**4.5CA251C01: DATA STRUCTURES LAB**

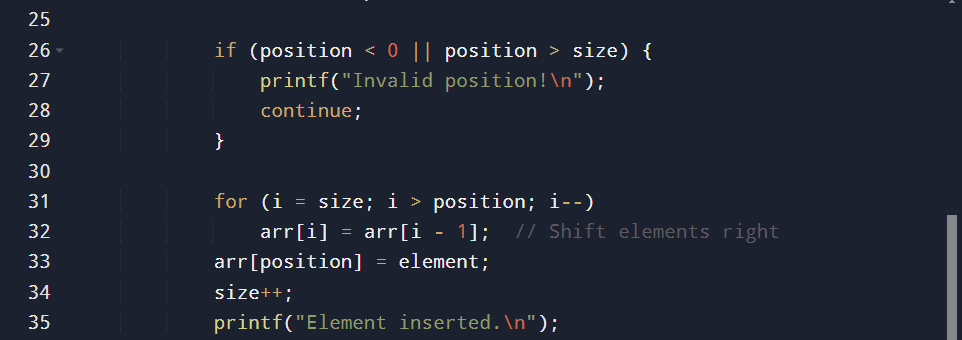
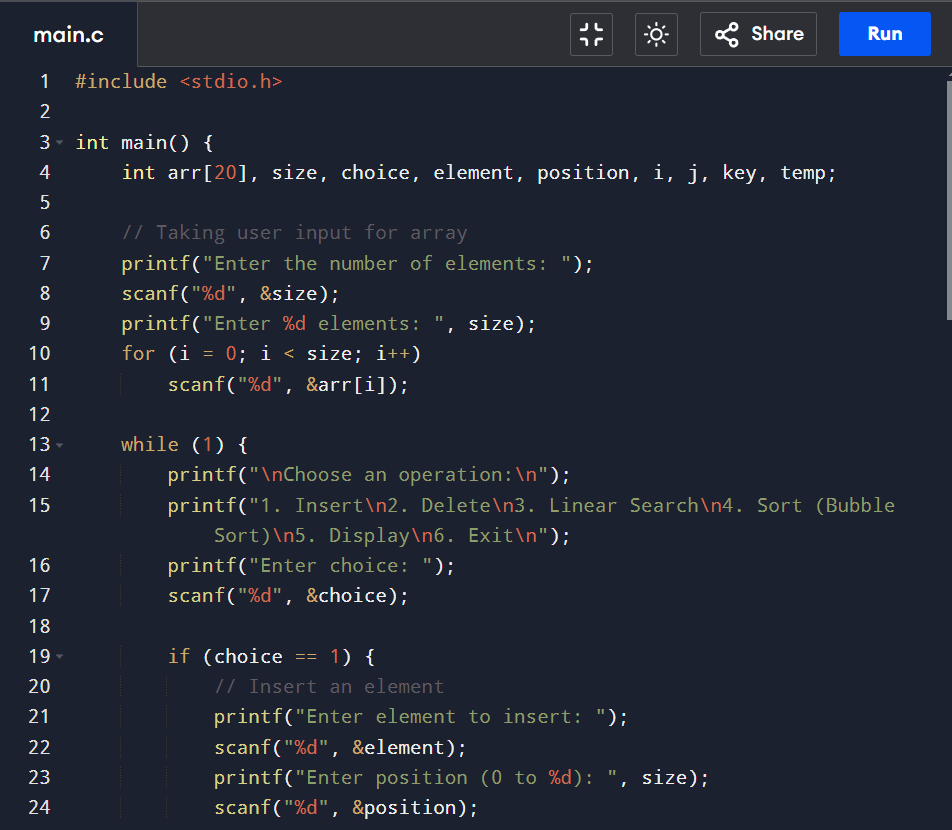
MAYANK AGGARWAL

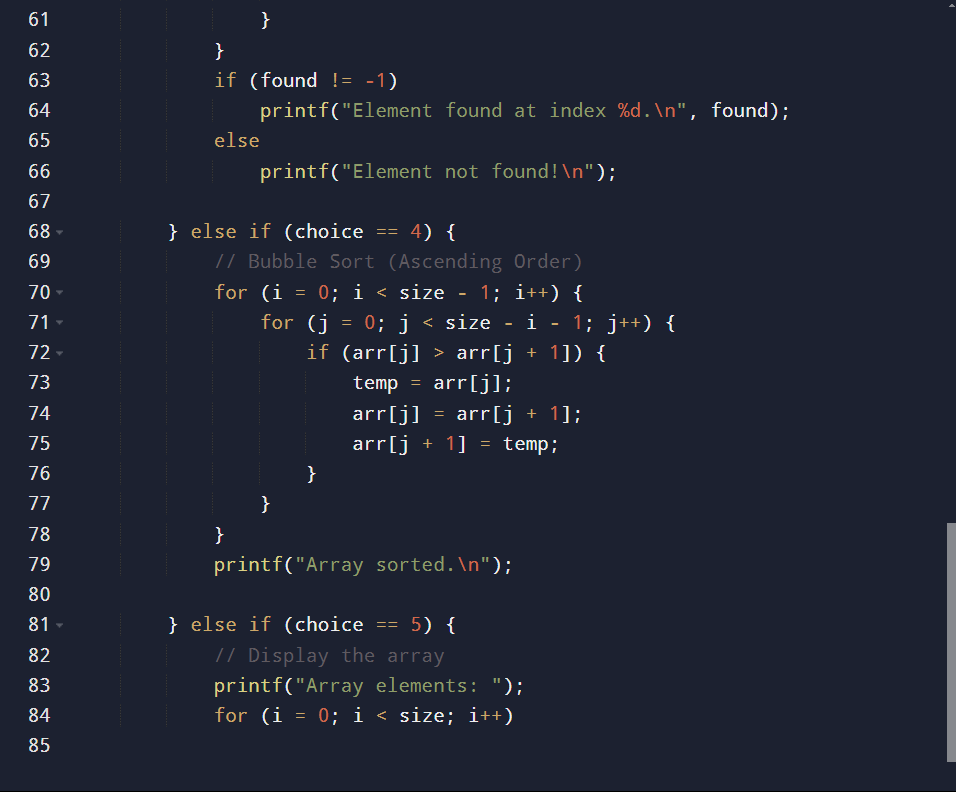
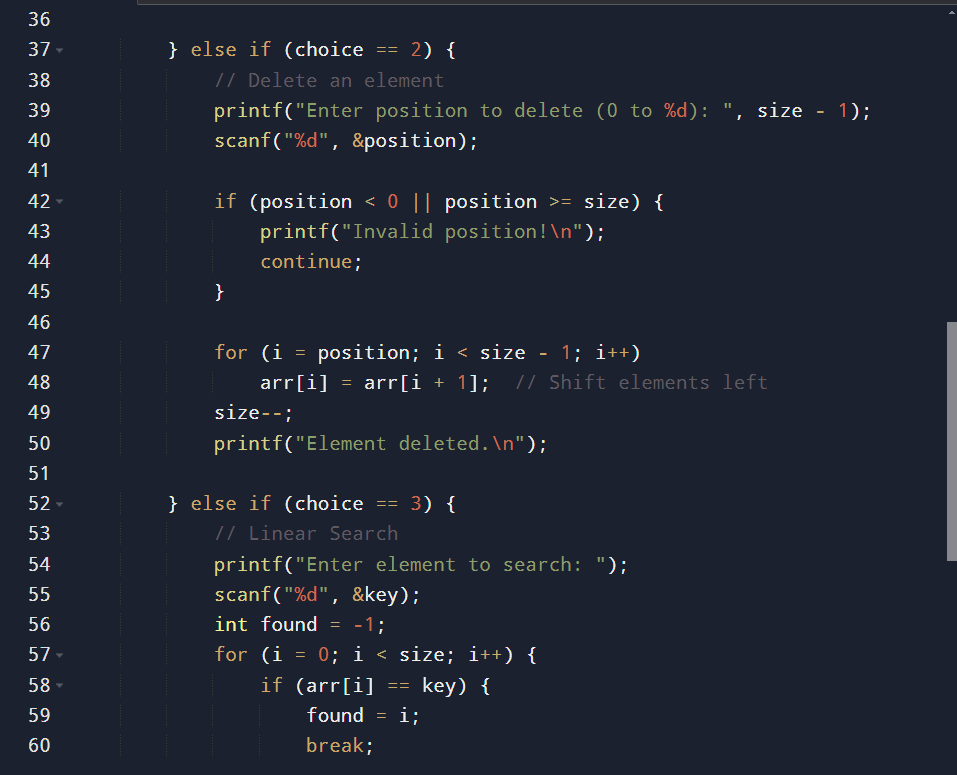
BCA – 2A

