

Instructions

Homework consists of two tasks: (1) MarsRoverAPI and (2) BowlingScoreKeeper.

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Important Notes

1. **ChatGPT:** You are *NOT* allowed to use generative AI (e.g. ChatGPT) throughout this assignment. The screen recording (explained below) you submit should demonstrate your compliance with this requirement.
2. **Order of Completion:** You *must* complete the two tasks in the specified order. That is, you should begin with *MarsRoverAPI*, followed by *BowlingScoreKeeper*. You must also complete both tasks in a single session, with allowances for short breaks only. The screen recording (explained below) you submit should demonstrate your compliance with these requirements.
3. **Recording:** For this homework, you *must* record your screen from the moment you start working on the first tasks until you have completed them all. You may read through this README file (and/or the README files for the two tasks: MarsRoverAPI and BowlingScoreKeeper) *before* your start recording. However, please begin your screen recording prior to initiating the cloning of this repository, and continue recording throughout the completion of all assigned tasks (i.e. both MarsRoverAPI and BowlingScoreKeeper). Do not stop the recording until after you have successfully submitted all the required zip files.
4. **Timing Constraints:** Each task has a designated time limit — 20 minutes for MarsRoverAPI and 60 minutes for BowlingScoreKeeper. These durations have been carefully tested and determined and should be sufficient for you to achieve satisfactory performances. While we understand that technical issues can arise, you are permitted a time extension of up to 20% beyond these limits if necessary. You may read through the README files for each task (MarsRoverAPI and BowlingScoreKeeper) to familiarize yourself with the requirements before you begin the actual timing of your work in Eclipse. In other words, you should time yourself starting at the moment when you start working in Eclipse. The screen recording you submit should demonstrate your compliance with these timing constraints, from the initiation to the completion of each task.

5. **Operating System:** You may use any operating system to complete this assignment, provided all activities are conducted within an *Eclipse* IDE.

Below, we have provided guidance to help you get started.

Task 0 Start Recording

To successfully complete this homework, you must record your screen while working.

For macOS Users:

1. **Open QuickTime Player:** Go to your Applications folder and open QuickTime Player.
2. **Start New Screen Recording:** In the QuickTime Player menu, click on “File” and then select “New Screen Recording.”
3. **Choose Recording Options:** Click on the down arrow next to the record button to choose your microphone if you want to record audio as well. You can also choose to show mouse clicks in the recording.
4. **Select Recording Area:** Click on the record button. You can choose to record the entire screen by clicking anywhere on the screen, or you can drag to select a specific area to record.
5. **Stop Recording:** When you are finished, click the stop button in the menu bar at the top of your screen. You can also press Command + Control + Esc to stop.
6. **Save Recording:** After stopping, QuickTime Player will automatically open the recording. You can now save the file by going to “File” and then “Save.”

For Windows Users:

1. **Open Game Bar:** Press the Windows key + G to open the Game Bar. If it’s your first time using it, you might need to enable it in Settings > Gaming > Game Bar.
2. **Start Recording:** Click on the “Start Recording” button (a circle with a dot) or press Windows key + Alt + R to begin recording.
3. **Stop Recording:** Click the “Stop Recording” button (a square) or press Windows key + Alt + R again to stop the recording.
4. **Access Recording:** Once you stop recording, a notification will pop up saying “Game clip recorded.” Click on the notification to view your recording, or find it in the “Videos” folder under “Captures.”

For Linux Users: For Linux, there are various screen recording tools available. Here’s how to use one of the popular tools, SimpleScreenRecorder:

1. **Install SimpleScreenRecorder:** You can install it via your package manager. For example, on Ubuntu, you can use the command: `sudo`

```
apt-get install simplescreenrecorder
```

2. **Open SimpleScreenRecorder:** Launch the application from your applications menu.
3. **Configure Settings:** Select your recording area, frame rate, and other settings. You can also choose to record audio.
4. **Start Recording:** Click the “Start Recording” button to begin recording your screen.
5. **Stop Recording:** Click the “Stop Recording” button when you are finished. Your recording will be saved in the location you specified in the settings.

Task 1 MarsRoverAPI

Setup Instruction To setup, please follow the steps below:

- Step 1: Click the green “Code” button and select “Download ZIP”
- Step 2: Open Eclipse (for Java) > File > Import > General > Select “Existing Projects into Workspace” and click “Next”
- Step 3: Click “Browse...” button and find the local copy of this project. For example, Downloads > MarsRoverAPI-master > Task1_MarsRoverAPI, and click open.

Congratulations, you are ready to start!!!

Task Requirement Please read through the description of the Mars Rover API and follow the instructions to complete this task.

Submission Instruction When finished, please follow the steps below:

- Step 1: In Eclipse, right click on the file name “Task1_MarsRoverAPI” and select “Export”
- Step 2: Select “Remote Systems > Remote file system” OR “General > File system” and click “Next”
- Step 3: Check the Task1_MarsRoverAPI, including .classpath, .gitignore, .project, and click “Finish”
- Step 4: Find this exported project, rename it as and compress it
- Submit .zip via Box. You should have received a Box invitation link in your Email. You can access the Box link and upload your submission.

Congratulations, you just finished Task 1! Now, let’s implement some actual JUnit tests at Task 2!

Task 2 BowlingScoreKeeper

Setup Instruction To setup, please follow the steps below:

- Step 1: Click the green “Code” button and select “Download ZIP”
- Step 2: Open Eclipse (for Java) > File > Import > General > Select “Existing Projects into Workspace” and click “Next”

- Step 3: Click “Browse...” button and find the local copy of this project. For example, Downloads > BowlingScoreKeeper-master > Task2_BowlingScoreKeeper, and click open.

Congratulations, you are ready to start!!!

Task Requirement Please read through the description of the Bowling Score Keeper and follow the instructions to complete this task.

Submission Instruction When finished, please follow the steps below:

- Step 1: In Eclipse, right click on the file name “Task2_BowlingScoreKeeper” and select “Export”
- Step 2: Select “Remote Systems > Remote file system” OR “General > File system” and click “Next”
- Step 3: Check the Task2_BowlingScoreKeeper, including .classpath, .gitignore, .project, and click “Finish”
- Step 4: Find this exported project, rename it as and compress it
- Submit .zip via Box. (Use the Box invitation link in your Email)

Congratulations, you just finished ALL tasks in this study!!!

Task 3 Submission

- You are free to stop screen recording now, please save it to a local disk and rename it as and submit it via Box. (Use the Box invitation link in your Email)
- A final checklist for all the files you should have submitted via Box by now: (1) .zip, (2) .zip, and (3)
- Please fill out a short post-survey!