

CSCI 1301 – Lab #7

Exercise

In this lab, you will enhance the program you implemented in Lab #6. This new version of the program will validate the correctness of the number of seconds entered by the user. Moreover, this new version of your program will ask the user whether (s)he wishes the time expressed in AM/PM or standard time format.

Modify the class Time you implemented in lab #6 to validate the numbers of seconds entered by the user. If the user enters a number less than 0 or greater than or equal than 86399, the program will display a message error and terminate. Otherwise, the program will prompt the user if (s)he wants the time displayed in AM/PM format. If the user's answer is yes (in any possible combination of cases) then the program will display the equivalent time in AM/PM format. Otherwise, the time will be displayed in standard time format as hours, minutes and seconds.

Example #1

```
Please enter the time in seconds: -12
Sorry, the number of second must be an integer between 0 and 86399. Bye.
```

Example #2

```
Please enter the time in seconds: 95878
Sorry, the number of second must be an integer between 0 and 86399. Bye.
```

Example #3

```
Please enter the time in seconds: 30600
Would you like the time in AM/PM format (yes/no)? Yes

30600 seconds are 8 h., 30 m., 0 s. AM
```

Example #4

```
Please enter the time in seconds: 908
Would you like the time in AM/PM format (yes/no)? NO

908 seconds are 0 h., 15 m., 8 s.
```

Example #5

```
Please enter the time in seconds: 908
Would you like the time in AM/PM format (yes/no)? jsjsh

908 seconds are 0 h., 15 m., 8 s.
```

This example shows that the program displays the time in standard time format whenever the user does not answer yes to the question:

```
"Would you like the time in AM/PM format (yes/no)?"
```

Hints

- You should use decision statements to validate the input entered by the user.
- You may use the `exit` method to terminate the execution of the program when the input entered by the user is not valid.
- Use the appropriate String methods to determine whether the user wants to display the equivalent time in AM/PM format.

Compile and run your program.

After you have completed this exercise, demonstrate it to your lab instructor.

WebCT Submission

After you have completed both exercises in this lab, upload the file `Time.java` in WebCT and submit it to receive credit.