

Manual For Using the NetBeans IDE

The content of this document is designed to help you to understand and to use the **NetBeans IDE** for your Java programming assignments. This is only an introductory presentation, and is no way intended for any professional or commercial use. It is geared especially for those students who have little or no knowledge of **NetBeans** and its use.

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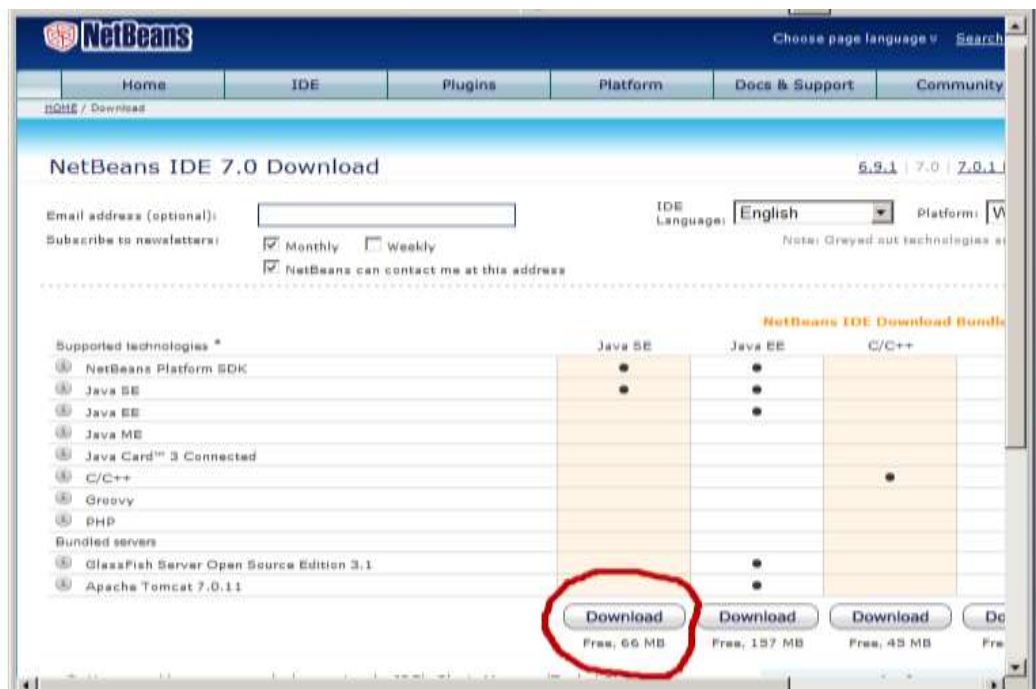
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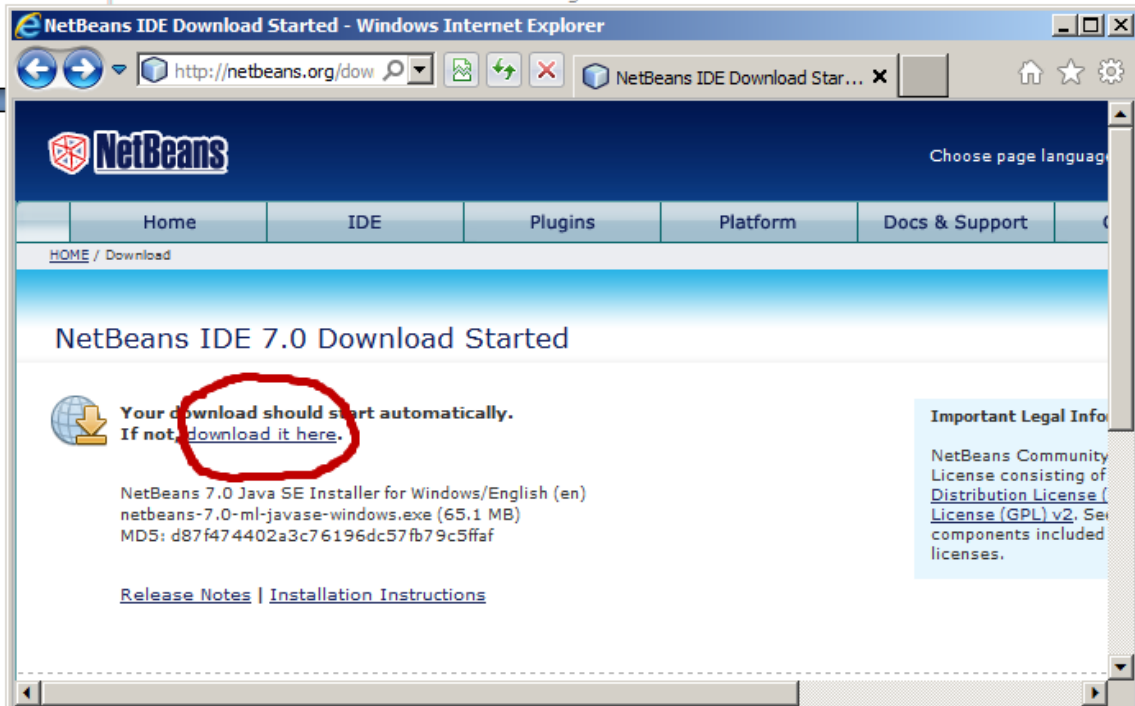
Download JDK(SDK) and NetBeans