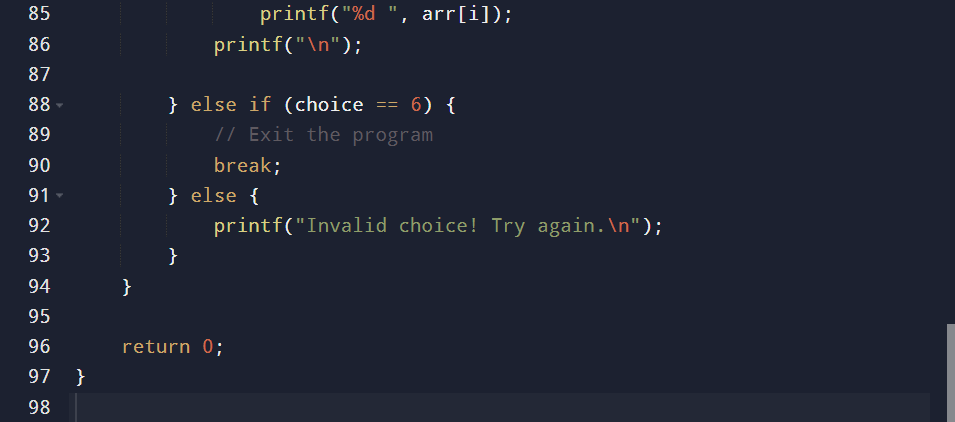
24/SCA/BCA/024

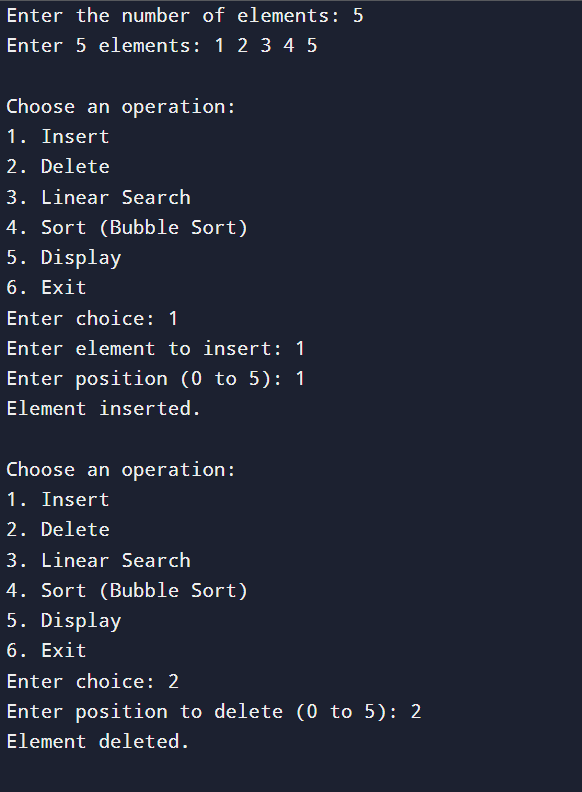
1. **Write a program in C to implement insertion in 1-D Arrays**
2. **Write a program in C to implement deletion in 1-D Arrays**
3. **Write a program in C to implement linear and binary searching in 1-D Arrays**
4. **Write a program in C to implement sorting in 1-D Arrays**

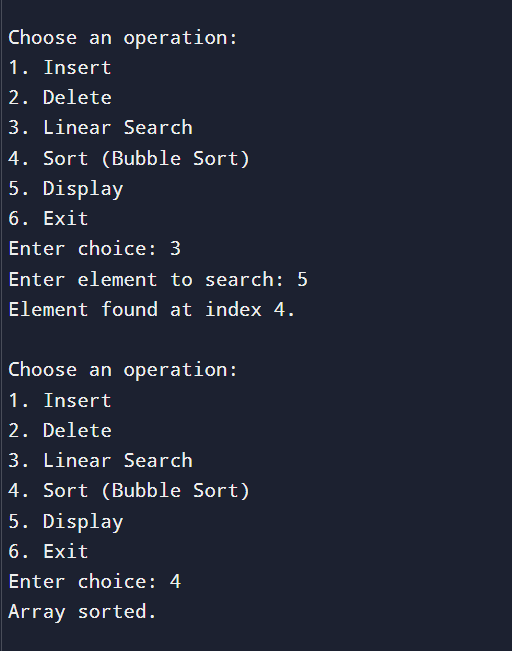
**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

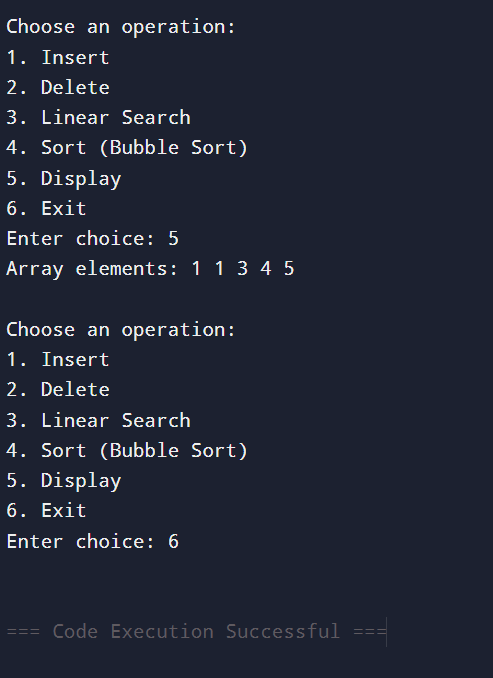












1. **Write a program in C to concatenate two arrays**

**What is Concatenation?**

**Concatenation** means **joining two things together**. In the context of **arrays**, it means **combining two arrays into one**.

