



Your Grade Book-2 Java Program

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INSTANCE VARIABLES

This tutorial will guide you how to create “set Method” and “get Method”. These set and get methods are frequently used in many programs and very often used in mobile applications to set (assign) value to variables and get (retrieve / obtain) variable values.

Variables declared in the body of a particular method are known as “local variables” and can be used only within that method.

A Class normally contains one or more methods that manipulate the attributes that belong to a particular object of the Class. Attributes are represented as variables in a Class declaration. Such variables are called “fields” and they are declared inside a class declaration but outside the bodies of the Class’s method declarations.

Step 1 : Class GradeBook

```
//Class declaration with one method
public class GradeBook {
    // display a welcome message to the user

    private String courseName; // course name for this
    Gradebook.

    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;
    }

    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 %s!\n",
                        getCourseName() );
    } // end method displayMessage
```

```
GradeBook.java GradeBookTest.java
1
2 //Class declaration with one method
3 public class GradeBook {
4     // display a welcome message to the user
5
6     private String courseName; // course name for this Gradebook.
7
8     public void setCourseName(String name){
9         courseName = name; // store the course name
10    } // end method setCourseName
11
12
13    // method to retrieve the course name
14
15    public String getCourseName(){
16        return courseName;
17    }
18
19    public void displayMessage(){
20
21        // this statement calls getCourseName to get the name of the
22        // course this GradeBook represents.
23        System.out.printf("Welcome to the grade book for %s!\n",
24                           getCourseName() );
25    } // end method displayMessage
26
27
```

Step 2 : Class GradeBookTest

```
// Create and manipulate GradeBook.
import java.util.Scanner;
public class GradeBookTest {

    // main method begins program execution.
    public static void main(String[] args) {

        // Create Scanner to obtain input from the 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 to read course name
        System.out.println("Please enter the course name:");
        String theName = input.nextLine(); // read a line of
        text
        course name    myGradeBook.setCourseName(theName); // set the
        System.out.println(); // output a blank line.

        // display Welcome message after specifying
        course name.   myGradeBook.displayMessage();

        }//end main
    }// end Class GradeBookTest
```

```
GradeBook.java  GradeBookTest.java  ⌕
1 // Create and manipulate GradeBook.
2 import java.util.Scanner;
3 public class GradeBookTest {
4
5     // main method begins program execution.
6     public static void main(String[] args) {
7
8         // Create Scanner to obtain input from the command window.
9         Scanner input = new Scanner(System.in);
10
11         // create a Gradebook object and assign it to myGradebook.
12         GradeBook myGradeBook = new GradeBook();
13
14         // display initial value of courseName
15         System.out.printf("Initial course name is: %s\n\n",
16             myGradeBook.getCourseName() );
17
18         // Prompt to read course name
19         System.out.println("Please enter the course name:");
20         String theName = input.nextLine(); // read a line of text
21         myGradeBook.setCourseName(theName); // set the course name
22         System.out.println(); // output a blank line.
23
24         // display Welcome message after specifying course name.
25
26         myGradeBook.displayMessage();
27
28     } //end main
29
30 } // end Class GradeBookTest
31
```