

C:\Users\DELL\Documents\large numbers.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug [*] 2D Array.cpp [*] large numbers.cpp

```
1 Q1)Adding two large numbers|
2
3 #include <stdio.h>
4 #include <stdlib.h>
5 struct Node {
6     int digit;
7     struct Node* next;
8 };
9 typedef struct Node Node;
10 Node* createNode(int digit) {
11     Node* newNode = (Node*)malloc(sizeof(Node));
12     newNode->digit = digit;
13     newNode->next = NULL;
14     return newNode;
15 }
16 void insertDigit(Node** head, int digit) {
17     Node* newNode = createNode(digit);
18     newNode->next = *head;
19     *head = newNode;
20 }
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Shorten compiler paths

Compilation results...

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\DELL\Documents\2D Array.exe
- Output Size: 152.720703125 KiB
- Compilation Time: 0.61s
```

Line: 1 Col: 28 Sel: 0 Lines: 62 Length: 1388 Insert Done parsing in 0.063 seconds

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21:49 18-08-2023

C:\Users\DELL\Documents\large numbers.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug

```
19 | *head = newNode;
20 | }
21 | Node* addLists(Node* list1, Node* list2) {
22 |     Node* result = NULL;
23 |     int carry = 0;
24 |     while (list1 || list2 || carry) {
25 |         int sum = carry;
26 |         if (list1) {
27 |             sum += list1->digit;
28 |             list1 = list1->next;
29 |         }
30 |         if (list2) {
31 |             sum += list2->digit;
32 |             list2 = list2->next;
33 |         }
34 |
35 |         carry = sum / 10;
36 |         sum %= 10;
37 |
38 |         insertDigit(&result, sum);
```

Compiler Resources Compile Log Debug Find Results Close

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(globals)

Project Classes Debug [*] 2D Array.cpp [*] large numbers.cpp

```
28         list1 = list1->next;
29     }
30     if (list2) {
31         sum += list2->digit;
32         list2 = list2->next;
33     }
34
35     carry = sum / 10;
36     sum %= 10;
37
38     insertDigit(&result, sum);
39 }
40 return result;
41 }
42 void printList(Node* head) {
43     Node* current = head;
44     while (current) {
45         printf("%d", current->digit);
46         current = current->next;
47     }
```

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(globals)

Project Classes Debug

```
44 while (current) {
45     printf("%d", current->digit);
46     current = current->next;
47 }
48 printf("\n");
49 }
50 int main() {
51     Node* num1 = NULL;
52     Node* num2 = NULL;
53     insertDigit(&num1, 9);
54     insertDigit(&num1, 9);
55     insertDigit(&num1, 9);
56     insertDigit(&num2, 1);
57     Node* sum = addLists(num1, num2);
58     printf("Sum: ");
59     printList(sum);
60     return 0;
61 }
62
```

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C:\Users\DELL\Documents\1d array.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug [*] 2D Array.cpp [*] large numbers.cpp [*] 1d array.cpp

```
1 Q2)1D Array|
2
3 #include <stdio.h>
4 void rotateArray(int array[], int size, int shift) {
5     int temp[size];
6     for (int i = 0; i < size; i++) {
7         temp[i] = array[(i + shift) % size];
8     }
9     for (int i = 0; i < size; i++) {
10        array[i] = temp[i];
11    }
12 }
13 int main() {
14     int size, shift;
15     printf("Enter the size of the array: ");
16     scanf("%d", &size);
17     int array[size];
18     printf("Enter %d elements:\n", size);
19     for (int i = 0; i < size; i++) {
20         printf("Element %d: ", i + 1);
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Shorten compiler paths

Compilation results...

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\DELL\Documents\2D Array.exe
- Output Size: 152.720703125 KiB
- Compilation Time: 0.61s
```

Line: 1 Col: 12 Sel: 0 Lines: 33 Length: 840 Insert Done parsing in 0.015 seconds