**Example of Array Concatenation**

**Before Concatenation**

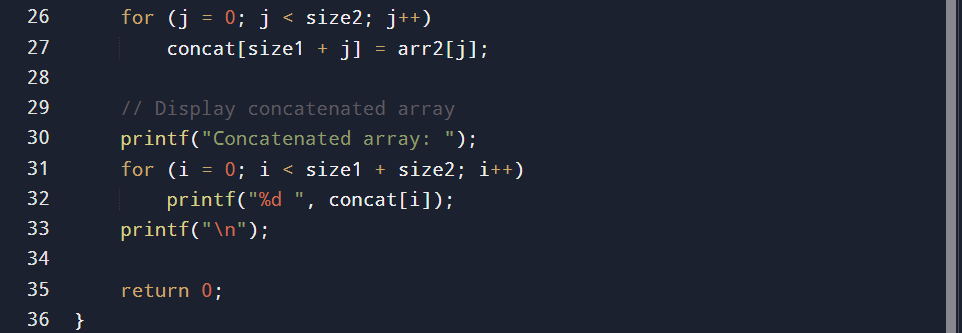
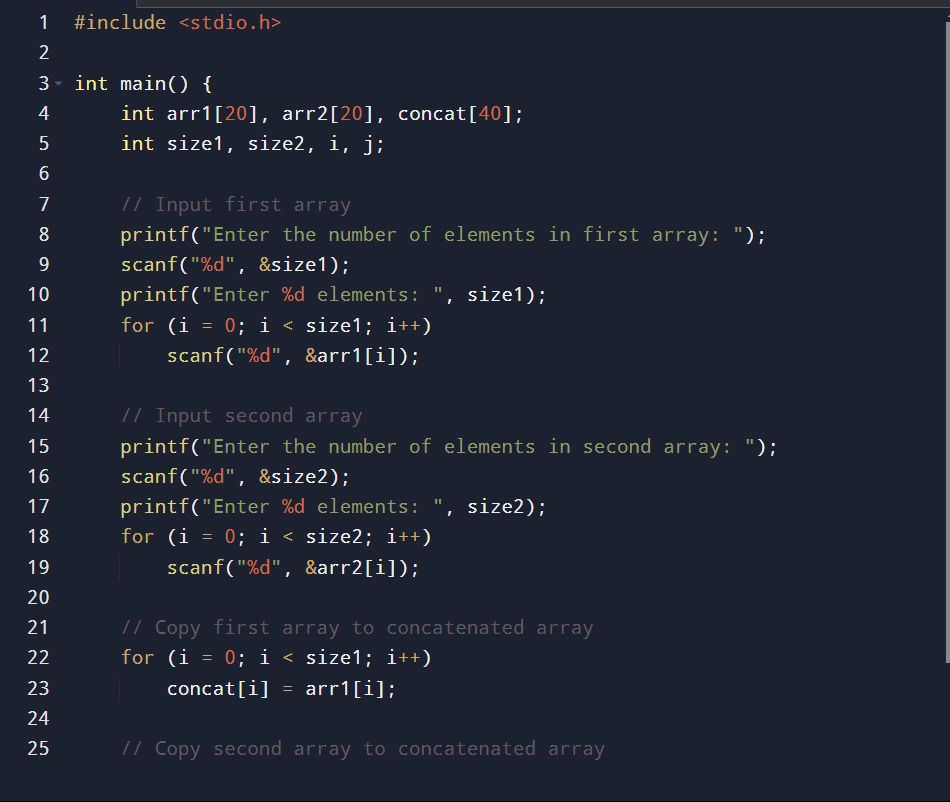
* **Array 1**: {1, 2, 3}
* **Array 2**: {4, 5, 6}

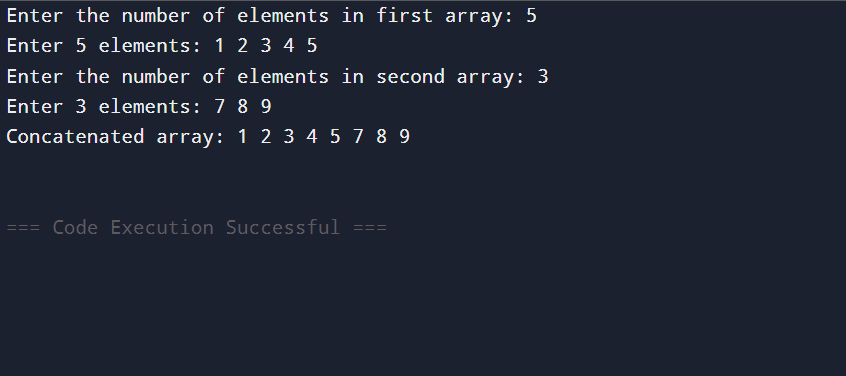
**After Concatenation**

* **New Array**: {1, 2, 3, 4, 5, 6} (combining both arrays)

It simply means **placing the elements of the second array right after the first one** in a new array.

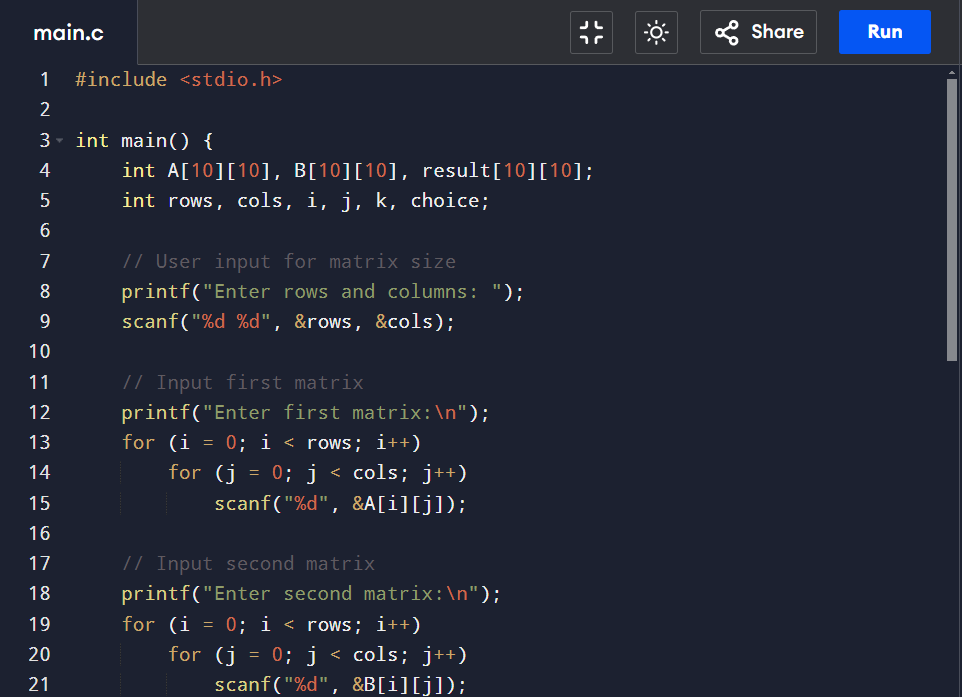
**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

