

This question involves reasoning about *text slang* and their definitions which are represented by the following `TextSlang` class.

```
public class TextSlang
{
    /** Constructs a TextSlang object. */
    public TextSlang (String term, String definition)
    { /* implementation not shown */ }

    /** Returns the slang term. */
    public String getSlang()
    { /* implementation not shown */ }

    /** Returns the definition of the slang term. */
    public String getDefinition()
    { /* implementation not shown */ }
}
```

The class below models a *text slang* translator to replace any speech in a passage that is *text slang* with its full meaning. A partial declaration of the `TextTranslator` class is shown. You will write two methods of the `TextTranslator` class.

```
public class TextTranslator
{
    private ArrayList<TextSlang> slangDictionary;

    // Constructor not shown.

    /** Returns a definition from the slang dictionary if the term is found;
     * Returns term if the word is not found in the dictionary.
     */
    public String convertTerm(String term)
    { /* to be implemented in part (a) */ }

    /** Returns an expanded String with all the slang terms in withSlang
     * replaced with their definitions.
     */
    public String expandText(String withSlang)
    { /* to be implemented in part (b) */ }
}
```

- (a) Write the method `convertTerm`, which returns a slang term's full definition if it exists in the dictionary. Slang terms do not contain spaces. Slang definitions may contain spaces.

| <u>Slang Term</u> | <u>Slang Definition</u> |
|-------------------|-------------------------|
| brb               | be right back           |
| irl               | in real life            |
| ttyl              | talk to you later       |

Complete the `convertTerm` method below.

```
/** Returns a definition from the slang dictionary if the term is found;  
 * Returns term if the word is not found in the dictionary.  
 */  
public String convertTerm(String term)
```

- (b) Write the method `expandText`, which returns the given string with all of the slang terms in that string replaced with their definitions. For convenience, assume all slang and their definitions are lower case. The given string MAY contain punctuation.

Examples:

Text before call to `expandText`

I have to go. ttyl!  
icymi, wash your hands often.  
I love sunshine.  
Hey - brb. No, I will not brb.

Text after call to `expandText`

I have to go. talk to you later!  
in case you missed it, wash your hands often.  
I love sunshine. ☐ no change  
Hey - be right back. No, I will not be right back.

Complete the `expandText` method below.

```
/** Returns an expanded String with all the slang terms in withSlang
 * replaced with their definitions.
 */
public String expandText (String withSlang)
```