                                                                                             3. Search Cars
                                                                                                                             4. Exit
          Car cars[50];
                                                                                                                             Choice: 1
          int count = 0;
                                                                                                                             Enter car make, model, year, price,
          int choice;
                                                                                                                             mileage: honda
          do
                                                                                                                             civic
                                                                                                                             2023
              printf("\n1. Add Car\n2. List Cars\n3. Search Cars\n4. Exit\nChoice: ");
                                                                                                                             3000000
              scanf("%d", &choice);
                                                                                                                             24
              if (choice == 1)
                                                                                                                             1. Add Car
                  addCar(cars, &count);
                                                                                                                             2. List Cars
              else if (choice == 2)
                                                                                                                             3. Search Cars
                  listCars(cars, count);
                                                                                                                             4. Exit
              else if (choice == 3)
                                                                                                                             Choice: 2
                                                                                                                             honda civic 2023 $3000000.00 24.00 m
                  char make[20];
                                                                                                                             iles
                  printf("Enter make to search: ");
 57
                  scanf("%s", make);
                                                                                                                             1. Add Car
                  searchCar(cars, count, make);
                                                                                                                             2. List Cars
                                                                                                                             3. Search Cars
                                                                                                                             4. Exit
          } while (choice != 4);
                                                                                                                             Choice: 3
          return 0;
                                                                                                                             Enter make to search: honda
                                                                                                                             Found: honda civic 2023 $3000000.00
                                                                                                                             24.00 miles
                                                                                                                             1. Add Car
                                                                                                                             2. List Cars
                                                                                                                             3. Search Cars
                                                                                                                             4. Exit
                                                                                                                             Choice: 4
```

Problem 05:

```
Lab-10_24k-2000 > C problem_05.c > O main()
                                                                            PS C:\Users\DELL\OneDrive\Desktop\la
      #include <stdio.h>
                                                                            b10> cd "c:\Users\DELL\OneDrive\Desk
       // Recursive function bubbleSort that takes an array and
                                                                           top\lab10\Lab-10 24k-2000\"; if ($?
       // bubble sort algorithm by repeatedly comparing adjacer
                                                                            ) { gcc problem_05.c -o problem_05 }
       // they are in the wrong order
                                                                             ; if ($?) { .\problem_05 }
       void bubbleSortPass(int arr[], int n)
                                                                            Enter the size of the array: 4
                                                                            Enter 4 elements of the array:
                                                                            54
           if (n == 1)
                                                                            21
               return;
                                                                            6
           for (int i = 0; i < n - 1; i++)
 10
                                                                           Original array: 54 21 6 4
 11
                                                                           Sorted array: 4 6 21 54
               if (arr[i] > arr[i + 1])
 12
                                                                            PS C:\Users\DELL\OneDrive\Desktop\la
 13
                                                                           b10\Lab-10_24k-2000>
                   int temp = arr[i];
 14
                   arr[i] = arr[i + 1];
 15
                   arr[i + 1] = temp;
 16
 17
 18
           bubbleSortPass(arr, n - 1);
 19
 20
 21
       void bubbleSort(int arr[], int n)
 22
 23
 24
           if (n \le 1)
 25
               return;
           bubbleSortPass(arr, n);
 26
           bubbleSort(arr, n - 1);
 27
 28
 29
```

```
Lab-10_24k-2000 > C problem_05.c > 分 main()
                                                                           PS C:\Users\DELL\OneDrive\Desktop\la
      void printArray(int arr[], int size)
 30
                                                                           b10> cd "c:\Users\DELL\OneDrive\Desk
      {
                                                                           top\lab10\Lab-10 24k-2000\"; if ($?
 31
                                                                           ) { gcc problem_05.c -o problem_05 }
           for (int i = 0; i < size; i++)
 32
                                                                            ; if ($?) { .\problem_05 }
 33
                                                                           Enter the size of the array: 4
               printf("%d ", arr[i]);
 34
                                                                           Enter 4 elements of the array:
 35
                                                                           54
           printf("\n");
 36
                                                                           21
 37
                                                                           6
      int main()
 39
                                                                           Original array: 54 21 6 4
 40
                                                                           Sorted array: 4 6 21 54
 41
          int size;
                                                                           PS C:\Users\DELL\OneDrive\Desktop\la
                                                                           b10\Lab-10_24k-2000>
           printf("Enter the size of the array: ");
 42
           scanf("%d", &size);
 43
 44
          int arr[size];
           printf("Enter %d elements of the array:\n", size);
 47
           for (int i = 0; i < size; i++)
 48
               scanf("%d", &arr[i]);
 50
           printf("Original array: ");
 51
           printArray(arr, size);
 52
 53
 54
           bubbleSort(arr, size);
 55
           printf("Sorted array: ");
 56
 57
           printArray(arr, size);
 58
 59
           return 0;
 60
```

Problem 06:

