

CSCI165 Computer Science II

Lab Assignment

Objectives:

- Use data types correctly, applying conversions when necessary
- Apply math operations
- Process String data using API methods
- Read/Write to external files

Travel Tickets Company sells tickets for airlines, tours, and other travel-related services. Because ticket agents frequently mistype long ticket numbers, Travel Tickets has asked you to write an application that filters out invalid ticket numbers. Ticket numbers are designed so that if you drop the last digit of the number, then divide the number by 7, the remainder of the division will be identical to the last dropped digit. This process is illustrated in the following example:

1. Examine a ticket number; for example, 123454.
2. Remove the last digit, leaving 12345.
3. Determine the remainder when the modified ticket number is divided by 7.
 1. In this case, 12345 divided by 7 leaves a remainder of 4 which does equal the original last digit. This ticket is valid.
4. Assign the Boolean value of the comparison between the remainder and the digit dropped from the ticket number.
5. Log valid ticket number to a file.
6. Get the next ticket number and repeat.

The program deals with data sets of 1000 potential ticket numbers at a time. The tickets can be anywhere from 5 to 8 digits long and you have no way of knowing how long a given ticket number will be. The goal of the problem is to filter out the valid ticket numbers from the invalid ticket numbers. The valid ticket numbers should be written to a file so that they can be distributed to customers.

You have been provided with some starter code for this lab. The starter code walks you through the String processing and math necessary to determine if a ticket number is valid.

The programming assignment for this module will not contain starter code.

Open the file ***Tickets.java*** and read the comments. They will direct you in your tasks. You will submit your work by pushing commits to your remote repository. Be sure to add a **.gitignore** file to the root of your local repository to include ***.class** files. I do not want class files to be submitted.

Rubric

Requirement	Points
Included Detailed Comments on provided code and included comments in additional code	7
Code is correct and identifies the appropriate ticket numbers	10
Submission instructions were followed.	3