Java Pig Latin

Contents

Time required: 120 minutes

Please read the directions carefully before beginning the assignment.

- Comment your code as shown in the tutorials and other code examples.

- Follow all directions carefully and accurately.

- Think of the directions as minimum requirements.

Pseudocode

1. Write TODO or pseudocode for the exercise

Here's What I Want You to Do

Write an application that accepts a word from a user and converts it to Pig Latin.

Here's Why I Want You to Do It

Demonstrate understanding of:

Constants, Input, Decisions, Strings, Characters, Loops

String and Character Comparisons

There are a couple of ways to compare letters of a string in Java.

NOTE: These examples are examples only, not necessarily part of a solution to this project.

A String data type in Java is an object. It is a reference variable, if you use **==**, you are comparing memory addresses. You would use the **.equals()** method.

```
String stringA = "string";
String stringB = "string";

if (stringA.equals(stringB)){
    return stringA;
}
```

You can compare chars directly as they are a primitive data type. Char uses single quotes '. A char is actually a unicode number, which is why it can be compared directly.

```
if(ch == 'A'){
    return ch;
}
```

There are char methods that deal with vowels and such.

```
String string;
if (isVowel(string.charAt(i)){
    return string.charAt(i);
}
```

Minimum Requirements

Create a Java program named **PigLatin.java**

Write an application that accepts a word from a user and converts it to Pig Latin.

- Word may begin with a vowel
- Word may begin with a consonant
- Word may begin with a consonant cluster
- Word may have no vowel

This web site converts English to Pig Latin
https://daryld.com/pig-latin/

English to Pig Latin	
Input	**Pig Latin**
welcome	elcomeway
abe	abeway
yellow	elloyay
food	oodfay
island	andislay

Sample TODO Pseudocode

You may want to use the String methods **subString()**, **charAt()**, and **indexOf()**. Look at Chapter 8 Java.

```
# TODO: Is the first character of the word a vowel?
# Remove the vowel, add way to the end of the word


# TODO: The first character of the word is not a vowel
# Loop through string until we don't find a vowel
# substring the word from the vowel until the end of the word
# substring the word from the beginning until the first consonant
```

Begins with Vowel

For words that begin with a vowel, add "way" at the end.

is = isway

apple =appleway

under = underway

octopus = octopusway

Begins with Consonant

If a word starts with a consonant, the Pig Latin version removes all consonants from the beginning of the word and places them at the end, followed by ay.

For example, **cricket** becomes **icketcray**, **young** becomes **oungyay**

cat = atcay

dog = ogday

simply = implysay

noise = oisenay

For words that begin with double or multiple consonants, take the group of consonants off the front of the word and add them to the end, adding "ay" at the very end of the word.

Here are some examples.

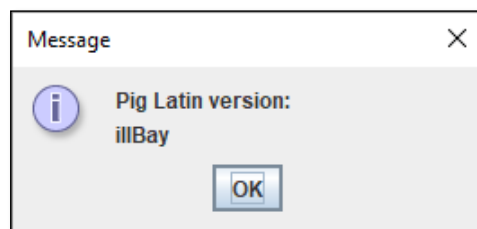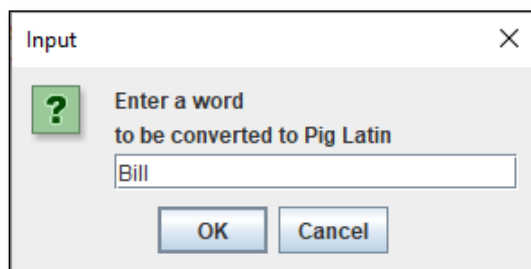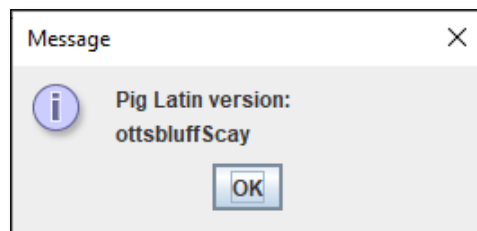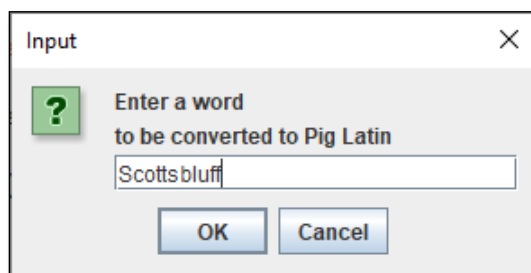scratch = atchscray

thick = ickthay

flight = ightflay

grime = imegray

Example run:

Your program can be a GUI or CLI.

```
Enter a word to be converted to Pig Latin: spring
ingspray
```

```
Enter a word to be converted to Pig Latin: alabama
alabamaway
```

Assignment Submission

1. Attach the pseudocode.

2. Attach the program files.

3. Attach screenshots showing the successful operation of the program.

4. Submit in Blackboard.