Assignment #9

Background Information

On the standard telephones, each of the digits 2 through 9 is associated with a group of three to four letters as shown below. For example, the number 776 – 4726 can be represented by the word “PROGRAM”. Such words often made easier to remember a telephone number.

- ABC 2
- DEF 3
- GHI 4
- JKL 5
- MNO 6
- PQRS 7
- TUV 8
- WXYZ 9

Note that not all phone numbers can be translated in this fashion since no letters are associated with **1** or **0**; that is, a phone number must not contain these digits if it is converted to a word.

Problem Description

Develop a java program **PhoneNumberToWords** that reads, as input, a seven-digit telephone number from the user (using keyboard); it then tests the number to ensure that it does not contain either a **0** or **1**, and if it does not contain these digits, displays all possible meaningful words that can be formed from the number.

In real-life, each possible word is checked against a dictionary to see if it is a valid English word; otherwise, it is rejected.

In this assignment, instead of having a large list you are given a text file of desired words, ***words.txt*** *file*.
The program will read a phone number from the user and will check if it can be translated into one or more words of words.txt file. The output of the program will contain the telephone numbers and their word representatives.

Note: The output should be displayed on the console as well as in a file called **phonesText.txt**.

Sample output:

```
This program translate a phone number to words.

Please enter a 7 digit phone number [nnn-nnnn]:
  225-1493
  225-1493 - NO WORDS

Would you like to repeat [yes no]:
  yes

Please enter a 7 digit phone number [nnn-nnnn]:
  222-6398
  222-6398 - CBCNEWS, BBCNEWS

Would you like to repeat [yes no]:
  no
```

After the above sample program is done **phonesText.txt file** should contain the following lines:

225-1493 - NO WORDS
222-6398 - CBCNEWS, BBCNEWS

The ***words.txt*** file has been created for you.

Marking Scheme

[10 marks] Presentation/Style: Organization, readability, descriptive identifier, indentation, bracket placement
[80 marks] Correctness: Program works without bugs. Use of appropriate methods.
[10 marks] Comments