In order to compile and execute your Java program, you need the Java compiler, first and foremost. You can download it from the web at oracle.com at no cost to you. Secondly you will need an editor which will use to compose the program. We have chosen the program NetBeans, though other programs such JCreator could.

NetBeans is more than just an editor. It is what is called an Integrated Development Environment (IDE, as it is popularly called) is a suite of programs that comes packaged as one unit that enables programmers to develop application software. It comes with a source editor which you will use to create and edit the program that is being developed; a translator which compiles, executes the program; and, a debugger that helps to test and track errors in the program.

Go to the netbeans website at: <http://netbeans.org/downloads/>





Locate NetBeans

Figure 1 shows a screen shot of my desktop. The last icon in the row of icons represents the **NetBeans** program. Locate it on your screen and point the mouse on it.



Figure 1 Locate the NetBean icon.

Load NetBeans

Once you have located the **NetBeans** icon by placing your point on it, double click on the icon to load **NetBeans**. Wait a while and you'll observe the **NetBeans** screen appears. It looks similar to **Figure 2**.



Figure 2 The NetBeans Program being loaded.

In its setting up, your will see a window appears, with a small window inset – similar to **Figure 3**. Inside the small window you will notice a slider moving across. This is indicating that the **NetBeans** program is still being loaded into the memory of your computer. Wait

