PROGRAM TWO
M A S H – DISCOVER YOUR FUTURE

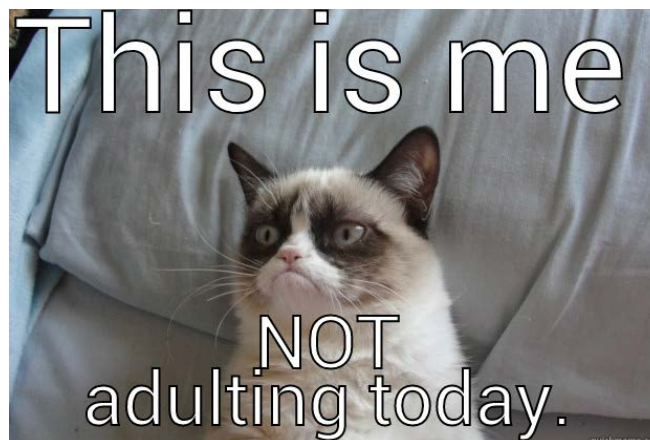## CSC2100-001 / SPRING 2017

ASSIGNMENT DATE

Monday, February 13, 2017

DUE DATE

Friday, March 3, 2017

PURPOSE OF PROGRAM

The purpose of the program is to play the game of MASH (Mansion, Apartment, Shack, House). You may have played this game when you were in 4th or 5th grade – or you may have never played at all. Most of you would not admit it if you had played this game. This program will temporarily let you forget about adulting!

This program asks the user multiple questions and then randomly generates answers based on the answers to predict the user's future. By the time you finish this program, you will have learned how to make a menu-based program, use switch statements, validate user input with while loops, use strings, and mix cin>> and cin.getline intermittently in a program.

PLAY ONLINE

There are many versions of this game online. If you have never played the game before, I recommend playing one of the online games before trying to create your own. Here is a link to one: http://mashga.me/

MENU:

You will have a main menu that will ask the user to either
> 1) Play MASH
> 2) End the program.

You must have a <mark>switch</mark> statement to figure out which choice the user selected. Validate the user's choice with a while loop. The program should run over and over until the user selects number 2 (to end the program).

INPUT

- INPUT you are getting from the user:
    - Names of three people
    - Three integers between 1 and 10
    - Three locations including city & state
    - Three job titles
    - Three companies or restaurants
    - Three integers between 10000 and 500000
    - Three types of cars

- Except for the numerical data, the user must enter two things they like and one they dislike for each "category". This makes the game much more interesting. Also, do not tell the user why they are entering in this information. For example, for the number of children you should write "Enter a number between 1 and 100" and for spouse you should write something like "Enter in a person that you like" or you can be funny "Enter in the name of the person that doesn't make you puke." This also makes it more fun.

- When reading in their answers, remember to use **getline** if you are reading in a string of data that has spaces and >> if it is numerical data (no spaces). Look at your notes to remember what you have to do in your code when you put cin>> and cin.getline() together in the same program.

- Numerical Data:
    - Salary – should be between 10000 and 500000 and you have to validate input (while loop) for all three numbers.
    - Number of children – should be between 1 and 100 and you have to validate input (while loop) for all three numbers.

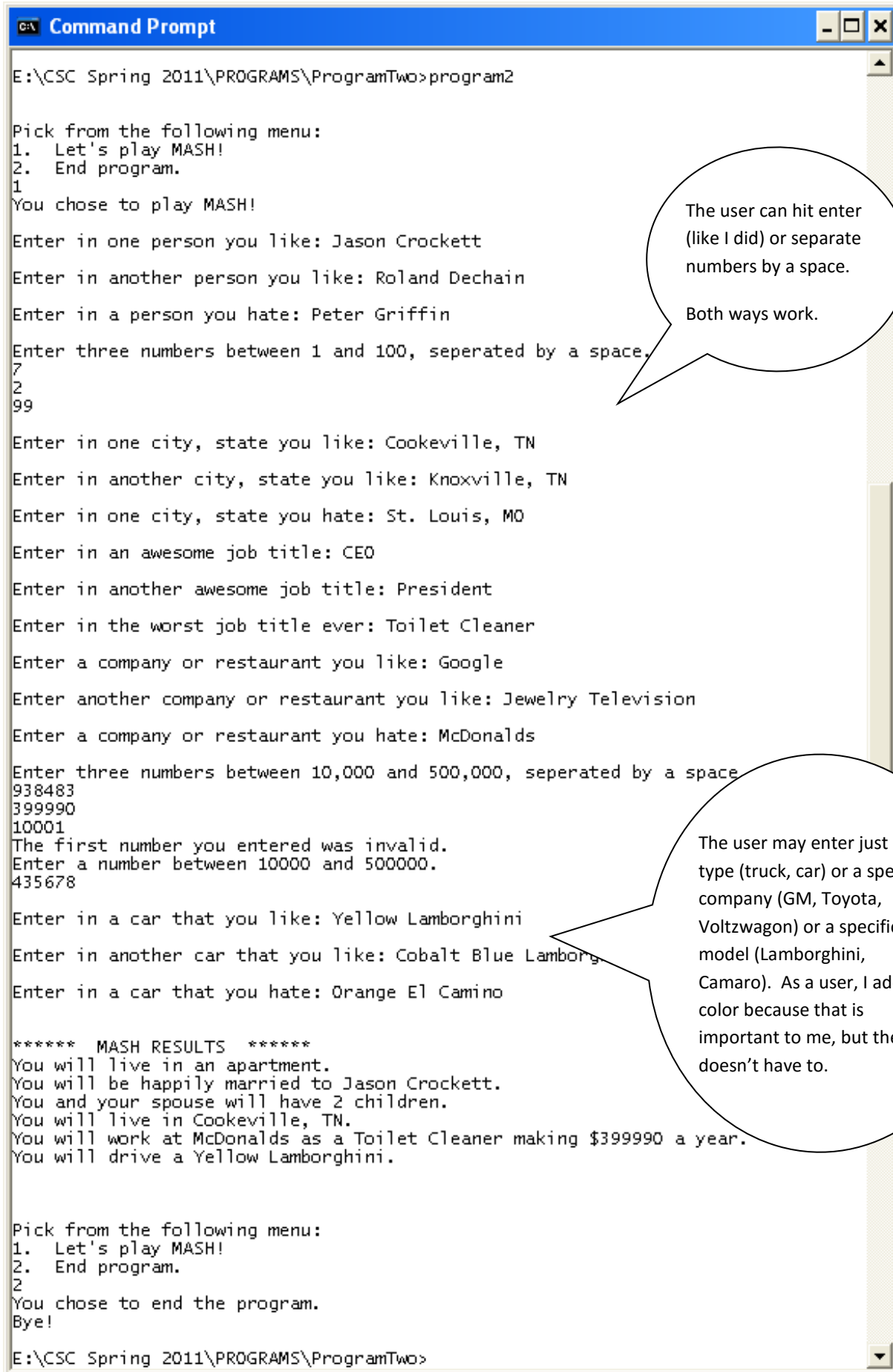## CALCULATIONS/OUTPUT:

RANDOM NUMBER

- You will be predicting the user's future by selecting one of their three choices randomly. You will need to create a random number **for each** "prediction". How you generate a random number:

    - First, you have to include the <cstdlib> header and the <ctime> header.

    - Second, you have to create an integer to hold the random number (I called mine randomInt).

    - You have to "seed" the number generator with a random number. It is best to seed with the computer's time because it will never be the same each time the number is ran. This is how you do that:
    <mark>srand((unsigned)time(0));</mark>
    Pleace the code (above) to seed the number generator at the top of your program (right underneath where you define your variables).

    - Now, before printing out each result you have to generate a random number to know which of the three user's answers to pick. You will assign this random number to randomInt:
    <mark>randomInt = (rand() % n) + 1;</mark>
    replace the n with a 3 if you want a number between 1 and 3
    replace the n with a 4 if you want a number between 1 and 4

- How to print out results.
  - For housing you are not asking the user for the data. The words MASH stand for the different types of housing. There are four choices (Mansion, Apartment, Shack or House). You will need to generate a number between 1 and 4. If it is a 1, you will print out that the user will live in a mansion. If it is a 2, you will print out that the user will live in an apartment……and so on.

  - For all the other "categories" you have three choices, not four. So you will need to generate a number between 1 and 3. If it is a 1, you print out the first one, 2 the second one, and 3 the third one. For example, for spouse – generate a number between 1 and 3. If it is a 1, then print out the first person that the user said they like. If it is a 2, then print out the second person that the user said they like. If it is a 3, then print out the third person that the user dislikes. Before printing out the spouse, you should say "You will be happily married to " and then print out the name.

  - For the answers you should say something like:
    - You will live in ….
    - You will be happily married to …
    - You and your spouse will have ….. children.
    - You will live in ….. (name city, state here)
    - You will work at ……. (place) as a …….… (job title) making $ ….…… (salary) a year.
    - You will drive a ……

  - Refer to the sample output to understand what the user should see on the screen.

Oh look! There's an app!!! hahahaha

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E:\CSC Spring 2011\PROGRAMS\ProgramTwo>program2


Pick from the following menu:
1.  Let's play MASH!
2.  End program.
1
You chose to play MASH!

Enter in one person you like: Jason Crockett

Enter in another person you like: Roland Dechain

Enter in a person you hate: Peter Griffin

Enter three numbers between 1 and 100, seperated by a space.
7
2
99

Enter in one city, state you like: Cookeville, TN

Enter in another city, state you like: Knoxville, TN

Enter in one city, state you hate: St. Louis, MO

Enter in an awesome job title: CEO

Enter in another awesome job title: President

Enter in the worst job title ever: Toilet Cleaner

Enter a company or restaurant you like: Google

Enter another company or restaurant you like: Jewelry Television

Enter a company or restaurant you hate: McDonalds

Enter three numbers between 10,000 and 500,000, seperated by a space.
938483
399990
10001
The first number you entered was invalid.
Enter a number between 10000 and 500000.
435678

Enter in a car that you like: Yellow Lamborghini

Enter in another car that you like: Cobalt Blue Lamborg

Enter in a car that you hate: Orange El Camino


******  MASH RESULTS  ******
You will live in an apartment.
You will be happily married to Jason Crockett.
You and your spouse will have 2 children.
You will live in Cookeville, TN.
You will work at McDonalds as a Toilet Cleaner making $399990 a year.
You will drive a Yellow Lamborghini.



Pick from the following menu:
1.  Let's play MASH!
2.  End program.
2
You chose to end the program.
Bye!

E:\CSC Spring 2011\PROGRAMS\ProgramTwo>
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The user can hit enter (like I did) or separate numbers by a space.

Both ways work.

The user may enter just a car type (truck, car) or a specific company (GM, Toyota, Voltzwagon) or a specific model (Lamborghini, Camaro). As a user, I added a color because that is important to me, but the user doesn't have to.