```
Lab-10_24k-2000 > 🧲 problem_06.c > 😚 addPackage(TravelPackage [], int)
                                                                                          cd "c:\Users\DELL\OneDrive\Desktop\lab1
  1 ∨ #include <stdio.h>
                                                                                         0\Lab-10 24k-2000\"; if ($?) { gcc prob
       #include <string.h>
                                                                                         lem 06.c -o problem 06 }; if ($?) { .\p
                                                                                         roblem 06 }
      #define MAX PACKAGES 100
                                                                                         Travel Package Management System
  6 ∨ typedef struct {
                                                                                         1. Add Travel Package
          char packageName[50];
                                                                                         2. Display Available Packages
                                                                                         3. Book a Travel Package
           char destination[50];
                                                                                         4. Exit
          int duration;
                                                                                         Enter your choice: 1
          float cost;
                                                                                         Enter package name: fasal movers
          int seatsAvailable;
                                                                                         Enter destination: Lahore
 12
       } TravelPackage;
                                                                                          Enter duration (in days): 2
                                                                                          Enter cost (in USD): 50
 14 ∨ int addPackage(TravelPackage packages[], int packageCount) {
                                                                                          Enter number of seats available: 10
           if (packageCount >= MAX PACKAGES) {
                                                                                         Package added successfully!
               printf("Cannot add more packages. Maximum limit reached.\n"
               return packageCount;
                                                                                         Travel Package Management System
                                                                                         1. Add Travel Package
 19
                                                                                         2. Display Available Packages
           printf("Enter package name: ");
                                                                                          3. Book a Travel Package
          scanf(" %[^\n]", packages[packageCount].packageName);
                                                                                         4. Exit
                                                                                         Enter your choice: 2
          printf("Enter destination: ");
                                                                                         Available Travel Packages:
          scanf(" %[^\n]", packages[packageCount].destination);
                                                                                         Package 1:
                                                                                           Name: fasal movers
          printf("Enter duration (in days): ");
                                                                                           Destination: Lahore
           scanf("%d", &packages[packageCount].duration);
                                                                                           Duration: 2 days
                                                                                           Cost: $50.00
          printf("Enter cost (in USD): ");
                                                                                           Seats Available: 10
          scanf("%f", &packages[packageCount].cost);
           printf("Enter number of seats available: ");
                                                                                         Travel Package Management System
          scanf("%d", &packages[packageCount].seatsAvailable);
                                                                                         1. Add Travel Package
                                                                                         2. Display Available Packages
                                                                                         3. Book a Travel Package
           printf("Package added successfully!\n");
                                                                                         4. Exit
          return packageCount + 1;
                                                                                         Enter your choice: 3
                                                                                          Enter your choice: 3
```