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C:\Users\DELL\Documents\1d array.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug [*] 2D Array.cpp [*] large numbers.cpp [*] 1d array.cpp

```
15 printf("Enter the size of the array: ");
16 scanf("%d", &size);
17 int array[size];
18 printf("Enter %d elements:\n", size);
19 for (int i = 0; i < size; i++) {
20     printf("Element %d: ", i + 1);
21     scanf("%d", &array[i]);
22 }
23 printf("Enter the number of positions to rotate: ");
24 scanf("%d", &shift);
25 rotateArray(array, size, shift);
26 printf("Rotated array: ");
27 for (int i = 0; i < size; i++) {
28     printf("%d ", array[i]);
29 }
30 printf("\n");
31 return 0;
32 }
33
```

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Abort Compilation

Shorten compiler paths

Compilation results...

```
-----
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Line: 1 Col: 12 Sel: 0 Lines: 33 Length: 840 Insert Done parsing in 0.015 seconds

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C:\Users\DELL\Documents\2D Array.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug

[*] 2D Array.cpp

```
1 Q3)2D Array|
2
3 #include <stdio.h>
4 void rotateMatrix(int matrix[][100], int size) {
5     int temp[size][size];
6
7     for (int i = 0; i < size; i++) {
8         for (int j = 0; j < size; j++) {
9             temp[j][size - 1 - i] = matrix[i][j];
10        }
11    }
12    for (int i = 0; i < size; i++) {
13        for (int j = 0; j < size; j++) {
14            matrix[i][j] = temp[i][j];
15        }
16    }
17 }
18 int main() {
19     int size;
20     printf("Enter the size of the matrix: ");
```

Compiler Resources Compile Log Debug Find Results Close

Compilation results...

- Errors: 0
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- Output Filename: C:\Users\DELL\Documents\2D Array.exe
- Output Size: 152.720703125 KiB
- Compilation Time: 0.61s

Line: 1 Col: 12 Sel: 0 Lines: 40 Length: 1039 Insert Done parsing in 0.062 seconds

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug

```
16 | }
17 | }
18 | int main() {
19 |     int size;
20 |     printf("Enter the size of the matrix: ");
21 |     scanf("%d", &size);
22 |     int matrix[100][100];
23 |     printf("Enter %d x %d matrix elements:\n", size, size);
24 |     for (int i = 0; i < size; i++) {
25 |         for (int j = 0; j < size; j++) {
26 |             printf("Element (%d, %d): ", i + 1, j + 1);
27 |             scanf("%d", &matrix[i][j]);
28 |         }
29 |     }
30 |     rotateMatrix(matrix, size);
31 |     printf("Rotated matrix:\n");
32 |     for (int i = 0; i < size; i++) {
33 |         for (int j = 0; j < size; j++) {
34 |             printf("%d ", matrix[i][j]);
35 |         }
36 |     }
37 | }
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Shorten compiler paths

Compilation results...

```
-----
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```

Line: 1 Col: 12 Sel: 0 Lines: 40 Length: 1039 Insert Done parsing in 0.062 seconds

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TDM-GCC 4.9.2 64-bit Debug

(globals)

Project Classes Debug [*] 2D Array.cpp

```
22 int matrix[100][100];
23 printf("Enter %d x %d matrix elements:\n", size, size);
24 for (int i = 0; i < size; i++) {
25     for (int j = 0; j < size; j++) {
26         printf("Element (%d, %d): ", i + 1, j + 1);
27         scanf("%d", &matrix[i][j]);
28     }
29 }
30 rotateMatrix(matrix, size);
31 printf("Rotated matrix:\n");
32 for (int i = 0; i < size; i++) {
33     for (int j = 0; j < size; j++) {
34         printf("%d ", matrix[i][j]);
35     }
36     printf("\n");
37 }
38 return 0;
39 }
40
```

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Compilation results...

```
-----
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```

Line: 38 Col: 14 Sel: 0 Lines: 40 Length: 1039 Insert Done parsing in 0.062 seconds

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