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| **COMP 1230 – Computer Programming II**  **Exceptions Assignment** |

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**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.