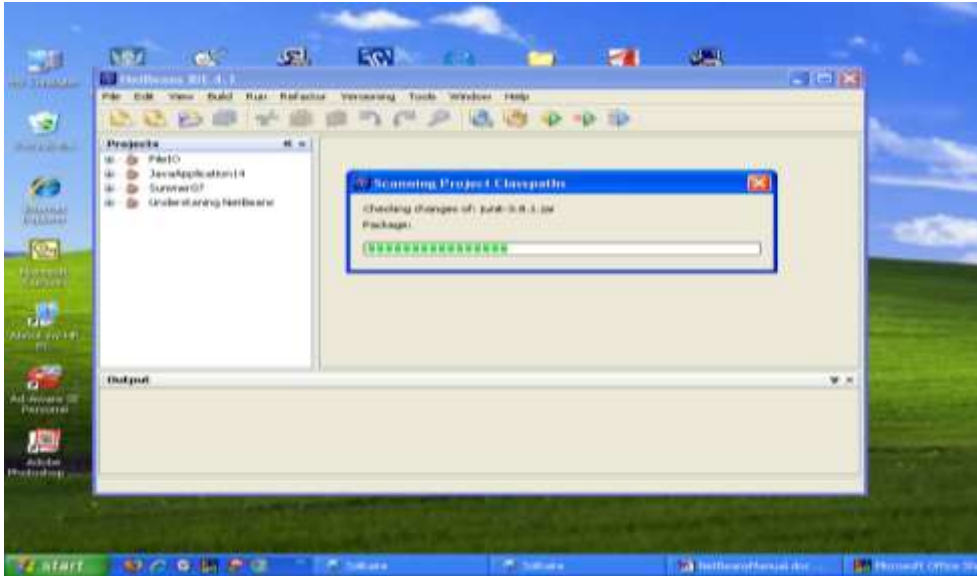


Figure 3 NetBeans is Being Loaded.

Once **NetBeans** is loaded the smaller window disappears and the larger one remains. Your screen should look similar to **Figure 4**. This is the window that you will be using to:

- (a) Type/edit your Java program.
- (b) Compile your program, and
- (c) Execute your program.

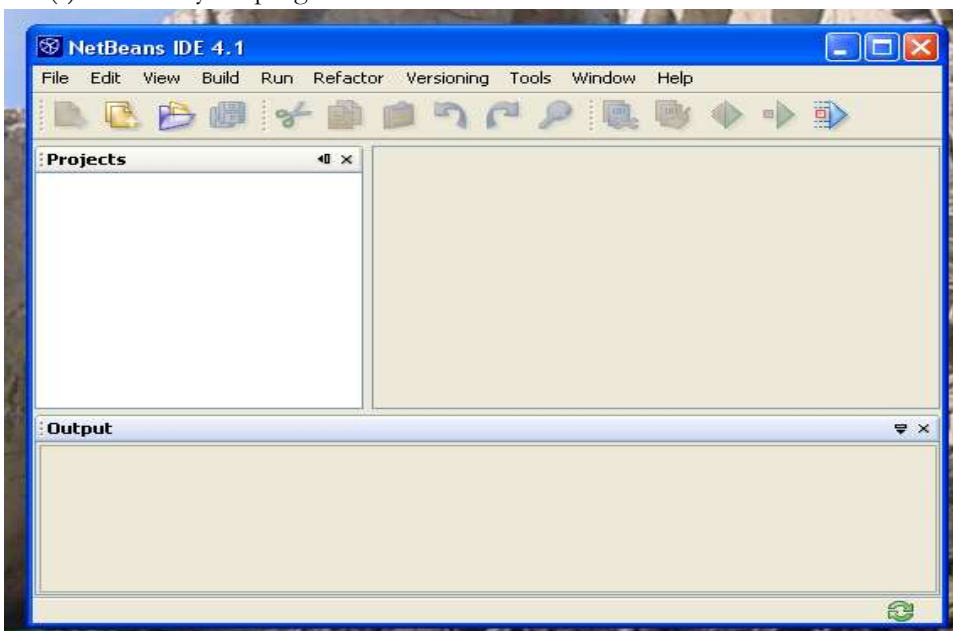


Figure 4 The NetBeans Environment

Navigating The NetBeans Window.

Referring to **Figure 4** notice that the screen is divided into various areas. There are three (3) rows of information and three sub screens/windows.

The first row tells us among other things, the name of the Program. In this case **NetBeans IDE 4.1** (Yours might be an updated version say **5.10** or so).

The second row is a menu showing the different tasks that you can perform. The first option is **File**. Click on it and you will see as in **Figure 5** the different options for handling your Java program file(s).

