Simple Arithmetic

LAB 3

SECTION G

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SUBMISSION DATE:

9/24/15

Problem

The purpose of this lab was to get used to how simple mathematic equations worked in notepad++. I found and corrected the problems with pre-written arithmetic equations, I wrote my own code that used simple arithmetic equations and also plugged in formulas to make the code work.

Analysis

The code I needed to correct was not very hard, we just needed to match the identifier with the correct data type. The simple equations were not that hard either, just a lot of repetition in the code.

Design

The layout of lab3 was easy since all that involved was writing what was wrong with the code. Lab3-2 was simple arithmetic equations, either with integers or decimals. Using the correct data-type to get the desired answer. Lab 3-3 dealt with the esplora do find out what the correlation with the X,Y,Z variables and the esplora using three tests.

Testing

The main testing portion of the testing was done in lab3-2, after I finished a couple lines of code I would compile and run the .exe to test to see if the code was correct and turned out the desired answer. Lab3-3 proved difficult because it involved performing a test and looking at the results to see what the correlation was between the esplora and the X,Y,Z variables. The dropping test proved most difficult because of the fact that you needed to catch the esplora and see the results.

Comments

None

Lab3

```
// CprE 185: Lab 3
// Problem 1: Mysterious Output

#include <stdio.h>

int main()
{
	int integerResult;
	double decimalResult;

	integerResult = 77 / 5;
	printf("The value of 77/5 is %d\n", integerResult);
	// the line above didn't have the correct data-type.
	integerResult = 2 + 3;
	printf("The value of 2+3 is %d\n", integerResult);
	// the printf line above didn't have a specifier.
	decimalResult = 1.0 / 22.0;
	printf("The value 1.0/22.0 is %lf\n", decimalResult);
	// the line above didn't have the correct data-type.
	return 0;
}
```

Lab3-2

```
#include <stdio.h>

int main(){
	int integerResult;
	double decimalResult;

	integerResult = 6427 + 1725;
	printf("the answer of 6427 + 1725 is %d\n", integerResult);

	integerResult = (6971 * 3925) - 95;
	printf("the answer to (6971 * 3925) - 95 is %d\n", integerResult);

	decimalResult = 79 + 12/5;
	printf("the answer to 79 + 12/5 is %lf\n", decimalResult);

	decimalResult = 3640.0/107.9;
	printf("the answer to 3640.0/107.9 is %lf\n", decimalResult);

	integerResult = (22/3)*3;
	printf("the answer to (22/3)*3 is %d\n", integerResult);

	integerResult = 22/(3*3);
	printf("the answer to 22/(3*3) is %d\n", integerResult);

	decimalResult = 22/(3*3);
```

```
	printf("the answer to 22/(3*3) is %lf\n", decimalResult);


	decimalResult = (22/3)*3;
	printf("the answer to (22/3)*3 is %lf\n", decimalResult);


	decimalResult = (22.0/3)*3.0;
	printf("the answer to (22.0/3)*3.0 is %lf\n", decimalResult);


	integerResult = 22/(3*3.0);
	printf("the answer to 22/(3*3.0) is %d\n", integerResult);


	decimalResult = 22.0/3.0*3.0;
	printf("the answer to 22.0/3.0*3.0 is %lf\n", decimalResult);


	decimalResult = 3.14*(23.567/2)*(23.567/2);
	printf("the area of a circle with a diameter of 23.567 is %lf\n", decimalResult);
	// I googled the equation of a circle and just re-rearrange it to fit the needed specifications that I knew would work.
	decimalResult = .3048 * 14;
	printf("the number of meters in 14 feet, is %lf\n", decimalResult);
	// I just plugged in the equation with the variable.
	decimalResult = (76 - 32)/1.8;
	printf("76 degrees in Fahrenheit is %lf centigrade\n", decimalResult);
	//same principle as the last equation.
return 0;
}
```