Assignment 6 (30 points) (**Due date/time**: Sunday, March 13th, 11:59 PM.)

In this programming project, you are expected to conduct refactoring on the program from the Fifth assignment part 1 so that it is designed in OOP style. So, you are supposed to write a Java program (**in Object-Oriented Programming Style)** for a robot that reads tasks that have been already conducted by the robot so far from a log file (logfile.txt). The tasks are displayed on a screen that is attached to the robot's head. Tasks are displayed on the screen sorted by their priority. Priority is represented as an integer number from 1 to 3 such that 1 means **highest** and 3 means **lowest.** The log file could contain an arbitrary number (N) of tasks stored in the following format (**5 lines for each task**):

> **Task description (only one line)**
> **a time when the task was received**
> **duration in minutes**
> **Date of the task (MM/DD/YYYY)**
> **Priority of the task (1 to 3)**

The program first prompts the user to enter a password that must be compared against a list of valid passwords saved in a text file (passwords.txt). If the entered password is found in the passwords file, then the program reads the tasks from the logfile.txt. Otherwise, the program notifies the user regards the invalid password and terminates.

Example: The password's file (passwords.txt)
A*bUwS#@2X19

logFile.txt	The output on the screen
Make a fresh coffee 06:31 AM 7 Minutes 06/29/2018 3 Get me the phone 06:39 AM 0.25 Minutes 06/29/2018 2 Bring me today's newspapers 06:40 AM 1 Minute 06/29/2018 2 Call 911, heart attack 06:57 AM 0.35 Minutes 06/29/2018 1	Number of tasks 4. ----------------------- Task 1: description: Call 911, heart attack Time: 06:57 AM Duration: 0.35 Minutes Date: 06/29/2018 Priority: 1 ----------------------- Task 2: description: Get me the phone Time: 06:39 AM Duration: 0.25 Minutes Date: 06/29/2018 Priority: 2 ---------------------- Task 3: description: Bring me today's news papers Time: 06:40 AM Duration: 1 Minute Date: 06/29/2018 Priority: 2 ----------------------- Task 4: description: Make a fresh coffee Time: 06:31 AM Duration: 7 Minutes Date: 06/29/2018 Priority: 3

Assignment 6, CS 145

Hint: Most likely, you are going to create 3 classes as follows:
1: class (Task) to instantiate objects to store the tasks read from the file individually. (10 points)
2: class (Robot) that include a list of objects of class (data type) Task that has been read from the file. This class should have a public method that allows us to print the tasks stored in the Robot list. (10 points)
3: class (App or Driver) that contain the **main** method that would create an object of the class Robot and make it read the data from the text file and print them sorted as expected by the user (sorted based on their priority.) (10 points)

Please make sure that the output meets exactly the description shown on the previous page in the table. That is, the number of detected (read) tasks is printed first, and then the tasks are printed sorted in non-decreasing order based on their priority.

Prompt Grading and feedback:
Please do not wait until the last minute to start working on your assignment. Treat it as a real live project in an industry that needs to be completed within a deadline.