Project 2 Spec

Goal

- Write a program to do the above computation
- It Must:
    - Accept as input the # of units sent out during a given month
    - Movie Title
    - Base Price
    - Whether the movie is a premium item
    - Output: How much in royalties must be paid

- Getpix: Provides streaming movies and DVDs by mail, for a given title
    - Pays licensor royalties based on # of units sent out each month

Getpix Royalty Schedule

- For first 400 units sent, royalty rate per unit is 9% of base price
- For next 800 units sent (beyond the initial 400)
    - The royalty rate per unit is 13% of base price if product is **not premium**
    - The royalty rate per unit is 16% of base price if product is **premium**
- For additional units (beyond initial 1200), the royalty rate is 14%

Example

Units sent: 200
Title: Straight outta Westwood
Base price: 15.90
Premium item? (y/n): n

Straight outta Westwood earned $286.20 in royalties.

Objective:

- Program must collect the info for one movie just like the example above
- Write cout a line with three hyphens only (no spaces or other characters)
- Followed by exactly one line
- The correctness of the program will be graded by examining only the line following the line with the three hyphens
    - This line following the hyphens must be 1 of the 5 forms:
        1. If the number of units sent is negative:
            a. The number of units sent must be nonnegative
        2. If an empty string was provided for the title:
            a. You must enter a title
        3. If the base price is negative
            a. The base price must be nonnegative
        4. If the premium status is not y or n (must be lower case)
            a. You must enter y or n
        5. If the input is valid and now of the preceding situations holds
            a. Title earned $amount in royalties

- In the last case, title must be the title as entered, and amount must be the correct answer
  - Shown with a number with at least one digit to the left and exactly two digits to the right of the decimal place
- The lines written must not start with a space

Common Mistakes

- Not writing to cout a line with exactly three hyphens
- Writing any spaces on the line that is supposed to have only three hyphens
- Writing more than one line after the line with three hyphens
- Writing lines to cerr instead of cout
- Misspelling, Wrong Capitalization, etc.

Requirements

- Units sent
- Title
- Base Price
- Premium Status

What will be turned in

1. Text file named **royalty.cpp**
   a. Contains source code for the program
   b. Should contain helpful comments that tell the purpose of the major program segments and explain any tricky code
2. File named **report.doc** or **report.docx** (in word format) or **report.txt** (in ordinary text file)
   a. Contains a brief description of notable obstacles overcome
   b. List of test data that could be used to thoroughly test the program, along with the reason for each test
      i. Ex: More surveyed than the total for keeping and returning (1000, 413, 382)
      ii. Ex: Fewer surveyed than the total for keeping and returning (500, 413, 382)
      iii. Ex: Zero surveyed (0, 100, 100)
      iv. Ex: Data giving a non-integer percentage (1000, 413, 382)
      v. Ex: More responses for keeping than returning (1000, 413, 382)
      vi. Ex: Equal responses for keeping and returning (1000, 500, 500)
3. File named **hw.doc** or **hw.docx** (in word format) or **hw.txt** (in text file)
   a. Containing solutions to the hw