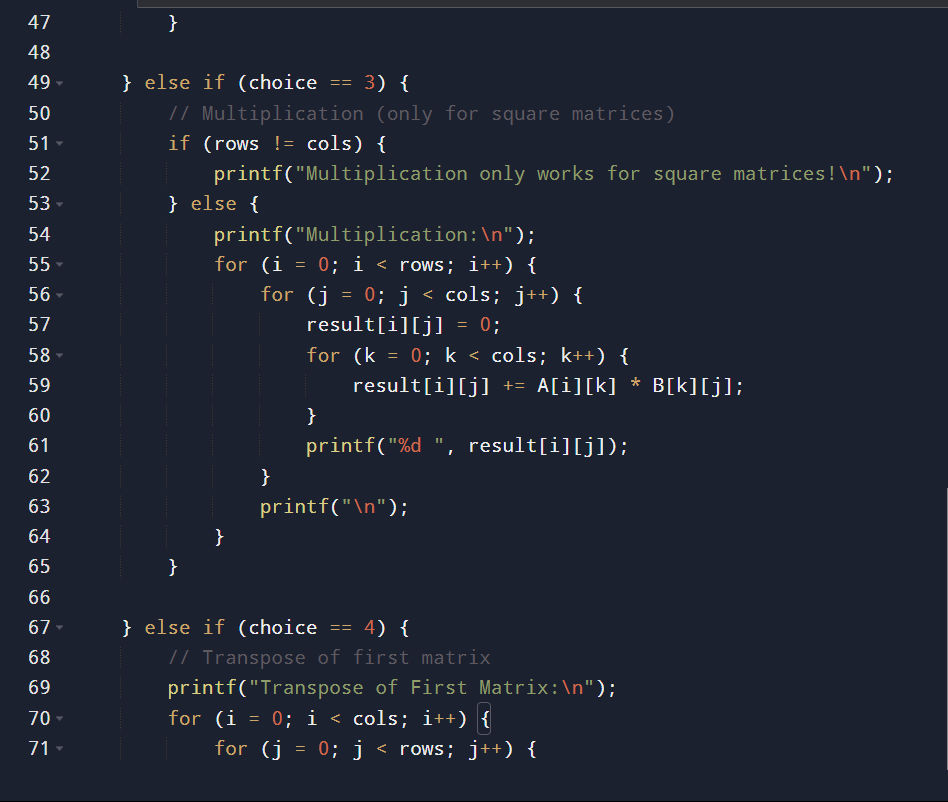


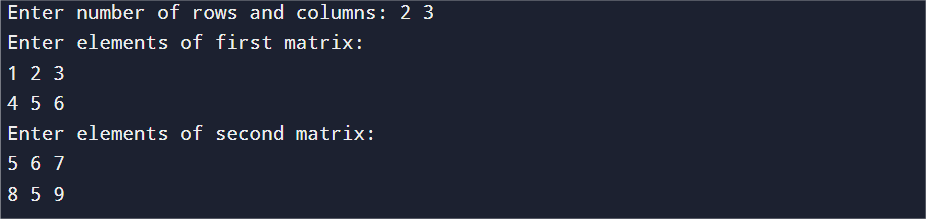
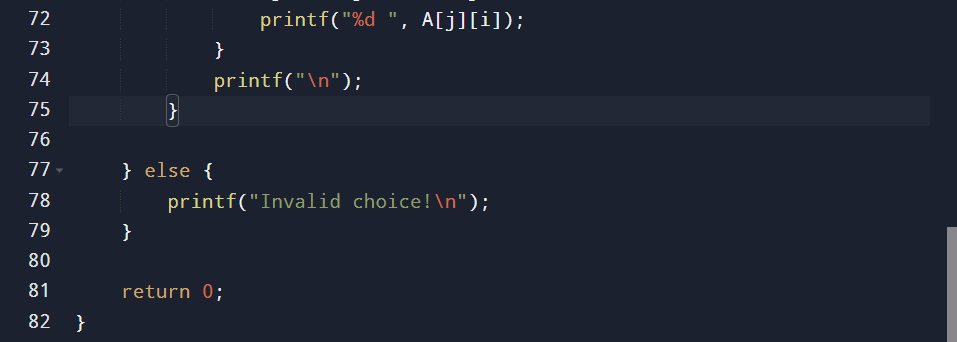


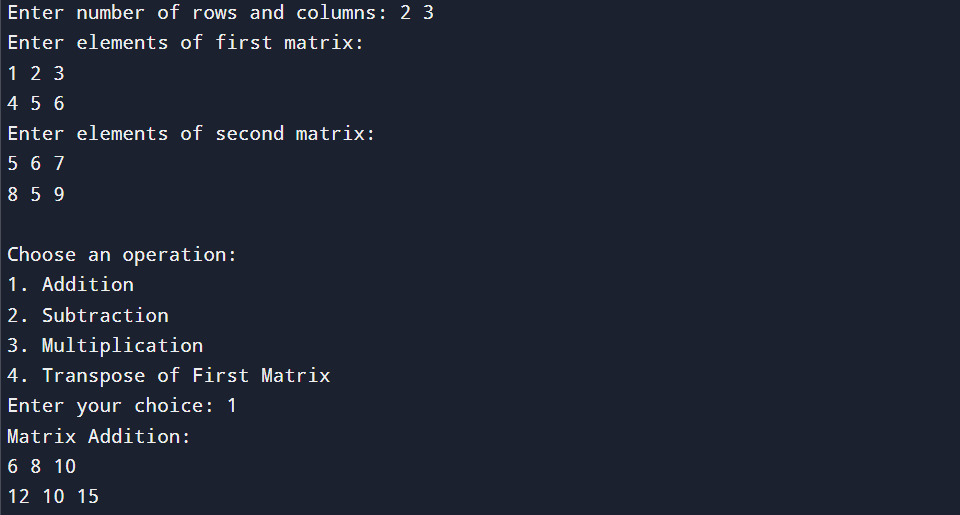
1. **Write a program in C to implement the following Operations on 2-D Array (addition; subtraction; multiplication; transpose)**

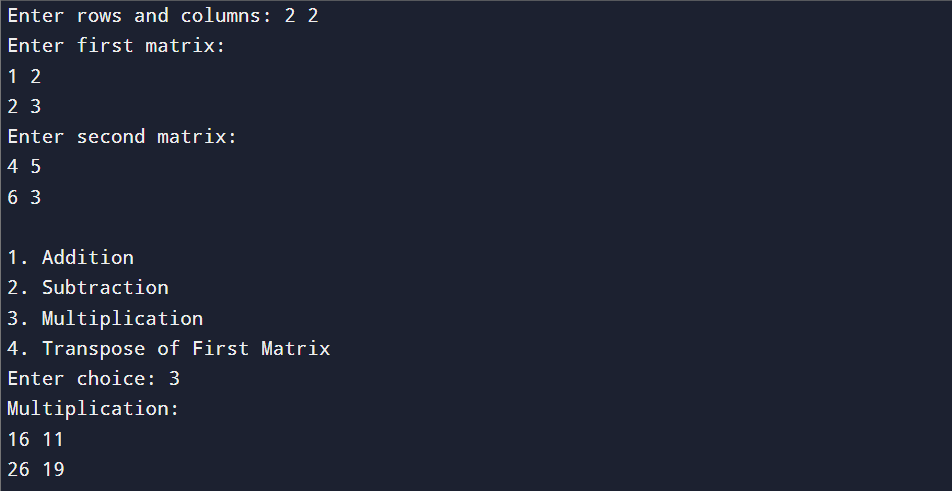
**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