```
void displayPackages(TravelPackage packages[], int packageCount) {
         if (packageCount == 0) {
                                                                                       Travel Package Management System
             printf("No packages available.\n");
                                                                                       1. Add Travel Package
42
             return;
                                                                                       2. Display Available Packages
                                                                                       3. Book a Travel Package
                                                                                       4. Exit
                                                                                       Enter your choice: 3
         printf("\nAvailable Travel Packages:\n");
                                                                                       Enter your choice: 3
         for (int i = 0; i < packageCount; i++) {</pre>
                                                                                       Enter the name of the package to book: a
             printf("Package %d:\n", i + 1);
                                                                                       EEnter the name of the package to book:
             printf(" Name: %s\n", packages[i].packageName);
                                                                                       EnEnter the name of the package to book:
             printf(" Destination: %s\n", packages[i].destination);
                                                                                       EntEnter the name of the package to book
             printf(" Duration: %d days\n", packages[i].duration);
                                                                                       Enter the name of the package to book: a
             printf(" Cost: $%.2f\n", packages[i].cost);
                                                                                       sal movers
             printf(" Seats Available: %d\n", packages[i].seatsAvailabl
                                                                                       Package not found.
             printf("-----\n");
                                                                                       Travel Package Management System
                                                                                       1. Add Travel Package
                                                                                       2. Display Available Packages
     void bookPackage(TravelPackage packages[], int packageCount) {
                                                                                       3. Book a Travel Package
                                                                                       4. Exit
         if (packageCount == 0) {
                                                                                       Enter your choice: 3
             printf("No packages available to book.\n");
                                                                                       Enter the name of the package to book: f
             return;
                                                                                       asal movers
                                                                                       Booking successful! Seats remaining: 9
         char packageName[50];
                                                                                       Travel Package Management System
         printf("Enter the name of the package to book: ");
                                                                                       1. Add Travel Package
         scanf(" %[^\n]", packageName);
                                                                                       2. Display Available Packages
                                                                                       3. Book a Travel Package
         for (int i = 0; i < packageCount; i++) {
                                                                                       4. Exit
             if (strcmp(packages[i].packageName, packageName) == 0) {
                                                                                       Enter your choice: 2
                 if (packages[i].seatsAvailable > 0) {
                     packages[i].seatsAvailable--;
                                                                                       Available Travel Packages:
70
                                                                                       Package 1:
                     printf("Booking successful! Seats remaining: %d\n",
71
                                                                                         Name: fasal movers
72
                  } else {
                                                                                         Destination: Lahore
                     printf("Sorry, no seats available for this package.
                                                                                         Duration: 2 days
                                                                                         Cost: $50.00
                 return;
                                                                                         Seats Available: 9
76
```

```
Lab-10_24k-2000 > C problem_06.c > \( \Phi \) addPackage(TravelPackage [], int)
                                                                                          Enter the name of the package to book: a
      void bookPackage(TravelPackage packages[], int packageCount) {
                                                                                          sal movers
           for (int i = 0; i < packageCount; i++) {
                                                                                          Package not found.
           printf("Package not found.\n");
                                                                                          Travel Package Management System
                                                                                          1. Add Travel Package
                                                                                          2. Display Available Packages
                                                                                          3. Book a Travel Package
 82
       int main() {
                                                                                          4. Exit
           TravelPackage packages[MAX PACKAGES];
                                                                                          Enter your choice: 3
           int packageCount = 0;
                                                                                          Enter the name of the package to book: f
           int choice;
                                                                                          asal movers
                                                                                          Booking successful! Seats remaining: 9
           do {
               printf("\nTravel Package Management System\n");
                                                                                          Travel Package Management System
               printf("1. Add Travel Package\n");
                                                                                          1. Add Travel Package
               printf("2. Display Available Packages\n");
                                                                                          2. Display Available Packages
               printf("3. Book a Travel Package\n");
                                                                                          3. Book a Travel Package
               printf("4. Exit\n");
                                                                                          4. Exit
               printf("Enter your choice: ");
                                                                                          Enter your choice: 2
               scanf("%d", &choice);
 94
                                                                                          Available Travel Packages:
                                                                                          Package 1:
               switch (choice) {
                                                                                            Name: fasal movers
                   case 1:
                                                                                            Destination: Lahore
                       packageCount = addPackage(packages, packageCount);
                                                                                            Duration: 2 days
                       break:
                                                                                            Cost: $50.00
                   case 2:
                                                                                            Seats Available: 9
                       displayPackages(packages, packageCount);
                       break:
                   case 3:
                                                                                          Travel Package Management System
                       bookPackage(packages, packageCount);
                                                                                          1. Add Travel Package
                       break;
                                                                                          2. Display Available Packages
                                                                                          3. Book a Travel Package
                   case 4:
                       printf("Exiting the program. Thank you!\n");
                                                                                          4. Exit
                                                                                          Enter your choice:
                       break:
                   default:
110
                       printf("Invalid choice. Please try again.\n");
111
           } while (choice != 4);
112
114
           return 0;
115
```

Problem 07:

