**Assignment #4**

**Introduction to C Programming – COP 3223**

**Objectives**

1. To learn how to use loops for repeated execution
2. To learn how to use If-Else statements for conditional execution

**Introduction: Ultimate Computing Fun**

A new game store is opening in your area! Ultimate Computing Fun (UCF) Games is looking for a home for their wide variety of computer games and has decided to make you a part of their growing business.

In your previous assignments, you helped UCF Games research what types of games people would like to purchase, plan out their new store space and determine which applicants would be the best fit for working in the store.

Now, UCF Games is officially ready to open! In this assignment, you will write a program to simulate customers purchasing items in the newly opened store.

**Problem: Purchase Simulator (buy.c)**

The game store will offer both used and new games to sell to customers. In this simulator, you should present the user with the following menu:

1. Buy New Games
2. Buy Used Games
3. Quit

If the customer would like to buy games (either new or used), you should next ask how many games they would like to buy. The price of each game is pre-determined using the following values:

Used games sell for $10.00.

New games sell for $50.00.

Your program must keep track of the total amount that the customer will spend for their games. This total should be printed out when the user decides to quit.

If the user quits before buying anything; only print that their final cost will be $0.00.

If the user inputs an invalid menu choice, your program should tell them that their choice is invalid and present the menu again.

Please see the output samples for more information.

**Input Specification**

1. The menu input will be an integer.

2. The number of games to be purchased at a time will be a positive integer.

**Output Specification**

Output the results using the format below:

Your total cost is $XX.XX.

**Output Samples**

Below are some sample outputs of running the program. **Note that these samples are NOT a comprehensive test.** You should test your program with different data than is shown here based on the specifications given above. In the sample run below, for clarity and ease of reading, the user input is given in *italics* while the program output is in **bold**. (Note: When you actually run your program no bold or italics should appear at all. These are simply used in this description for clarity’s sake.)

**Sample Run #1 – New Games**

**Welcome to UCF Games!**

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*1*

**How many new games would you like to buy?**

*3*

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*3*

**Your total cost is $150.00.**

**Sample Run #2 – Used Games**

**Welcome to UCF Games!**

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*2*

**How many used games would you like to buy?**

*3*

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*3*

**Your total cost is $30.00.**

**Sample Run #3 – Unusual Cases**

**Welcome to UCF Games!**

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*5*

**Sorry, 5 is not a valid choice.**

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*3*

**Your total cost is $0.00.**

**Sample Run #4 – Both New and Used**

**Welcome to UCF Games!**

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*1*

**How many new games would you like to buy?**

*3*

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*2*

**How many used games would you like to buy?**

*5*

**What would you like to do?**

**1. Buy New Games.**

**2. Buy Used Games.**

**3. Quit**

*3*

**Your total cost is $200.00.**

**Deliverables**

One source file: *buy.c* for your solution to the given problem submitted over WebCourses.

**Restrictions**

Although you may use other compilers, your program must compile and run using Code::Blocks. Your program should include a header comment with the following information: your name, assignment title, and date. Also, make sure you include comments throughout your code describing the major steps in solving the problem.

**Grading Details**

Your programs will be graded upon the following criteria:

1) Your correctness

2) Your programming style and use of white space. Even if you have a plan and your program works perfectly, if your programming style is poor or your use of white space is poor, you could get 10% or 15% deducted from your grade.

3) Compatibility – You must submit C source files that can be compiled and executed in a standard C Development Environment. If your program does not compile, you will get a sizable deduction from your grade.