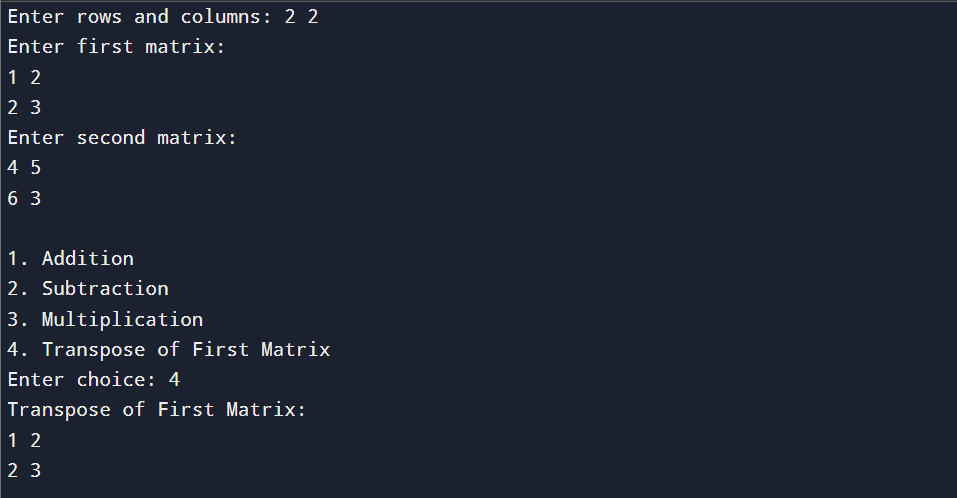












1. A computer screen shot of a program

   AI-generated content may be incorrect.A computer screen shot of a computer code

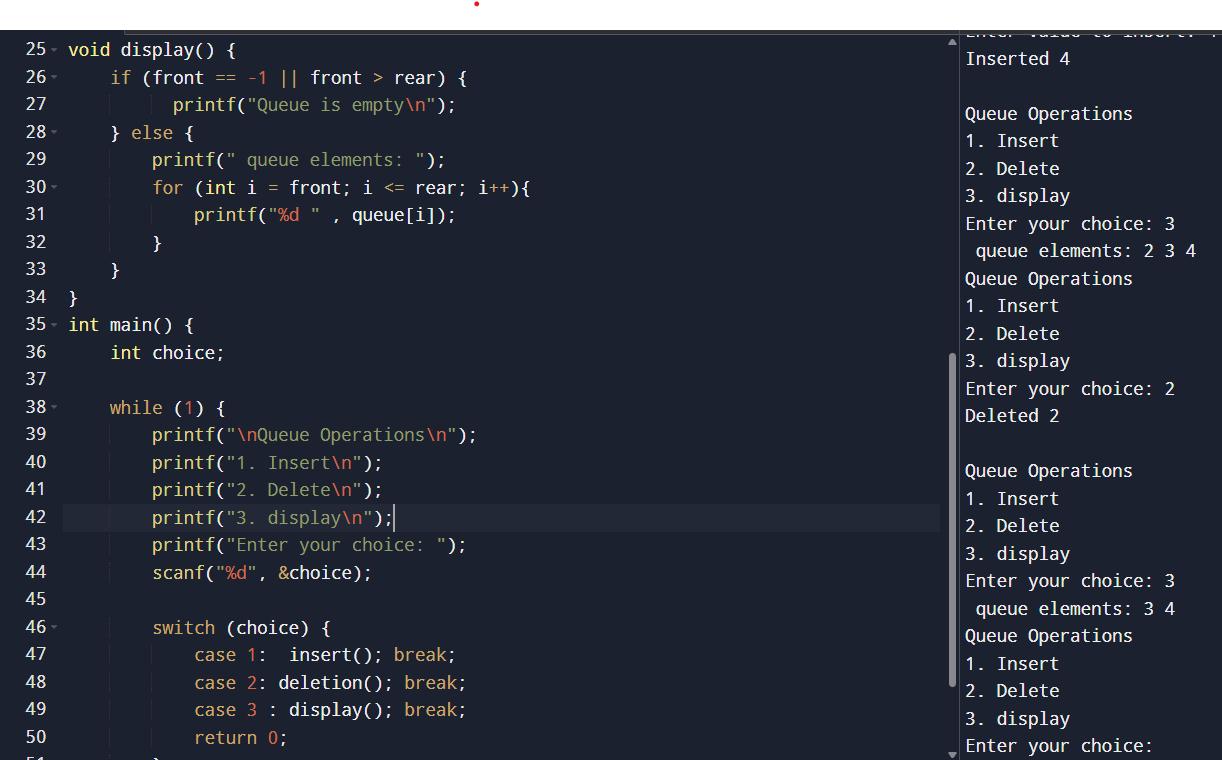
   AI-generated content may be incorrect.All Operations of Stack (PUSH, POP, DISPLAY).

A screenshot of a computer program

AI-generated content may be incorrect.**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

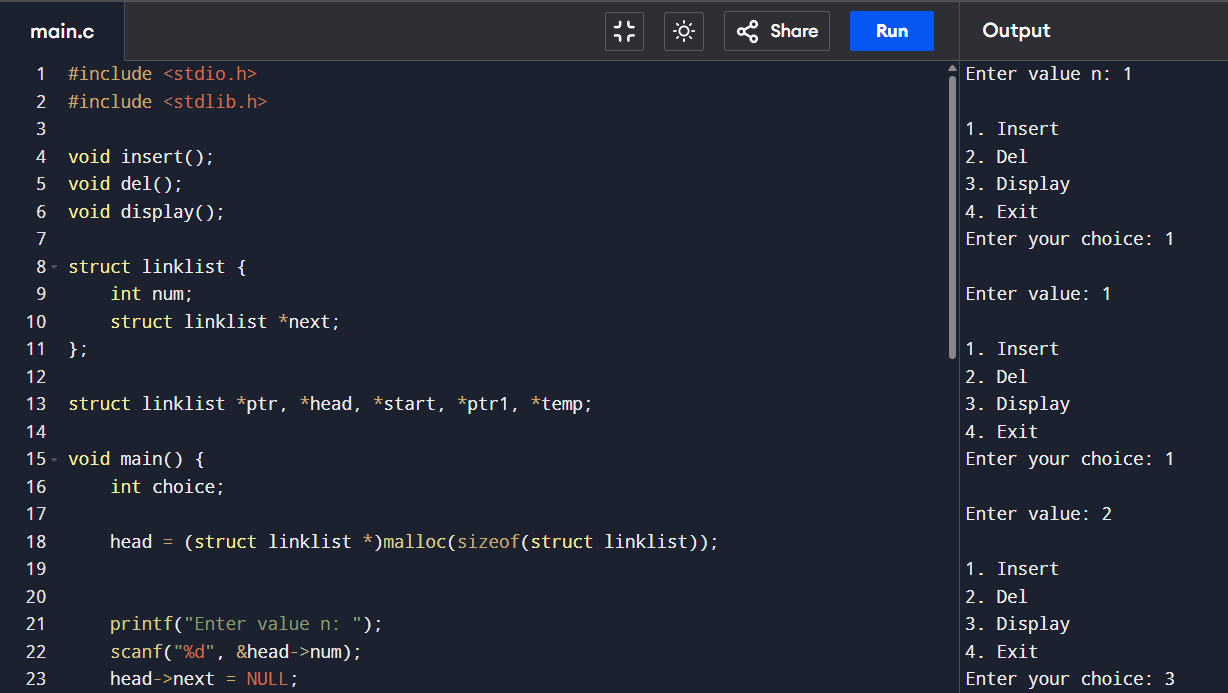
1. All Operations of QUEUE (INSERTION, DELETION, DISPLAY).

