Quest 9

200 EXP

CPSC121 SI

Craig: Welcome Back Programmer.

Craig: This time we will be talking about the switch statement.

Craig: switch statements are a control mechanism that helps control the flow of the program. In other words, a variable could control which branch of code is executed, similar to if/else if statements, but a lot cleaner.

Craig: Switch statements are ideal for menu driven programs. They allow different courses of action based on user input. For example:

```
int choice;
cin >> choice;
switch(choice)
{
   case 1: cout << “You have entered choice 1.”; break;
   case 2: cout << “You have entered choice 2.”; break;
   default: cout << “Not choice 1 or 2.”;
}
```

Craig: In the code above, the choice variable holds the user input. The switch statement then evaluates the choice variable to execute the correct course of action.

Craig: if the choice == 1, you execute case 1. If the choice == 2, you execute case 2. If the switch statement ever makes it to the default case, you execute the default case.

Craig: Please note how case 1 and 2 have break; at the end of the executed code. This break; will exit the switch statement, thus not executing the default case. (The default case can have a break; as well).

Craig: By now you should have a pretty clear understanding of how switch statements work so let's see if you can trace the following switch statement.

```
switch(x)
{
   case 'A': cout << "You have selected A.\n"; break;
   case 'K': cout << "You have selected K.\n";
   case 'M': cout << "You have selected M.\n"; break;
   default: cout << "I'm a unicorn.\n"; break;
}
```

Craig: Based on the following inputs for x, what is the output?

A:

B:

M:

K:

D:

Craig: My boss needs you to design a menu for him. The program should ask the user for 2 numbers, and display a menu to them asking if they want to (1)add, (2)subtract, (3)multiply, or (4)divide the two numbers. The program should then pass the choice to a switch statement that will execute the correct operation and display the result. If an invalid choice has been made, please let the user know.

Craig: Once you are finished please show your SI leader your work.