

The screenshot shows a dark-themed code editor interface with a sidebar containing file navigation icons and a list of files. The main area displays a C++ program for linear search. The terminal below shows the execution of the program, including user input for the number of elements and the element to search for.

**EXPLORER**

**OPEN EDITORS**

- C day29.2.c U
- C day30.c U
- C day30.2.c U
- C day31.c c++ U
- X C day31.2.c... U
- C day32.c c... U
- C day32.2.c... U
- C user.management... U
- C Projectcal... U
- C day22.c c++ U
- C day22.2.c... U
- C day22.2.c... U

**vs**

**c++**

- day29.2 U
- C day29.2.c U
- C day29.c U
- day30 U
- day30.2 U
- C day30.2.c U
- C day30.c U
- day31 U
- day31.2 U
- C day31.2.c U
- C day31.c U
- day32 U
- day32.2 U
- C day32.2.c U
- C day32.c U
- Definea... A
- C Definea... A
- DMA A
- C DMA.c A
- DoWhile... A
- C DoWhile... A
- ex1 A
- C ex1.c A
- exp3.1 U

**TERMINAL**

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.c -o day31 && "/Users/rishabhtrivedi/Documents/vs/c++/"day31
rishabhtrivedi@rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.c -o day31 && "/Users/rishabhtrivedi/Documents/vs/c++/"da
y31
Enter number of elements: 2
Enter 2 elements:
345
34
Enter the element to search: 5
Element 5 not found in the array.
rishabhtrivedi@rishabhs-MacBook-Air c++ %
```

Indexing completed.

Ln 35, Col 1 Spaces: 4 UTF-8 LF () C Go Live macos-clang-x64 Prettier

The screenshot shows a dark-themed code editor interface with various toolbars and panels. The main area displays a C++ program for performing a linear search on an array. The code includes prompts for the number of elements and the element to search for, followed by a loop that iterates through the array to find the key. If found, it prints the position; if not found, it prints a message indicating the key was not found.

```
#include <stdio.h>

int main() {
    int n, i, key, found = 0;
    int arr[100];

    // Input: number of elements
    printf("Enter number of elements: ");
    scanf("%d", &n);

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

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

    // Linear search
    for (i = 0; i < n; i++) {
        if (arr[i] == key) {
            printf("Element %d found at position %d.\n", key, i + 1);
            found = 1;
            break;
        }
    }

    if (!found)
        printf("Element %d not found in the array.\n", key);

    return 0;
}
```

The terminal panel at the bottom shows the execution of the program. It prompts for the number of elements (2), the array elements (345 and 34), and the element to search for (5). The output indicates that the element 5 was not found in the array.

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.c -o day31 && "/Users/rishabhtrivedi/Documents/vs/c++/" day31 && cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.c -o day31 && "/Users/rishabhtrivedi/Documents/vs/c++/" day31
rishabhtrivedi@Rishabhs-MacBook-Air ~ % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.c -o day31 && "/Users/rishabhtrivedi/Documents/vs/c++/" day31
y31
Enter number of elements: 2
Enter 2 elements:
345
34
Enter the element to search: 5
Element 5 not found in the array.
rishabhtrivedi@Rishabhs-MacBook-Air ~ %
```

```
OPEN EDITORS
c++ > C day31.2.c ...
1 #include <stdio.h>
2
3 int main() {
4     int n, i, temp;
5     int arr[100];
6
7     // Input: number of elements
8     printf("Enter number of elements: ");
9     scanf("%d", &n);
10
11    // Input: array elements
12    printf("Enter %d elements:\n", n);
13    for (i = 0; i < n; i++) {
14        scanf("%d", &arr[i]);
15    }
16
17    // Reverse the array in-place (no extra space)
18    for (i = 0; i < n / 2; i++) {
19        temp = arr[i];
20        arr[i] = arr[n - i - 1];
21        arr[n - i - 1] = temp;
22    }
23
24    // Output: reversed array
25    printf("Reversed array:\n");
26    for (i = 0; i < n; i++) {
27        printf("%d ", arr[i]);
28    }
29
30    printf("\n");
31    return 0;
32 }
33
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1

```
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day31.2.c -o day31.2 && "/Users/rishabhtrivedi/Documents/vs/c++/day31.2"
Enter number of elements: 2
Enter 2 elements:
3
23
Reversed array:
23 3
rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```

Indexing completed.