```
Lab-10_24k-2000 > C problem_07.c > 分 main()
                                                                                                     gcc problem_07.c -o problem_07 } ; if ($?) { .\problem_07 }
      #include <stdio.h>
      // C program that defines a constant for the conversion factor of meters to ki
                                                                                                     Conversion Menu:
      #define M_TO_KM 0.001
                                                                                                     1. Convert meters to kilometers
      void convertToKilometers(float meters){
                                                                                                     2. Exit
                                                                                                     Enter your choice: 1
          static int callCount = 0;
                                                                                                     Enter distance in meters: 54
          callCount++;
                                                                                                     Meters: 54.00, Kilometers: 0.054 (Function called 1 times)
          float kilometers = meters * M_TO_KM;
          printf("Meters: %.2f, Kilometers: %.3f (Function called %d times)\n", meter
                                                                                                     Conversion Menu:
                                                                                                     1. Convert meters to kilometers
      int main(){
                                                                                                     2. Exit
          int choice;
                                                                                                     Enter your choice: 1
          float meters;
                                                                                                     Enter distance in meters: 23
          do{
                                                                                                     Meters: 23.00, Kilometers: 0.023 (Function called 2 times)
              printf("\nConversion Menu:\n");
                                                                                                     Conversion Menu:
              printf("1. Convert meters to kilometers\n");
                                                                                                     1. Convert meters to kilometers
              printf("2. Exit\n");
                                                                                                     2. Exit
              printf("Enter your choice: ");
                                                                                                     Enter your choice: 2
 18
              scanf("%d", &choice);
                                                                                                     Exiting the program. Thank you!
              switch (choice){
                                                                                                     PS C:\Users\DELL\OneDrive\Desktop\lab10\Lab-10_24k-2000>
              case 1:
                   printf("Enter distance in meters: ");
                  scanf("%f", &meters);
                   convertToKilometers(meters);
                  break;
              case 2:
                   printf("Exiting the program. Thank you!\n");
                  break;
              default:
                   printf("Invalid choice. Please try again.\n");
           } while (choice != 2);
          return 0;
```

Problem 08:

```
Lab-10_24k-2000 > C problem_08.c > ...
                                                                                         PS C:\Users\DELL\OneDrive\Desktop\lab10>
      #include <stdio.h>
                                                                                          cd "c:\Users\DELL\OneDrive\Desktop\lab1
      // Recursive function linearSearch that takes an array, its size,
                                                                                         0\Lab-10 24k-2000\" ; if ($?) { gcc prob
      // the target element to search for, and the current index
                                                                                         lem_08.c -o problem_08 } ; if ($?) { .\p
      int linearSearch(int arr[], int size, int target, int index){
                                                                                         roblem 08 }
                                                                                          Enter the size of the array: 4
           if (index >= size)
                                                                                          Enter 4 elements of the array:
               return -1;
                                                                                          53
          if (arr[index] == target)
                                                                                         42
               return index;
                                                                                         12
          return linearSearch(arr, size, target, index + 1);
                                                                                          53
 10
                                                                                         Enter the target element to search for:
      int main(){
 11
 12
           int size, target, result;
                                                                                          Element 12 found at index 2.
 13
           printf("Enter the size of the array: ");
                                                                                         PS C:\Users\DELL\OneDrive\Desktop\lab10\
          scanf("%d", &size);
                                                                                         Lab-10_24k-2000>
 15
          int arr[size];
          printf("Enter %d elements of the array:\n", size);
          for (int i = 0; i < size; i++){</pre>
 17
               scanf("%d", &arr[i]);
 18
 19
          printf("Enter the target element to search for: ");
 20
 21
           scanf("%d", &target);
 22
 23
           result = linearSearch(arr, size, target, 0);
           if (result == -1)
 25
 26
 27
               printf("Element %d not found in the array.\n", target);
 28
           else
 29
               printf("Element %d found at index %d.\n", target, result);
 31
 32
 33
           return 0;
```