**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

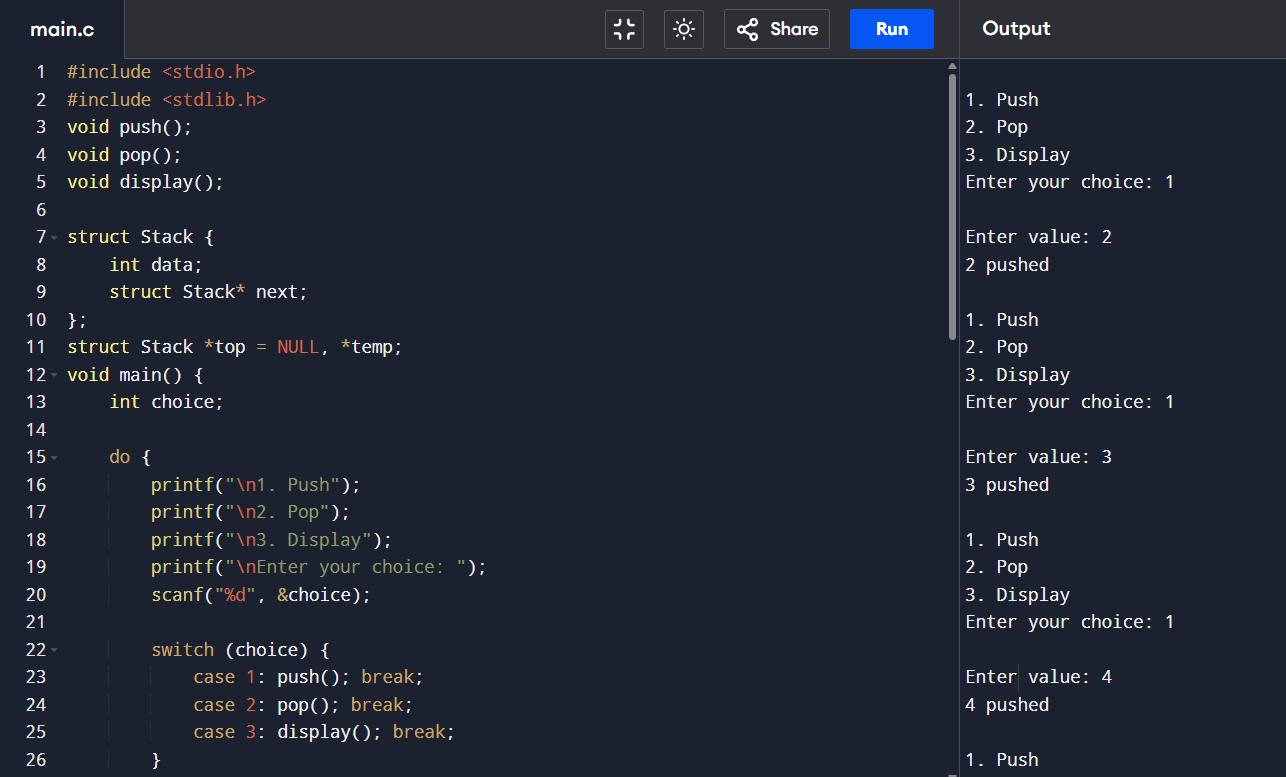
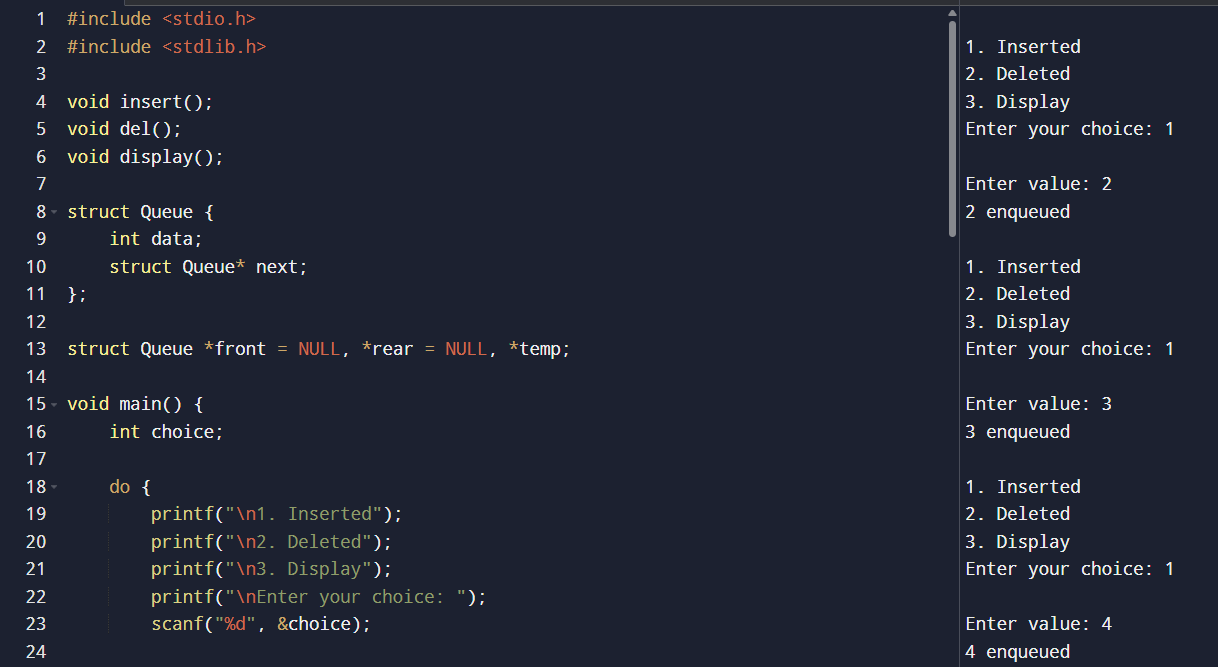


1. A computer screen shot of a code

   AI-generated content may be incorrect.A screen shot of a computer program

   AI-generated content may be incorrect.Linked list **[ Mayank Aggarwal (24/SCA/BCA/024) ]**
2. A screen shot of a computer screen

   AI-generated content may be incorrect.A screen shot of a computer

   AI-generated content may be incorrect. Stack through linked list. **[ Mayank Aggarwal (24/SCA/BCA/024) ]**
3. A computer screen shot of a program

   AI-generated content may be incorrect.Queue through linked list. **[ Mayank Aggarwal (24/SCA/BCA/024) ]**

A computer screen shot of a computer code

AI-generated content may be incorrect.A screen shot of a computer

AI-generated content may be incorrect.