The screenshot shows a dark-themed code editor interface, likely Visual Studio Code, displaying a C++ program. The code is intended to find the digit that occurs most frequently in a given number.

```
#include <stdio.h>

int main() {
    long num;
    int count[10] = {0}; // To store frequency of each digit (0-9)
    int digit, maxDigit = 0, maxCount = 0;

    // Input number
    printf("Enter a number: ");
    scanf("%ld", &num);

    // Handle negative numbers
    if (num < 0)
        num = -num;

    // Count occurrences of each digit
    while (num > 0) {
        digit = num % 10;
        count[digit]++;
        num /= 10;
    }

    // Find digit with maximum count
    for (int i = 0; i < 10; i++) {
        if (count[i] > maxCount) {
            maxCount = count[i];
            maxDigit = i;
        }
    }

    // Output result
    printf("The digit that occurs the most is %d (appears %d times)\n", maxDigit, maxCount);
    return 0;
}
```

The code uses a frequency array `count` to store the count of each digit from 0 to 9. It then iterates through the input number to populate this array. Finally, it finds the digit with the highest frequency and prints the result.

Below the code editor, the terminal window shows the execution of the program:

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day32.2.c -o day32.2 && "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day32.2 -o day32.2 && "/Users/rishabhtrivedi/Documents/vs/c++/" && cd "/Users/rishabhtrivedi/Documents/vs/c++/" && ./day32.2
Enter a number: 34
The digit that occurs the most is 3 (appears 1 times)
```

The terminal also displays the command used to build and run the program, followed by the user's input and the program's output.

The screenshot shows a terminal window with a dark background and light text, displaying a C++ binary search program and its execution output. The code is as follows:

```
c++ > C day33.c > main()
1 #include <stdio.h>
2
3 int main() {
4     int n, i, key, low, high, mid;
5     int arr[100];
6
7     // Input size of array
8     printf("Enter number of elements: ");
9     scanf("%d", &n);
10
11    // Input sorted array elements
12    printf("Enter %d sorted elements:\n", n);
13    for (i = 0; i < n; i++) {
14        scanf("%d", &arr[i]);
15    }
16
17    // Input the element to search
18    printf("Enter the element to search: ");
19    scanf("%d", &key);
20
21    // Binary search logic
22    low = 0;
23    high = n - 1;
24    int found = 0;
25
26    while (low <= high) {
27        mid = (low + high) / 2;
28
29        if (arr[mid] == key) {
30            printf("Element %d found at position %d.\n", key, mid + 1);
31            found = 1;
32            break;
33        }
34        else if (arr[mid] < key)
35            low = mid + 1;
36    }
37}
```

The terminal output shows the execution of the program:

```
c++/" && gcc day33.c -o day33 && "/Users/rishabhtrivedi/Documents/vs/c++/day33
Enter number of elements: 4
Enter 4 sorted elements:
1234
1234
23344
344
Enter the element to search: 3
Element 3 not found in the array.
```

A screenshot of the Visual Studio Code (VS Code) interface. The left sidebar shows the file tree with a folder named 'vs' containing '.vscode' and 'c++'. Inside 'c++', there is a folder 'exp1.c' and several files: '15.2', '15.2.c', '23', '23.c', '33.2', '33.2.c', '33.c', 'add', 'add.c', 'addition', 'Array', 'Array.c', 'BreakSt...', 'BreakSt...', 'CallByR...', 'CallByR...', 'code.c', 'createfile', and 'createfil...'. The '33.2.c' file is currently selected and open in the editor.

The code in the editor is a C++ program for insertion sort:

```
#include <stdio.h>

int main() {
    int arr[100], n, i, element, pos;

    // Input size of array
    printf("Enter number of elements: ");
    scanf("%d", &n);

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

    // Input element to insert
    printf("Enter element to insert: ");
    scanf("%d", &element);

    // Find position to insert
    for (i = 0; i < n; i++) {
        if (element < arr[i]) {
            pos = i;
            break;
        }
    }

    // If element is greater than all, insert at end
    if (i == n)
```

The terminal tab at the bottom shows the execution of the program:

```
Enter number of elements: 4
Enter 4 sorted elements:
4
3
34
3
Enter element to insert: 4
Array after insertion:
4 3 4 34 3
```

The status bar at the bottom right indicates 'macos-clang-x64' and 'Prettier'.

