

File Edit View Git Project Build Debug Test Analyze

Microsoft Visual Studio Debug Console

Please enter the number of equations you would like to solve (up to 10 equations): 3
To load equations from a file please enter 1, for manual input please enter 0: 0
Please enter the coefficients for row 1 and variable x. Please include Zero values: -3
Please enter the coefficients for row 1 and variable y. Please include Zero values: 2
Please enter the coefficients for row 1 and variable z. Please include Zero values: -5
Please enter the equation's resulting value: -14
Please enter the coefficients for row 2 and variable x. Please include Zero values: 2
Please enter the coefficients for row 2 and variable y. Please include Zero values: -3
Please enter the coefficients for row 2 and variable z. Please include Zero values: 4
Please enter the equation's resulting value: 10
Please enter the coefficients for row 3 and variable x. Please include Zero values: 1
Please enter the coefficients for row 3 and variable y. Please include Zero values: 1
Please enter the coefficients for row 3 and variable z. Please include Zero values: 1
Please enter the equation's resulting value: 4

ORIGINAL MATRIX

	-3.000	2.000	-5.000		-14.000	
	2.000	-3.000	4.000		10.000	
	1.000	1.000	1.000		4.000	

INDEX VECTOR = | 1, 2, 3 |
SCALED RATIOS = | 1.500, 0.500, 1.000 |
MULTIPLIER: 0.000, -0.667, -0.333
PIVOT ROW: 1

MATRIX AFTER PARTIAL PIVOT

	-3.000	2.000	-5.000		-14.000	
	0.000	-1.667	0.667		0.667	
	0.000	1.667	-0.667		-0.667	

NEW INDEX VECTOR = | 1, 2, 3 |
SCALED RATIOS = | 2.500, 1.000 |
MULTIPLIER: 0.000, -1.000
PIVOT ROW: 2

MATRIX AFTER PARTIAL PIVOT

	-3.000	2.000	-5.000		-14.000	
	0.000	-1.667	0.667		0.667	
	0.000	-0.000	-0.000		-0.000	

NEW INDEX VECTOR = | 1, 2, 3 |

** Solution **
X = -2.6
Y = 1.6
Z = 5

E:_School\CalPoly Pomona\Classes\CS_3010\Programming Assignment #1 DUE OCT 8\Project_1\Debug\Project_1.exe (process 19628) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

main.cpp

```
13 of each of the three coefficients and t
14 manually through the console or with a
15 */
16
17 #include <iostream>
18 #include <fstream>
19 #include <istream>
20 #include <iomanip>
21 using namespace std;
22 int numberOfEquations();
23 int menuChoice();
24 void displayMatrix(float[][3], float[
25 void manualInput(float[][3], float[
26 bool fileInput(float[][3], float[
27 void scRatio(float[][3], float[
28 void equationMultiplier(float[][3], f
29 int findPivot(float[], int, int);
30 void calculateIntermediateMatrix(float
31 void rowSwitch(float[][3], float[
32 void backSubstitution(float[][3], fl
33
34 int main() {
35     // LOCAL VARIABLES
36     int const MAXARRAYSIZE = 10;
37     int const NUMOFVARIABLES = 3;
38     int numofEquations = 0;
39     int choice = 99;
40     int idxStart = 0;
41     int pivot = 0;
42     // ARRAY INITIALIZATIONS
43     float coefficientMatrix[MAXARRAYS
44     float equationResults[MAXARRAYSIZ
45     float scaledRatio[MAXARRAYSIZE] =
```

Server Explorer

Toolbox

Solution Explorer

Project_1

References

External Dependencies

Header Files

Resource Files

Source Files

main.cpp

Output

Show output from: Debug

'Project_1.exe' (Win32): Loaded 'C:\Windows\SysWOW64\kernel.

'Project_1.exe' (Win32): Loaded 'C:\Windows\SysWOW64\msvcrt.

'Project_1.exe' (Win32): Loaded 'C:\Windows\SysWOW64\rpcrt4.

The thread 0x2498 has exited with code 0 (0x0).

The thread 0xa70 has exited with code 0 (0x0).

The program '[19628] Project_1.exe' has exited with code 0 (0x0).

Ready

Add to Source Control

3:38 AM

10/8/2021

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Project_1

Server Explorer Toolbox

main.cpp

```
13 of each of the three coefficients and the results for each
14 manually through the console or with a file input.
15 */
16
17 #include <iostream>
18 #include <fstream>
19 #include <istream>
20 #include <iomanip>
21 using namespace std;
22 int numberOfEquations();
23 int menuChoice();
24 void displayMatrix(float[][3], float[], int);
25 void manualInput(float[][3], float[], int[], int);
26 bool fileInput(float[][3], float[], int[], int);
27 void scRatio(float[][3], float[], int[], int, int);
28 void equationMultiplier(float[][3], float[], int[], int,
29 int findPivot(float[], int, int);
30 void calculateIntermediateMatrix(float[][3], float[], f
31 void rowSwitch(float[][3], float[], int[], int, int, int
32 void backSubstitution(float[][3], float[]);
33
34
35 int main() {
36     // LOCAL VARIABLES
37     int const MAXARRAYSIZE = 10;
38     int const NUMOFVARIABLES = 3;
39     int numofEquations = 0;
40     int choice = 99;
41     int idxStart = 0;
42     int pivot = 0;
43     // ARRAY INITIALIZATIONS
44     float coefficientMatrix[MAXARRAYSIZE][NUMOFVARIABLES
45     float equationResults[MAXARRAYSIZE] = { 0 };
46     float scaledRatio[MAXARRAYSIZE] = { 0 };
```

Microsoft Visual Studio Debug Console

Please enter the number of equations you would like to solve (up to 10 equations): 3
To load equations from a file please enter 1, for manual input please enter 0: 1
Please enter the file name: Test.txt

ORIGINAL MATRIX

2.000	3.000	0.000	8.000
-1.000	2.000	-1.000	0.000
3.000	0.000	2.000	9.000

INDEX VECTOR = | 1, 2, 3 |
SCALED RATIOS = | 0.667, 0.500, 1.000 |
MULTIPLIER: 0.667, -0.333, 0.000
PIVOT ROW: 3

MATRIX AFTER PARTIAL PIVOT

3.000	0.000	2.000	9.000
0.000	2.000	-0.333	3.000
0.000	3.000	-1.333	2.000

NEW INDEX VECTOR = | 3, 2, 1 |
SCALED RATIOS = | 1.000, 1.000 |
MULTIPLIER: 0.000, 1.500
PIVOT ROW: 2

MATRIX AFTER PARTIAL PIVOT

3.000	0.000	2.000	9.000
0.000	2.000	-0.333	3.000
0.000	0.000	-0.833	-2.500

NEW INDEX VECTOR = | 3, 2, 1 |

** Solution **
X = 1
Y = 2
Z = 3

E:\School\CalPoly Pomona\Classes\CS_3010\Programming Assignment #1 DUE OCT 8\Project_1\Debug\Project_1.exe (process 6320) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

100 % No issues found

Output

Show output from: Debug

'Project_1.exe' (Win32): Loaded 'C:\Windows\System32\kernel.appcore.dll'.
'Project_1.exe' (Win32): Loaded 'C:\Windows\System32\msvcrt.dll'.
'Project_1.exe' (Win32): Loaded 'C:\Windows\System32\RPCRT4.dll'.
The thread 0x4fc4 has exited with code 0 (0x0).
The thread 0x2954 has exited with code 0 (0x0).
The program '6320' Project_1.exe' has exited with code 0 (0x0).

Error List Output

Ready Add to Source Control 3:32 AM 10/8/2021