

Assignment 1
MOBILE PAYMENT
Due September 27, 2010

In this assignment, you will design a GUI and code in Java to implement an application to calculate a monthly payment for a mobile phone. Suppose that you have a basic plan with a monthly cost of \$44.99 (\$39.99 for minutes and \$5.00 for messages).

Your mobile bill will contain the following three items:

1. Minutes: incoming or outgoing minutes. The plan covers 450 minutes. If you used more than that, you need to pay \$0.15/minute for extra minutes.
2. Instant messages: The plan covers 100 messages for each month. If you used more than 100 messages, you need to pay \$0.10/message for the extra messages.
3. Internet usage: KBs (kilobytes) used for upload and download from internet. For each KB, you pay \$0.02.

This plan also offers a special: If you used more than 1000 minutes and more than 500 messages, you will get a 10% discount on your bill. The total cost of the bill, after taking any discount, will include New York State sales tax at 8%.

Write a program that performs the following operations:

- Allow the user to type in how many of minutes, messages, and KBs that he or she used for this month. (Use a jTextField for each item.)
- If the user used more than 450 minutes or more than 100 messages, calculate the extra charges based on the basic plan.
- If the user used more than 1,000 minutes and more than 500 messages, user will get 10% special discount on the bill.
- When the user is done, display a bill showing the bill results: it should include the subtotal of the bill of all three items, the discount (if the order qualified for it), the discounted price, the tax and the grand total.
- Allow the user to clear the items and totals in order to start over.

When you develop the program, follow these steps:

- Design the user interface:
 - Design the layout of the form
 - Decide what each button will do
- Write the program
 - Decide on the names and types of variables and where to declare them
 - Write comments on the top of the program, including **your name** and what the program is for
 - Write comments before each button actionPerformed function with the description of what it does
 - Write other comments on statements as necessary

Grading

All programs should have comments that contain the name of the programmer and that explain the role of each button function. Additional comments must be added as necessary to explain the actions of the program.

The following additional items will be included in the grading. The program must

- Run!
- Correctly compute the subtotal, discount, tax and total bill and display them
- The form must have a Clear button to allow the user to start over
- The form must present a good appearance and have clear instructions for the user

How to Submit your Homework:

In your project directory, create a **zip file** of the sub-directory that has your homework project in it. For example, if you name your project “Mobile”, there will be a folder named “Mobile” under your projects folder – zip the Mobile folder. Go to the iLMS page and submit the zipped file for assignment 1.