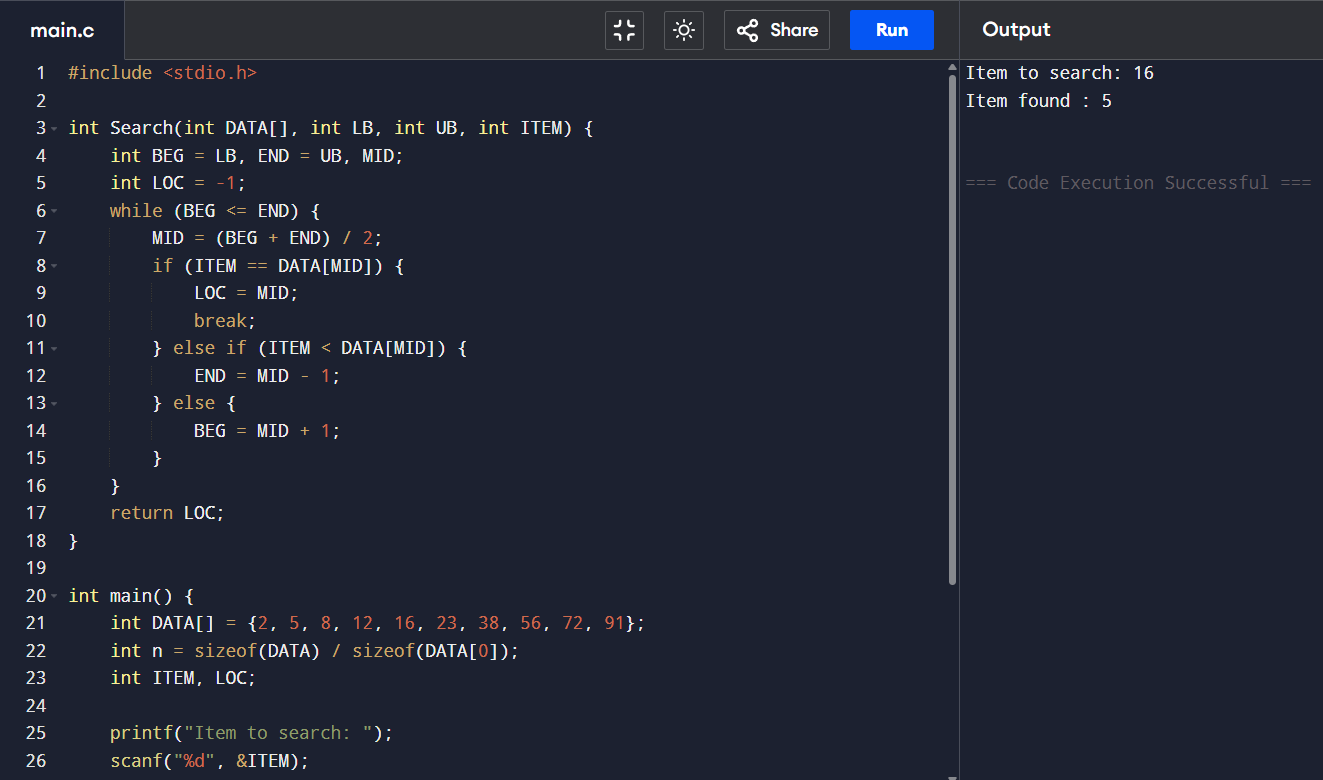
1. A screen shot of a computer

   AI-generated content may be incorrect.A screen shot of a computer program

   AI-generated content may be incorrect.A screenshot of a computer program

   AI-generated content may be incorrect. Tree traversal (inorder, preorder, postorder)  
   **[ Mayank Aggarwal (24/SCA/BCA/024) ]**
2. Tree searching (sorted)

**A computer code on a dark background

AI-generated content may be incorrect.****[ Mayank Aggarwal (24/SCA/BCA/024) ]**

1. Binary search

A computer screen shot of code

AI-generated content may be incorrect.A screenshot of a computer program

AI-generated content may be incorrect.**[ Mayank Aggarwal (24/SCA/BCA/024) ]**

1. Sorting using quick sort

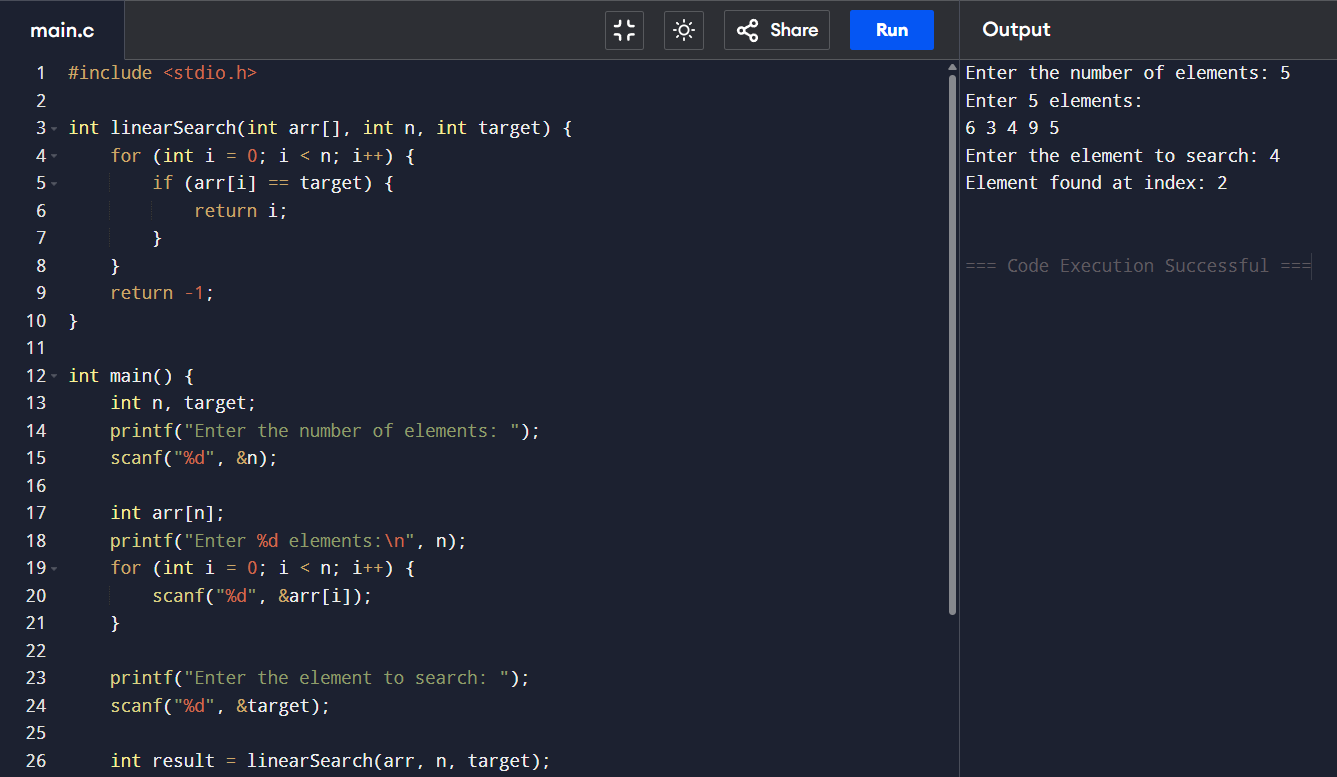
A computer screen shot of a computer code

AI-generated content may be incorrect.**A screenshot of a computer program

AI-generated content may be incorrect.[Mayank Aggarwal (24/SCA/BCA/024 ]**

1. Linear search method

A screen shot of a computer

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1. Concatenation of two linklist  
   [ Mayank Aggarwal (24/SCA/BCA/024) ]