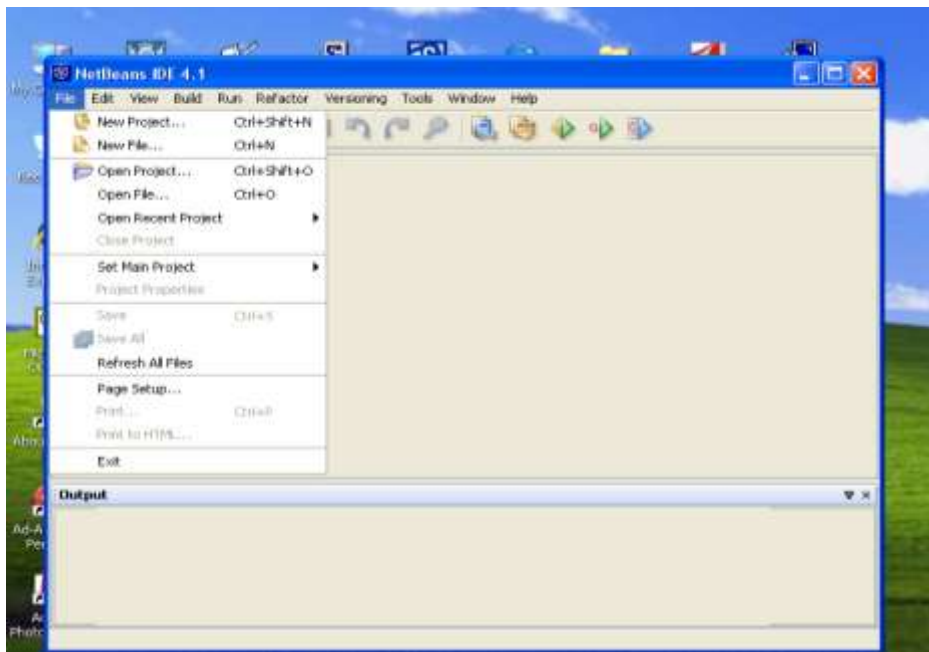


Figure 5. The File Menu.

The File menu allows you, among other things, to:

- (a) Create a new project (directories in which to store your Java files)
- (b) Create a new Java source file; or
- (c) Open an existing project, or
- (d) Open an existing Java file.

If you slide the mouse across the menu, to **Edit** and click on it, you will see the activities (in grey) that can be done when editing a Java file. See **Figure 6**.

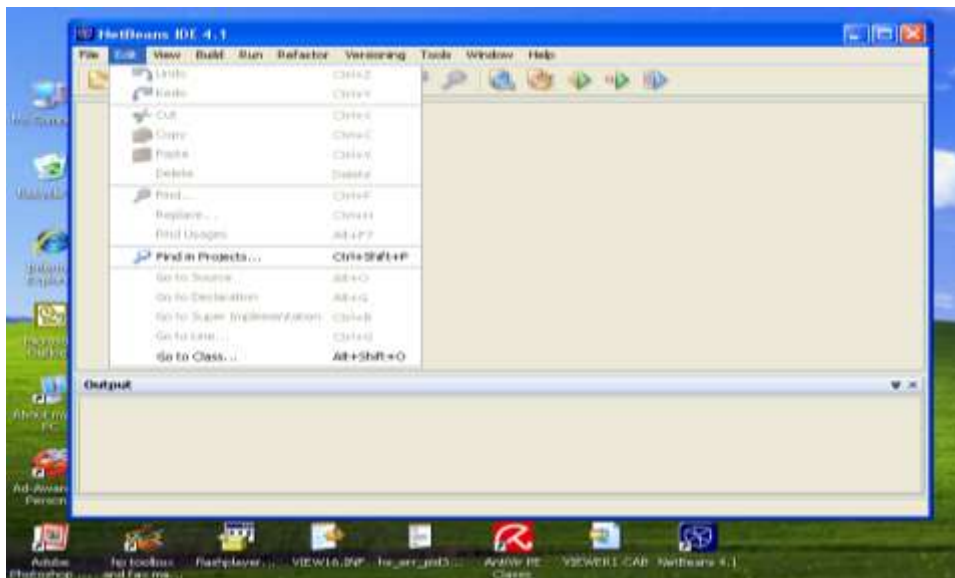


Figure 6 The Edit menu

Chief among the activities that you can perform are:

- (a) Copy a piece of text, and
- (b) Paste a piece of text that was copied.

