

**Vu Nguyen  
T00612390**

**Oct 22, 2019**

## Test Cases (Assuming we are counting from 0-39, and not 1-40)

- the string has less than 20 characters (fails in the title field)
  - |Lewis et al 2015H|
- the string has less than 35 characters (fails in the author field)
  - |Java Foundations 2015H|
- the string has less than 39 characters (fails in the year field)
  - |Java Foundations Lewis et al H|
- the string has more than 39 characters (fails in the title field)
  - |Java Foundations Lewis et al 2015H|
- the string has more than 39 characters (fails in the author field)
  - |Java Foundations Lewis et al 2015H|
- the string fails in the year field ( greater than 2019)
  - |Java Foundations Lewis et al 2020H|
  -
- the string fails in the year field ( less than 2000)
  - |Java Foundations Lewis et al 1999H|
- the string doesn't have the final character
  - |Java Foundations Lewis et al 2015|
  -
- the year field contains some non-numeric character
  - |Java Foundations Lewis et al 201xH|
  -
- the string doesn't have the correct final character
  - |Java Foundations Lewis et al 2015X|
  -
- the string has no issues( alternating H,L,O final characters)
  - |Java Foundations Lewis et al 2015H|

## Problem:

THE PURPOSE OF THIS ASSIGNMENT IS TO GAIN EXPERIENCE WITH EXCEPTION HANDLING IN JAVA. SEE THE PRODUCT CODES EXAMPLE IN THE LECTURES TO HELP YOU CODE THIS PROBLEM.

- WRITE A JAVA PROGRAM THAT READS A SERIES OF STRINGS FROM A USER UNTIL STOP IS ENTERED.
- EACH INPUT CONSISTS OF INFORMATION ABOUT ONE BOOK IN THE TRU LIBRARY SYSTEM.
- THE INPUT CONSISTS OF THE BOOK'S TITLE
  - (20 CHARACTERS –YOU MUST ADD EXTRA SPACES IF THE TITLE IS NOT THIS LONG),
  - THE AUTHOR (15 CHARACTERS – YOU MUST ADD EXTRA SPACES IF THE AUTHOR'S NAME IS NOT THIS LONG)
  - THE YEAR IT WAS PUBLISHED (A 4 DIGIT INTEGER)
  - THE LOCATION OF THE BOOK (ONE CHARACTER, EITHER FOR L FOR MAIN LIBRARY, OR H FOR HOUSE OF LEARNING LIBRARY).

THE FORMAT FOR THE INPUT IS SHOWN BELOW. FOR EXAMPLE THIS WOULD BE THE INFORMATION ABOUT THE TEXTBOOK FOR THIS COURSE

```
JAVA FOUNDATIONS  LEWIS ET AL  2015H
| ← 20 CHARS  →      ←15 CHARS→|
```

- THIS INFORMATION MUST BE READ IN AS ONE STRING, AND BROKEN INTO THE INDIVIDUAL PIECES.
- AS THE CODE TRIES TO BREAK THE STRING INTO ITS PARTS, EXCEPTIONS MAY BE THROWN
- CATCH THESE IN MAIN AND PRINT OUT A DESCRIPTION OF THE PROBLEM ENCOUNTERED.
- BE SPECIFIC. FOR EXAMPLE RATHER THAN OUTPUTTING, "INVALID YEAR" STATE THAT "201X IS AN INVALID YEAR".

INPUT A SERIES OF THESE STRINGS, SO THAT ALL POSSIBLE EXCEPTIONS ARE TESTED, THEN INPUT STOP WHEN YOU ARE DONE.

IF THE INPUT IS VALID THEN WRITE OUT A MESSAGE IN THIS FORMAT: JAVA FOUNDATIONS BY LEWIS ET AL PUBLISHED IN 2015 IS AVAILABLE IN THE HOUSE OF LEARNING LIBRARY. USE THE TRIM( ) METHOD IN THE STRING CLASS TO REMOVE EXTRA SPACES IN THE TITLE AND THE AUTHOR.