

# CSCI 1301 – Spring 2012

## Homework Assignments

**PAY ATTENTION TO DUE DATES SHOWN ON CLASS CALENDAR. NO LATE WORK IS ACCEPTED.**

Assignments from the Brookshear text are due **HANDWRITTEN**, at the beginning of class on the date shown on the calendar.

**HW One** - Brookshear - Chapter One Review Problems 1, 7, 9, 19, 26, 27,

**HW Two** - Brookshear - Chapter Two Review Problems 1, 2, 5, 7, 9, 11, 14, 15, 34, 42

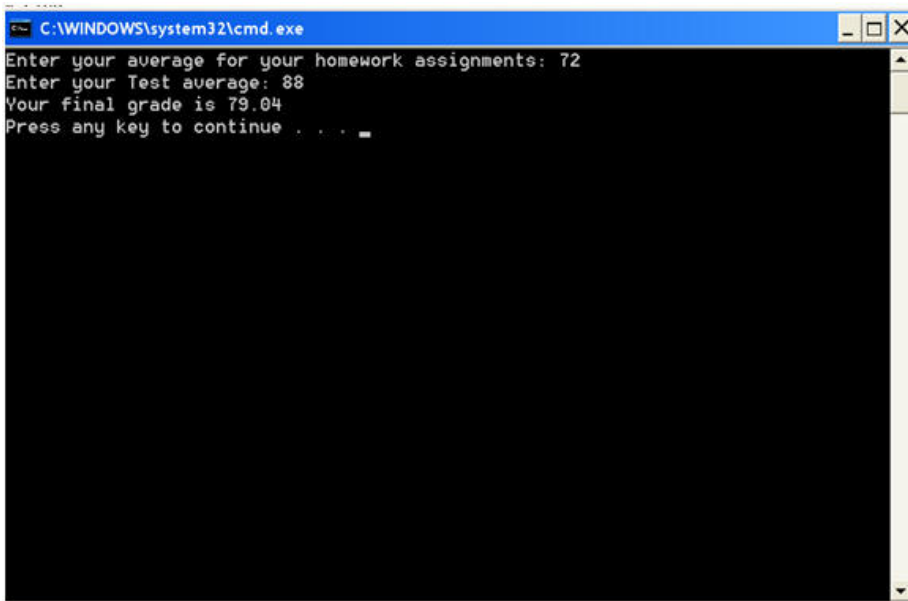
**HW Three** - Brookshear - Chapter Six Review Problems 1, 17, 18, AND Define the following terms, using your own words: variable, data type, integer, character type, Boolean, data structure, constant, assignment statement, operator precedence, and control statement.

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**Coding assignments are due at 10:30am on the date shown on the class calendar. Entire projects should be zipped and submitted via WebSubmit.**

### **HW Four (Input/Output/Mathematical Calculations)**

Create a program that allows a student to input their averages/grades for the different components of the overall grade for CSCI 1303 (Homework 20%, Exams 80%). The program should calculate and display the overall numeric average. Your interface should look similar to the following, with the appropriate components.



```
C:\WINDOWS\system32\cmd.exe
Enter your average for your homework assignments: 72
Enter your Test average: 88
Your final grade is 79.04
Press any key to continue . . .
```

## Homework Five (Conditionals and Looping)

Create a Calorie Counter program that allows a user to calculate daily caloric needs to maintain his/her weight, using the following rules. Then, using a loop, allow the user to input values for all meals and snacks. Each time a meal or snack is entered, the program should display the calories the user has left for the day:

### Daily Caloric Needs

**Step 1 - Determine your basal metabolic rate with the appropriate formula:**

**Female:**  $655 + (4.35 \times \text{weight in pounds}) + (4.7 \times \text{height in inches}) - (4.7 \times \text{age in years})$

**Males:**  $66 + (6.23 \times \text{weight in pounds}) + (12.7 \times \text{height in inches}) - (6.8 \times \text{age in years})$

**Step 2 - Insert your BMR into the appropriate formula to determine daily caloric needs:**

**You don't exercise:** BMR x 1.2

**You engage in light exercise one to three days a week:** BMR x 1.375

**You exercise moderately three to five times a week:** BMR x 1.55

**You exercise intensely six to seven days a week:** BMR x 1.725

**You exercise intensely six to seven days a week and have a physically active job:** BMR x 1.9

Taken from: "Count Calories to Maintain Weight | LIVESTRONG.COM." [Http://www.livestrong.com](http://www.livestrong.com). Web. 6 June 2010.

Feel free to add in other functionality for extra credit (up to 10 pts). Your interface should look something like this:

```
C:\WINDOWS\system32\cmd.exe
Welcome to the Calorie Counter Program!
First let's calculate your BMI.
Are you Male or Female? Enter M/F:
M
Enter your weight in pounds:
200
Enter your height in inches:
72
Enter your age:
30
Your BMI is 2022.4

To calculate your caloric needs to maintain your weight, choose your level of
exercise.
1. You don't exercise.
2. You engage in light exercise 1-3 days a week.
3. You exercise moderately 3-5 times a week.
4. You exercise intensely 6-7-days a week.
5. You exercise intensely 7 days a week and have a physically active job
3
To maintain your weight, you should eat no more than 3134 calories per day!

Enter the caloric value for your meal or snack
300
You have 2834 calories left for the day to stay on track.
Do you want to enter another meal or snack?
Enter 1 to stop or 2 to input the caloric value for another meal or snack
2
*****
Enter the caloric value for your meal or snack
550
You have 2284 calories left for the day to stay on track.
Do you want to enter another meal or snack?
Enter 1 to stop or 2 to input the caloric value for another meal or snack
2
*****
Enter the caloric value for your meal or snack
425
You have 1859 calories left for the day to stay on track.
Do you want to enter another meal or snack?
Enter 1 to stop or 2 to input the caloric value for another meal or snack
```

**HW Six** - Gaddis Text - Chapter 6 - Programming Challenge # 7 (Functions)

**HW Seven** - Gaddis Text - Chapter 8 - Programming Challenge # 3 (Parallel Arrays)