```
c++ > C day34.c > ...
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n, i, element, pos;
5
6     // Input size of array
7     printf("Enter number of elements: ");
8     scanf("%d", &n);
9
10    // Input array elements
11    printf("Enter %d elements:\n", n);
12    for (i = 0; i < n; i++) {
13        scanf("%d", &arr[i]);
14    }
15
16    // Input element and position
17    printf("Enter element to insert: ");
18    scanf("%d", &element);
19    printf("Enter position to insert (1 to %d): ", n + 1);
20    scanf("%d", &pos);
21
22    // Validate position
23    if (pos < 1 || pos > n + 1) {
24        printf("Invalid position!\n");
25        return 0;
26    }
27
28    // Shift elements to the right
29    for (i = n; i >= pos; i--) {
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1 + ⌂ X

rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day34.c -o day34 && "/Users/rishabhtrivedi/Documents/vs/c++/"day34 |

```
Enter number of elements: 4
Enter 4 elements:
34
345
345
345
Enter element to insert: 34
Enter position to insert (1 to 5):
```

Indexing completed. macos-clang-x64 Prettier



```
#include <stdio.h>

int main() {
    int arr[100], n, i, pos;

    // Input size of array
    printf("Enter number of elements: ");
    scanf("%d", &n);

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

    // Input position to delete
    printf("Enter position to delete (1 to %d): ", n);
    scanf("%d", &pos);

    // Validate position
    if (pos < 1 || pos > n) {
        printf("Invalid position!\n");
        return 0;
    }

    // Shift elements to the left
    for (i = pos - 1; i < n - 1; i++) {
        arr[i] = arr[i + 1];
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1

```
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/"34.2
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/"34.2
c++/"/ && gcc 34.2.c -o 34.2 && "/Users/rishabhtrivedi/Documents/vs/c++/"34.2
Enter number of elements: 2
Enter 2 elements:
23
23
Enter position to delete (1 to 2): 234
Invalid position!
rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```



```
c++ > C day35.c > ...
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n, i;
5     int largest, second_largest;
6
7     // Input size of array
8     printf("Enter number of elements: ");
9     scanf("%d", &n);
10
11    // Check for minimum valid size
12    if (n < 2) {
13        printf("At least two elements are required.\n");
14        return 0;
15    }
16
17    // Input array elements
18    printf("Enter %d elements:\n", n);
19    for (i = 0; i < n; i++) {
20        scanf("%d", &arr[i]);
21    }
22
23    // Initialize largest and second largest
24    if (arr[0] > arr[1]) {
25        largest = arr[0];
26        second_largest = arr[1];
27    } else {
28        largest = arr[1];
29        second_largest = arr[0];
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day35.c -o day35 && "/Users/rishabhtrivedi/Documents/vs/c++/"day35
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day35.c -o day35 && "/Users/rishabhtrivedi/Documents/vs/c++/"day35
Enter number of elements: 2
Enter 2 elements:
234
23
The second largest element is: 23
rishabhtrivedi@Rishabhs-MacBook-Air c++ % 3
```



```
ay30.2.c... U C day31.2.c U C 34.2.c U C day35.c U C 35.2.c U X C day32 D v ⚙ ? C day31.2.c > ...
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n, k, i;
5     int temp[100];
6
7     // Input size of array
8     printf("Enter number of elements: ");
9     scanf("%d", &n);
10
11    // Input array elements
12    printf("Enter %d elements:\n", n);
13    for (i = 0; i < n; i++) {
14        scanf("%d", &arr[i]);
15    }
16
17    // Input number of rotations
18    printf("Enter number of positions to rotate (k): ");
19    scanf("%d", &k);
20
21    // Handle cases where k >= n
22    k = k % n;
23
24    // Copy last k elements to temp[]
25    for (i = 0; i < k; i++) {
26        temp[i] = arr[n - k + i];
27    }
28
29    // Shift the rest of the elements to the right
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1

● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc 35.2.c -o 35.2 && "/Users/rishabhtrivedi/Documents/vs/c++/"35.2
Enter number of elements: 2
Enter 2 elements:
234
234
Enter number of positions to rotate (k): 234
Array after rotating to the right by 0 positions:
234 234
rishabhtrivedi@Rishabhs-MacBook-Air vs %
```



```
c++ > C day36.c > ...
1 #include <stdio.h>
2
3 int main() {
4     int a[10][10];
5     int rows, cols, i, j;
6
7     // Input number of rows and columns
8     printf("Enter number of rows: ");
9     scanf("%d", &rows);
10    printf("Enter number of columns: ");
11    scanf("%d", &cols);
12
13    // Input matrix elements
14    printf("Enter elements of the matrix (%d x %d):\n", rows, cols);
15    for (i = 0; i < rows; i++) {
16        for (j = 0; j < cols; j++) {
17            scanf("%d", &a[i][j]);
18        }
19    }
20
21    // Display matrix elements
22    printf("\nThe matrix is:\n");
23    for (i = 0; i < rows; i++) {
24        for (j = 0; j < cols; j++) {
25            printf("%d ", a[i][j]);
26        }
27        printf("\n");
28    }
29 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1  
JavaSE-21  
Code c++  
3456  
645  
45  
erty  
The matrix is:  
456 345 3456 645  
45 0 1799006392 1  
10 0 868352 0



The screenshot shows a Mac OS X desktop environment with the Visual Studio Code application open. The code editor displays a C++ program for calculating the sum of all elements in a matrix. The terminal below shows the execution of the program, entering 2 for rows and 4 for columns, followed by the matrix elements 3456, 345, and 34. The output shows the sum as 45.