A computer screen shot of a program code

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A screenshot of a computer

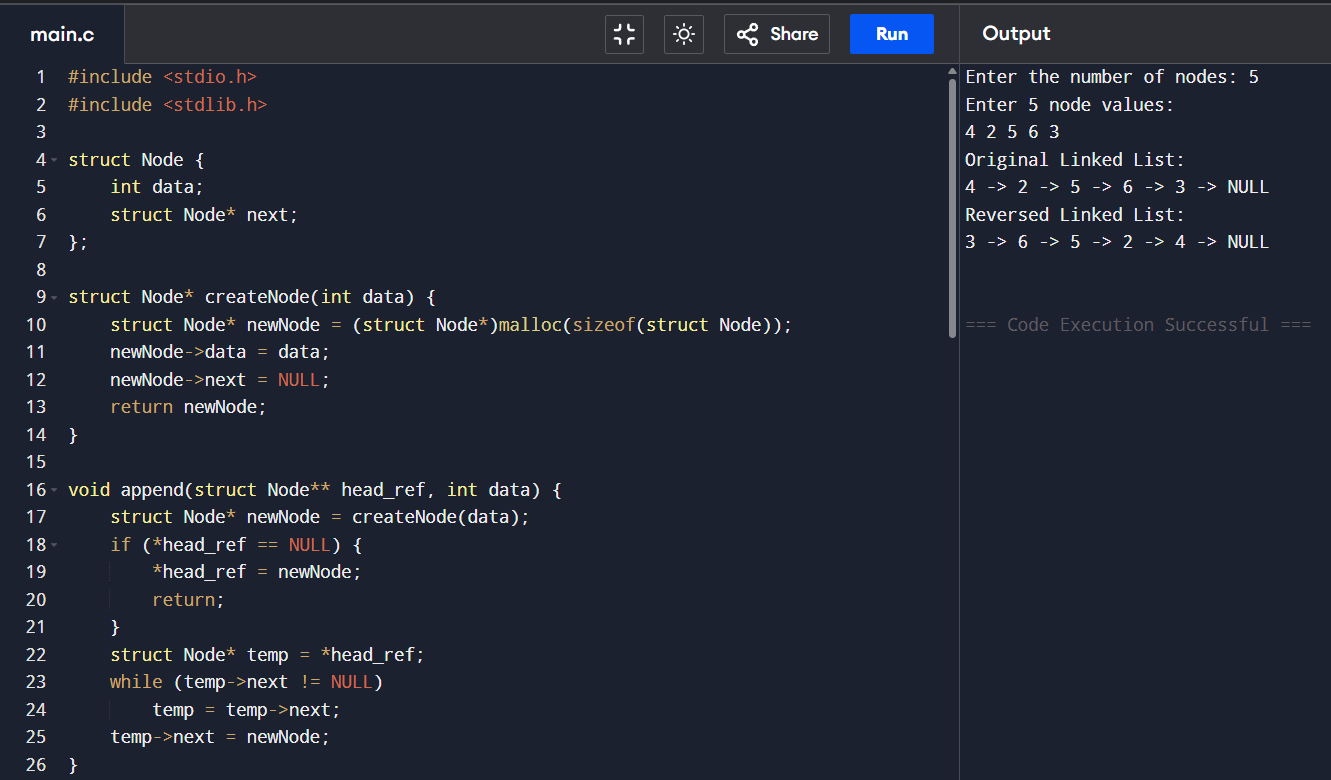
AI-generated content may be incorrect.

A screen shot of a computer

AI-generated content may be incorrect.A computer screen shot of a program code

AI-generated content may be incorrect.

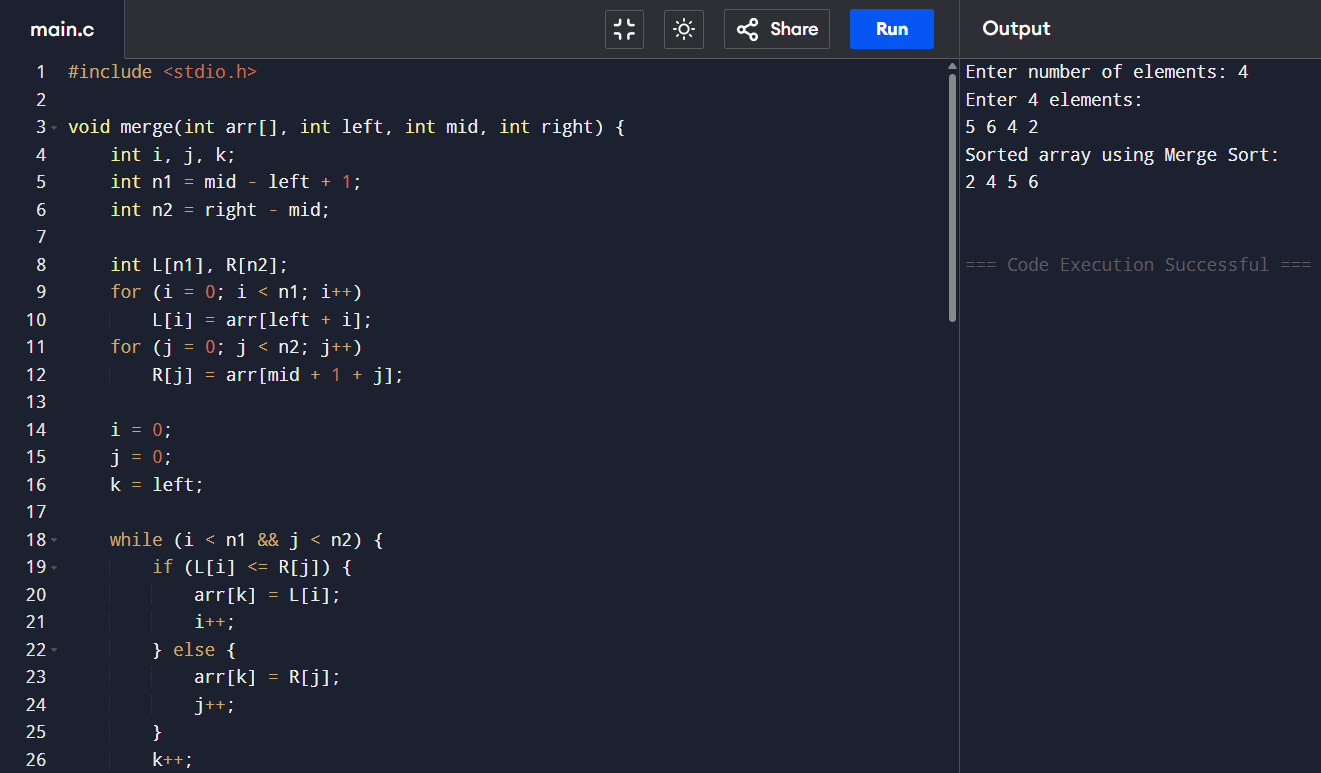
1. A screen shot of a computer program

   AI-generated content may be incorrect.Reverse of a linklist

A computer screen shot of a code

AI-generated content may be incorrect.[ Mayank Aggarwal (24/SCA/BCA/024) ]

1. A computer screen shot of a program code

   AI-generated content may be incorrect.Sorting using merege sort

[ Mayank Aggarwal ( 24/SCA/BCA/024 ) ]

A computer screen shot of a program code

AI-generated content may be incorrect.