COP2800C Java 1 Module 11 Ungraded Practice Exercise

In this exercise we will practice using Dates and Times and also learn a little Git and GitHub. We will be modifying an application for which I will provide the initial source files.

This application simulates a SpaceX™ Starship launch system and provides an Astronaut class which will be used to populate the Starship. There are two source files:

- **Starship.java** which resides in the **com.spacex.vehicles** package
- **Astronaut.java**, which resides in the **com.spacex.personnel** package.

The main method for the Starship class is used as the application's main method; the program creates a Starship vehicle with an initial weight and altitude and adds astronauts. Each astronaut has a random height (cm) and weight (kg) within a specified range; when an astronaut is added, the total vehicle weight is updated with the astronaut's weight.

Once you have followed the process described below to obtain the source files, make your changes and then upload them as specified.

Obtaining the Source Files

We are using Git and GitHub for this exercise. If you do not already have Git installed, use the Horizon system for this.

Start by accepting the GitHub classroom invitation provided in the practice exercise's Canvas page for this module. When you accept the invite GitHub will create a private repository (repo) for you.

After the repo has been created, clone it to a local system using Git. Use the "Code" button on the GitHub repo to copy the repo link, then paste it in a clone command the Windows command tool. In this example I am executing the clone in my downloads folder.

C:\users\yourId\Downloads\> git clone repolink

After cloning, you will have the source files available for editing in a folder which uses the name of your repo.

New Application Features

Add a new instance variable to the Astronaut class which represents the time of arrival (addition) to the Starship vehicle. This variable must be declared as a **LocalDateTime** type.

Modify the overloaded Astronaut constructor to accept a LocalDateTime parameter which is used to set the new instance variable.

Modify the Astronaut toString method to display this value down to a one-second granularity (but no less).

In the addAstronaut method in the Starship class, declare a local LocalDateTime variable to set the time the astronaut is being added to the vehicle. Initialize this variable to the current date and time (e.g. **LocalDateTime ldtArrival = LocalDateTime.now();**)

Committing Your Changes

Once you have verified your code builds and executes correctly, push the modified files back up to the GitHub repo using the following commands (run these from inside the local cloned repo folder):

git status
git add your modified files (.java source files only, do not add any other files)
git commit -m "descriptive message for these changes"
git push
git status

The git status commands are only needed to determine the changes files and then to verify they have been pushed up to GitHub successfully.

Verify your changes have been stored in the repo by reloading the repo page; you can then view the modified files directly on GitHub.

You can repeat the above steps if you need to make any subsequent change to your code. You only need to clone again if you are starting your work in a clean folder.

Be sure you can successfully commit your changes, you will need to use this process for our graded assignment.