Next, move the mouse over to the menu choice **Build**. This is another option that you will be using frequently. See **Figure 7**. In grey you see the menu item marked **Compile File**. This is the option that you will choose when you want to compile your Java program.

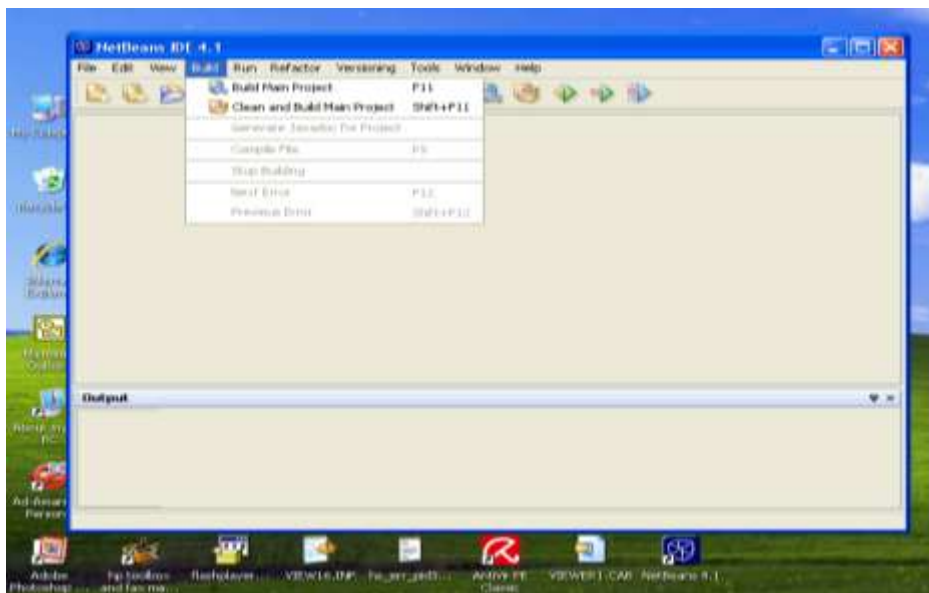


Figure 7 The Build Menu.

Lastly, move the mouse over to the menu choice mark **Run**. See **Figure 8**.

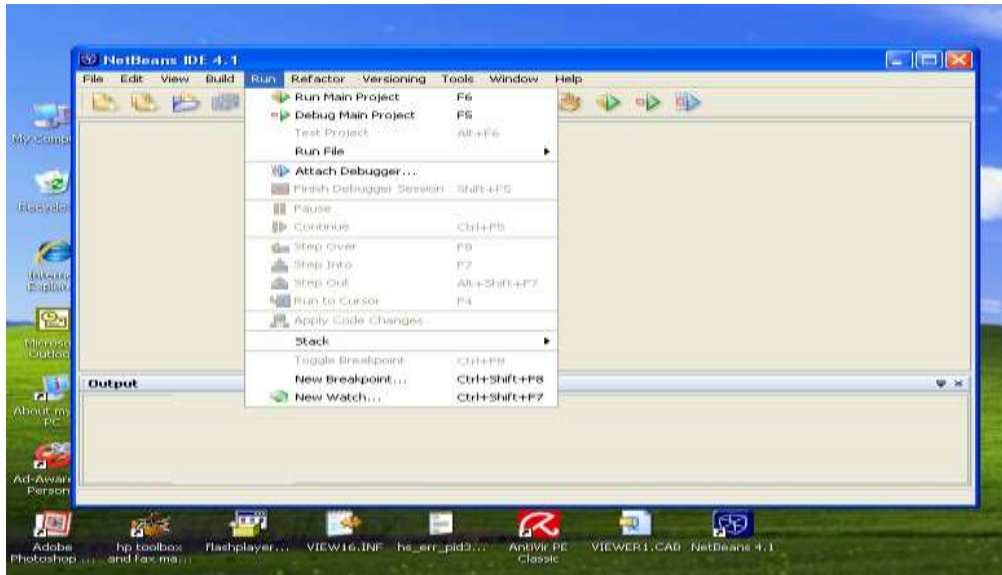


Figure 8 The Run menu.