```
1 #include <stdio.h>
2
3 int main() {
4     int a[10][10];
5     int rows, cols, i, j, sum = 0;
6
7     // Input number of rows and columns
8     printf("Enter number of rows: ");
9     scanf("%d", &rows);
10    printf("Enter number of columns: ");
11    scanf("%d", &cols);
12
13    // Input matrix elements
14    printf("Enter elements of the matrix (%d x %d):\n", rows, cols);
15    for (i = 0; i < rows; i++) {
16        for (j = 0; j < cols; j++) {
17            scanf("%d", &a[i][j]);
18        }
19    }
20
21    // Calculate sum of all elements
22    for (i = 0; i < rows; i++) {
23        for (j = 0; j < cols; j++) {
24            sum += a[i][j];
25        }
26    }
27
28    // Display the sum
29    printf("\nSum of all elements in the matrix = %d\n", sum);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1 + ⌂ ×

cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc 36.2.c -o 36.2 && "/Users/rishabhtrivedi/Documents/vs/c++/"36.2  
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc 36.2.c -o 36.2 && "/Users/rishabhtrivedi/Documents/vs/c++/"36.2  
Enter number of rows: 2  
Enter number of columns: 4  
Enter elements of the matrix (2 x 4):  
3456  
345  
34

macos-clang-x64 Prettier

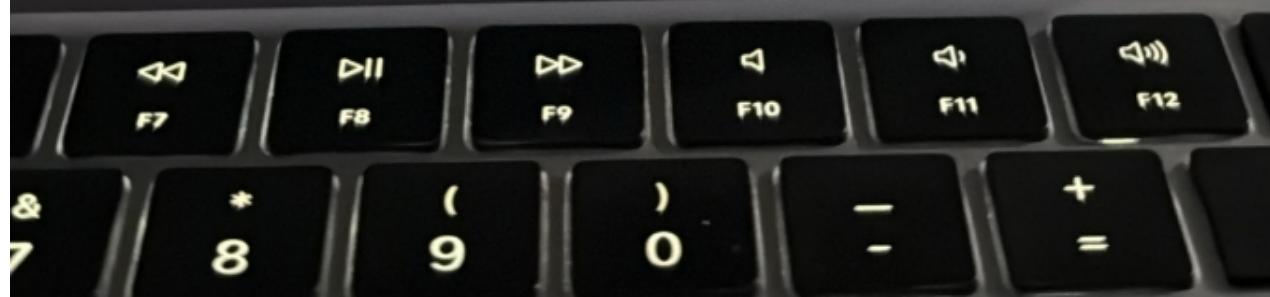


```
c++ > C day37.c > ...
1 #include <stdio.h>
2
3 int main() {
4     int a[10][10], rowSum[10];
5     int rows, cols, i, j;
6
7     // Input number of rows and columns
8     printf("Enter number of rows: ");
9     scanf("%d", &rows);
10    printf("Enter number of columns: ");
11    scanf("%d", &cols);
12
13    // Input matrix elements
14    printf("Enter elements of the matrix (%d x %d):\n", rows, cols);
15    for (i = 0; i < rows; i++) {
16        for (j = 0; j < cols; j++) {
17            scanf("%d", &a[i][j]);
18        }
19    }
20
21    // Calculate sum of each row
22    for (i = 0; i < rows; i++) {
23        rowSum[i] = 0; // initialize sum for current row
24        for (j = 0; j < cols; j++) {
25            rowSum[i] += a[i][j];
26        }
27    }
28
29 // Display matrix
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1 + ⋮

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day37.c -o day37 && "/Users/rishabhtrivedi/Documents/vs/c++/"day37
rishabhtrivedi@Rishabhhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day37.c -o day37 && "/Users/rishabhtrivedi/Documents/vs/c++/"day37
Enter number of rows: 2
Enter number of columns: 2
Enter elements of the matrix (2 x 2):
2
3
3
```

