**Lab 3**
(Due date: Friday, 2/6/2009 in the Lab hours)

| Your name: | Score: |
|---|---|
|  |  |

1. Practice with Fig3.1-3.2 from the textbook (the following is the sample code for this project).
   Write down the important statements in the blank space.

```java
// Fig. 3.1: GradeBook.java
// Class declaration with one method.

public class GradeBook
{
   // display a welcome message to the GradeBook user
   public void displayMessage()
   {
      System.out.println( "Welcome to the Grade Book!" );
   } // end method displayMessage

} // end class GradeBook

// Fig. 3.2: GradeBookTest.java
// Create a GradeBook object and call its displayMessage method.


public class GradeBookTest
{
   // main method begins program execution
   public static void main( String args[] )
   {
      // create a GradeBook object and assign it to myGradeBook
      GradeBook myGradeBook = new GradeBook();

      // call myGradeBook's displayMessage method
      myGradeBook.displayMessage();
   } // end main

} // end class GradeBookTest
```

2. Practice with Fig3.4-3.5 from the textbook (the following is the sample code for this project).
   Write down the important statements in the blank space.

```java
// Fig. 3.4: GradeBook.java
// Class declaration with a method that has a parameter.

public class GradeBook
{
   // display a welcome message to the GradeBook user
   public void displayMessage( String courseName )
   {
      System.out.printf( "Welcome to the grade book for\n%s!\n",
         courseName );
   } // end method displayMessage

} // end class GradeBook


// Fig. 3.5: GradeBookTest.java
// Create GradeBook object and pass a String to
// its displayMessage method.
import java.util.Scanner; // program uses Scanner

public class GradeBookTest
{
   // main method begins program execution
   public static void main( String args[] )
   {
      // create Scanner to obtain input from command window
      Scanner input = new Scanner( System.in );

      // create a GradeBook object and assign it to myGradeBook
      GradeBook myGradeBook = new GradeBook();

      // prompt for and input course name
      System.out.println( "Please enter the course name:" );
      String courseName = input.nextLine(); // read a line of text
      System.out.println(); // outputs a blank line

      // call myGradeBook's displayMessage method
      // and pass courseName as an argument
      myGradeBook.displayMessage( courseName );
   } // end main

} // end class GradeBookTest
```

3.Practice with Fig3.7-3.8 from the textbook (the following is the sample code for this project).
    Write down the important statements in the blank space.

```java
// Fig. 3.7: GradeBook.java
// GradeBook class that contains a courseName instance variable
// and methods to set and get its value.

public class GradeBook
{
   private String courseName; // course name for this GradeBook

   // method to set the course name
   public void setCourseName( String name )
   {
      courseName = name; // store the course name
   } // end method setCourseName

   // method to retrieve the course name
   public String getCourseName()
   {
      return courseName;
   } // end method getCourseName

   // display a welcome message to the GradeBook user
   public void displayMessage()
   {
      // this statement calls getCourseName to get the
      // name of the course this GradeBook represents
      System.out.printf( "Welcome to the grade book for\n%s!\n",
         getCourseName() );
   } // end method displayMessage

} // end class GradeBook
```

```java
// Fig. 3.8: GradeBookTest.java
// Create and manipulate a GradeBook object.
import java.util.Scanner; // program uses Scanner

public class GradeBookTest
{
   // main method begins program execution
   public static void main( String args[] )
   {
      // create Scanner to obtain input from command window
      Scanner input = new Scanner( System.in );

      // create a GradeBook object and assign it to myGradeBook
      GradeBook myGradeBook = new GradeBook();

      // display initial value of courseName
      System.out.printf( "Initial course name is: %s\n\n",
         myGradeBook.getCourseName() );
```

```
      // prompt for and read course name
      System.out.println( "Please enter the course name:" );
      String theName = input.nextLine(); // read a line of text
      myGradeBook.setCourseName( theName ); // set the course name
      System.out.println(); // outputs a blank line

      // display welcome message after specifying course name
      myGradeBook.displayMessage();
   } // end main

} // end class GradeBookTest
```