Honor Code: All submissions should include a comment statement near the top of the program of the form:

```c
/* THIS CODE IS MY OWN WORK, IT WAS WRITTEN WITHOUT CONSULTING
 * A TUTOR OR CODE WRITTEN BY OTHER STUDENTS - YOUR NAME
 */
```

Cases of apparent plagiarism or collusion will be referred to the Honor Council.

Preparation: To disallow other students from reading your homework programs, you must save your file(s) in a directory inside your cs170 directory. If you follow the below commands, your work will be protected.

1. Create a directory called hw6 directory inside your cs170 project directory to save your hw6 files.
   ```bash
mkdir ~/cs170/hw6
   ```
2. You must use ~/cs170/hw6 directory as your current directory when editing any program files for hw6. Change your current directory to your newly created hw6 directory:
   ```bash
cd ~/cs170/hw6
   ```
3. You can now run gedit to edit your programs:
   ```bash
gedit yourProgramName.java &
   ```

The name yourProgramName is the name of the Java program (and also the name of the class!).

---

1. (60 pts) Write a program named **CountWord** to count the number of occurrences of a word in a text file. Your program should take the file name and the word as two command line arguments and print the number of occurrences of this word in the file. Note that
   - Words are separated by white space characters including space (' '), tab ('\t') and ('\n');
   - Words are **NOT** case sensitive (e.g. “Java”, “java” and “JAVA” are considered as same words);
   - You **MAY** skip non-alphanumeric characters (e.g. “cs170”, “cs170?” and “cs170.” are considered as same words);

Sample output:
Suppose you have a text file named `myFile.txt` which contains the following sentences.

```
Computer is amazing! I love computer science. That's why I enrolled cs170.
```

Your program output should resemble the following:
>>> java CountWord myFile.txt comPuter
2

>>> java CountWord myFile.txt Emory
0

>>> java CountWord myFile.txt thats
1

2. (40 pts) Write a program named **Palindrome** to find the longest palindromic substring. Palindromic strings are strings that read the same forward or reversed. For example, “bob”, “eye”, and “2002” are palindromic strings. Your program should take the string as a command line argument and print its longest palindromic string. If the string has more than one longest palindromic substrings, print the left most one.

**Sample output:**
Your program output should resemble the following:

```plaintext
>>> java Palindrome 121123
2112

>>> java Palindrome //^O^\n
^O^

>>> java Palindrome computer

c
```

**Submission:**
- Submit your work using the following commands. You need to be in your ~/cs170/hw6 directory when you issue them.
  - /home/cs170001/turnin CountWord.java hw6a
  - /home/cs170001/turnin Palindrome.java hw6b
- Your homework is not turned unless the above commands are successful (you will get a "success" message when turn in was successful).