main.c

Share Run

```c
//DAY 39
//Q77
#include <stdio.h>
int main() {
    int n, i, j, k, isDistinct = 1;

    printf("Enter the size of the square matrix: ");
    scanf("%d", &n);

    int matrix[n][n];
    printf("Enter elements of the matrix:\n");
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++) {
            printf("Element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }
    int diagonal[n];
    for (i = 0; i < n; i++) {
        diagonal[i] = matrix[i][i];
    }
    for (i = 0; i < n; i++) {
        for (j = i + 1; j < n; j++) {
            if (diagonal[i] == diagonal[j]) {
                isDistinct = 0;
                break;
            }
        }
        if (!isDistinct)
            break;
    }
    printf("\nThe entered matrix is:\n");
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n");
```

Output

```
Enter the size of the square matrix: 2
Enter elements of the matrix:
Element [0][0]: 1
Element [0][1]: 2
Element [1][0]: 2
Element [1][1]:
3

The entered matrix is:
1   2
2   3

Diagonal elements: 1 3 All diagonal elements are distinct.


=== Code Execution Successful ===
```

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Share Run

```c
//DAY 39
//Q78
#include <stdio.h>
int main() {
    int n, i, j, sum = 0;

    printf("Enter the size of the square matrix: ");
    scanf("%d", &n);

    int matrix[n][n];

    printf("Enter elements of the matrix:\n");
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++) {
            printf("Element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }
    for (i = 0; i < n; i++) {
        sum += matrix[i][i];
    }
    printf("\nThe entered matrix is:\n");
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n");
    }
    printf("\nSum of main diagonal elements = %d\n", sum);
    return 0;
}
```

Output

```
Enter the size of the square matrix: 2
Enter elements of the matrix:
Element [0][0]: 1
Element [0][1]: 13
Element [1][0]:
3
Element [1][1]: 7

The entered matrix is:
1   13
3   7

Sum of main diagonal elements = 8


=== Code Execution Successful ===
```