

Problem 1-Write a program. Submit NumberLength.java

Write a program that:

-Asks a user to enter a number between 4-6 (including 4 and 6). This input should be stored in a variable called *num*. If they enter a number out of range (not 4, 5 or 6), the program should say "Number out of range!" and exit.

-Ask a user to enter a word with at least *num* (what the user entered before) letters and at most 10 letters.

- If they enter a word longer than this, the program should say "Too many letters!" and end.
- If they enter a word shorter than *num* letters, the program should say "Too few letters!" and end.
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-Ask the user to enter another number between 1-3 (including 1 and 3) and store it in a variable called *num2*. You should print out that many letters of the word from the beginning.

Example Program Run:

Please enter a number between 4-6: 5

Enter a word with at least 5 letters and at most 10 letters: seashell

Please enter another number between 1-3: 3

sea

Problem 2-Write a program. MonthsToNumbers.java

Write a program that:

- The program asks the user to specify the name of a month. It should not make a difference whether any letter in the name appears in lower case or upper case, all such variations should be accepted by the program.
- If the user entered correctly the name of a month, the program prints out the month name, and the order of that month in the year (e.g., January is the first month, July is the seventh month, and so on). Note that when the program prints out the month name, the first letter of the month name should be capitalized, and all other letters should be in lower case.
- If the user enters a name that is not recognized, the program prints out "Unknown month: " and the name entered by the user. Note that the name

entered by the user should be printed exactly as entered by the user (with no conversions of any letters to upper or lower case).

Example Program Run 1:

Please enter the name of a month: juNE
June is the sixth month.

Example Program Run 2:

Please enter the name of a month: SUMmer
Unknown month: SUMmer

Example Program Run 3:

Please enter the name of a month: May
May is the fifth month.

Problem 3-Write a program. Submit GiftWrap.java

Gifts And More is a store that offers giftwrapping for items in rectangular shaped boxes. Customers can either buy standard wrapping paper or holiday wrapping paper. The owner of this store wants customers to be able to know how much they will spend on wrapping paper before they get to the counter in order to speed up the check out process. Standard wrapping paper costs \$1 per square inch and holiday edition wrapping paper costs \$2 per square inch. Customers are expected to enter measurements of the rectangular shaped box themselves.

**Hint: look up the formula for surface area of a rectangular prism to calculate how much actual wrapping paper you need*

Example Program Run:

Hello! Please pick from the following options:

- 1) Buy standard wrapping paper-press 1
 - 2) Buy holiday edition wrapping paper-press 2
- 1

You have selected standard wrapping paper.

Please enter the size of your gift (in inches):

Length: 2

Height: 5

Width: 4

You will pay \$76 at the counter. Thank you for shopping with us!

Problem 4-Write a program. Submit WordStart.java

Write a program that:

- Asks the user to enter a word.
- If word starts with a vowel, the program prints that it starts with a vowel.
- If word starts with a consonant, the program prints that it starts with a consonant.

- If word starts with neither a vowel nor a consonant (e.g., it starts with a number, or a punctuation character, or it is the empty string), the program prints that it starts with neither a vowel nor a consonant.

Example Program Run:

Please enter a word: 543

543 starts with neither a vowel nor a consonant.

Example Program Run:

Please enter a word: Airplane

Airplane starts with a vowel.

Example Program Run:

Please enter a word: cat

cat starts with a consonant.