CS 12 - Assignment 6
Classes
Due Tuesday, May 26

In this assignment you will be using classes. Be sure to include all necessary information at the top of your program and use good commenting and style throughout. You must use linux to do this assignment and you must divide your program up into separate files and use a makefile.

Write a class to maintain information about a University course. You should have the following data members:

Course Title Keep the name of the course.

Days Assume that all course are offered on either MWF or on TR. You should keep track of what days this course is offered.

Time Assume all courses begin on the hour. Keep track of the starting time of this course.

Maximum number of students This should hold the maximum number of students that are allowed to enroll in this course.

Number of students Maintain the current number of students enrolled.

You should also have the following function members:

Set up course Set all the data members of the course.

Enroll student A student is attempting to enroll in the specified course. Update the appropriate data member(s) and be sure not to over enroll the course. Return 1 if the student was allowed to add, return 0 if the course was full and the student could not be added.

Drop student Update the appropriate data member(s) and be sure that there is never a negative number of students enrolled. Return 1 if a student was dropped, return 0 if no student was dropped (due to the current enrollment already being 0).

Change Allow the day and time to be changed.

Print Print out all data members.

You should be sure to use good programming, for example, be sure to print out messages where necessary and print them nicely, making the messages informative. Some other things that make your program nicer is to do things such as making sure the user wishes to reset all the information in the course

before doing so. For example, the first time the user chooses the function to set-up the course, the information should be set. If they choose this function again, however, the user might appreciate being prompted to decide whether to actually change all the course information and reset it all. The user may want to decide against this. Doing this without wasting space is always a plus.

Adding in error checking and using constants where possible will also make your program nicer.

Now write a nice main program that maintains a list of 10 courses. You should allow the user to choose from the following options:

Set up a course Set the information for a course. Keep track of the number of courses that are set up so that you do not go out of the array. In other words, each time this function is called, it will only set up one course (if there is room in the array), not all the courses at once.

Print all courses Print the information out for each course that is set up.

Manipulate Course Allow the user to choose the course identifier, the array position. Then they should be able to continue to manipulate the specified course until they choose to go back to this main menu. The options for manipulating a course are the above described course function members.

Future assignments will build off of this assignment, so be sure to do a good job.