Indexing completed. macos-clang-x64 Pr



100% Sat 1 Nov 8:31 PM

... 6.c U C day32.c U C day38.c U X C day32.2.c U C 36.2.c U D v ...

c++ > C day38.c > ...

```
1 #include <stdio.h>
2
3 int main() {
4     int a[10][10], b[10][10], sum[10][10];
5     int rows, cols, i, j;
6
7     // Input number of rows and columns
8     printf("Enter number of rows: ");
9     scanf("%d", &rows);
10    printf("Enter number of columns: ");
11    scanf("%d", &cols);
12
13    // Input elements of first matrix
14    printf("Enter elements of first matrix (%d x %d):\n", rows, cols);
15    for (i = 0; i < rows; i++) {
16        for (j = 0; j < cols; j++) {
17            scanf("%d", &a[i][j]);
18        }
19    }
20
21    // Input elements of second matrix
22    printf("Enter elements of second matrix (%d x %d):\n", rows, cols);
23    for (i = 0; i < rows; i++) {
24        for (j = 0; j < cols; j++) {
25            scanf("%d", &b[i][j]);
26        }
27    }
28
29    // Add two matrices
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1 + ... | x

cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day38.c -o day38 && "/Users/rishabhtrivedi/Documents/vs/c++/day38" && rishabhtrivedi@Rishabh-MacBook-Air: ~ % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day38.c -o day38 && "/Users/rishabhtrivedi/Documents/vs/c++/day38" Enter number of rows: 2 Enter number of columns: 2 Enter elements of first matrix (2 x 2): 2 2

macos-clang-x64 Prettier

master\*+ 0 0 △ 0 vs/c++ Debug Indexing completed.

JavaSE-21... Code c++

The screenshot shows a macOS desktop environment with several windows open. The main window is a code editor displaying a C++ program for matrix traversal. The terminal window below it shows the execution of the program, including user input for the matrix size and elements, and the output of the primary diagonal traversal.

```
c++ > #include <stdio.h>
      1 int main() {
      2     int a[10][10];
      3     int n, i, j;
      4
      5     // Input the size of the square matrix
      6     printf("Enter the order of the square matrix (n x n): ");
      7     scanf("%d", &n);
      8
      9     // Input matrix elements
     10    printf("Enter elements of the %d x %d matrix:\n", n, n);
     11    for (i = 0; i < n; i++) {
     12        for (j = 0; j < n; j++) {
     13            scanf("%d", &a[i][j]);
     14        }
     15    }
     16
     17    // Display the matrix
     18    printf("\nMatrix:\n");
     19    for (i = 0; i < n; i++) {
     20        for (j = 0; j < n; j++) {
     21            printf("%d ", a[i][j]);
     22        }
     23        printf("\n");
     24    }
     25
     26    // Diagonal traversal (Primary Diagonal)
     27    printf("\nPrimary Diagonal: ");
     28
     29
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 1

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day40.c -o day40 && "/Users/rishabhtrivedi/Documents/vs/c++/day40"
● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day40.c -o day40 && "/Users/rishabhtrivedi/Documents/vs/c++/day40"
Enter the order of the square matrix (n x n): 2
Enter elements of the 2 x 2 matrix:
2
2
2
23
2
```

