p3.9

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1 Specification

Write a program that reads in three floating-point numbers and prints the largest of the three inputs.

2 Analysis/Design

Store the 3 values in double variables
Use if statesments to compare each of the variables to see which one is largest
Display the result

- Obtain user input for three unique numeric values
- Determine which value is the largest
- Display result

3 Implementation

These are the include files needed for library function calls

⟨ *Include files* 1 ⟩ ≡

```
#include <iostream>
using namespace std;
```

◇

Fragment referenced in 2a.

"p3_9.cpp" 2a≡

```
⟨ Include files 1 ⟩

int main()
{
        ⟨ get values 2b ⟩
        ⟨ determine largest 2c ⟩
        ⟨ display result 3 ⟩
}
```

◇

Get three unique numeric values from user

⟨ *get values* 2b ⟩ ≡

```
double num1, num2, num3;

cout << "Please input an unique numeric value for number 1: ";
cin >> num1;
cout << "Please input an unique numeric value for number 2: ";
cin >> num2;
cout << "Please input an unique numeric value for number 3: ";
cin >> num3;
```

◇

Fragment referenced in 2a.

Use if statements to check which value is the largest

⟨ *determine largest* 2c ⟩ ≡

```
double result = 0;
if (num1 > num2 && num1 > num3)
{
        result = num1;
}
else if (num2 > num1 && num2 > num3)
{
        result = num2;
}
else if (num3 > num1 && num3 > num2)
{
        result = num3;
}
```

◇

Fragment referenced in 2a.

Output result to screen

⟨ *display result* 3 ⟩ ≡

```
cout << "The largest number is: " << result;
```

◇

Fragment referenced in 2a.

4 Test

Input 4, 9, and 2.5 as test values, and see if the program returns 9 as the largest value