COMP 1451 – Assignment #2 (50 points)
Due: 11:59 p.m. the night before session 5

As we all know, spam (unsolicited junk email) is clogging up the arteries of the internet. In this project you are going to modify the mail-system project from chapter 3 to filter spam.

Here are the specifications for this project. Read them carefully:

- Do Exercise 3.33 from the textbook to become familiar with the mail-system project. Study its functionality carefully.

- Modify the MailItem class so that it includes a subject field. The constructor will now expect to, from, subject, message in that order. Provide an appropriate accessor method for the subject, and modify the print method to include it.

- Modify the MailServer so that it uses a HashMap to store MailItems instead of an ArrayList. The HashMap field must be the only field in MailServer. The keys to the HashMap must be the names of the recipients, and each value must be an ArrayList containing all the MailItems stored for that recipient.

- Any email whose subject starts with the word "SPAM" or whose subject contains the phrases "cheap drugs", "deal for you", "loan request" or "hot news" (capitalized or not) is spam, and must not be posted by the MailServer.

- Add a method to the MailServer class called printAllMessages, that iterates through the users, prints out each user name, and prints out all the emails associated with that user.

- Do not change the signatures of any of the existing MailServer methods. The functionality of your modified system must be identical to the original from a user's point of view, with the exception of the added field in MailItem.

- For each class in the project create a test class with unit tests, to thoroughly test your modified mail-system. Test a variety of scenarios, including the case where you request mail for a user who has not yet received any mail.

Marks will be given for:
- Style – see the style guide Appendix J of the textbook.
- Correctness and completeness – system meets functional requirements.
- Unit tests – system is tested thoroughly.

Create a .zip file containing your entire BlueJ project (zip the folder, not the individual files). Name the .zip file with your name and the assignment number, e.g. "Susan_Wong_Assign_2.zip". Upload the file to WebCT before the cutoff time.