This is the option that you will use when you want to execute your Java program. Point on **Run** you will see sub menu **Run File**. At this point you will not be able to see anything more since we do not have an active file to run.

The third row of menu choices contains icons for many of the menu choices in the second row. You may explore these at your own pace. Look back at **Figure 4** we see three rectangular windows. The window marked **Projects** is the area which shows us the Java files, among other things, that are in the Project/folder that you are currently working with. The window to the right of it is where you will compose/edit your Java files; and the window that is marked **Output** shows:

- (a) The state of your Java program when it is compiling,
- (b) The state of it when it is executing (running), and
- (c) Any output generated from your program.

Creating a Project/Folder

Whenever you are about to write a Java program using **NetBeans**, one of the first things that **NetBeans** requires you to do is to create a folder in which to place all the Java files for your application. **NetBeans** calls the folder a **Project**. So you must create a project in which to place your Java files.

To create a **Project** do the following:

- (a) Select **File New Project**. You will get a screen similar to **Figure 9**.

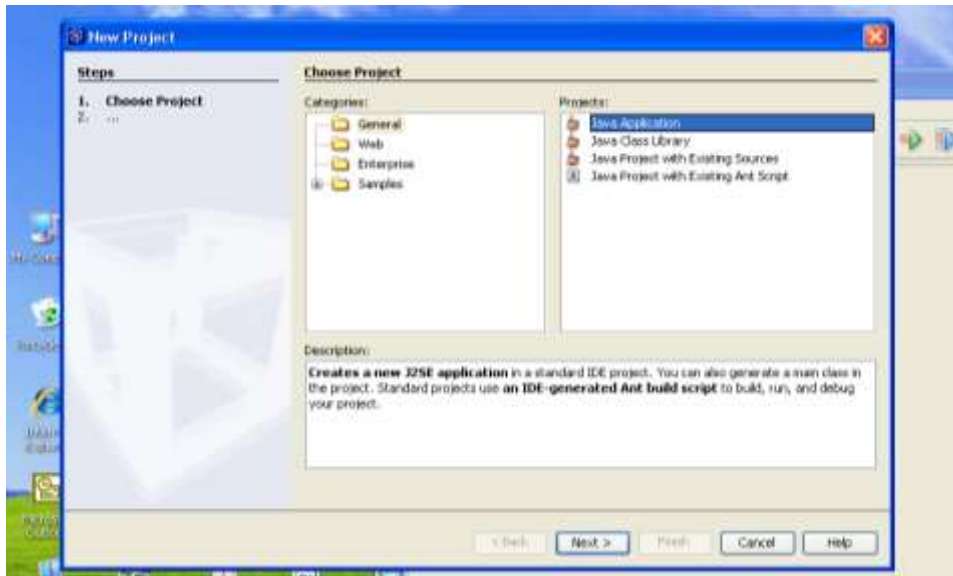


Figure 9 Creating a new Project.

- (b) Using Figure 9, select **General** → **Java Application**, and click **Next**.
- (c) Go to menu item **Project Location**. Click on the **Browse** button, and select the disk drive and directory where you want your project to be stored. You will get a new window, similar to Figure 10. When you have decided on the folder where you want to create your project, click on it, and then click **Open**. In my case I selected drive **D**, and directory **computer science 2006**. Next click on the **Open** button to confirm the selection.

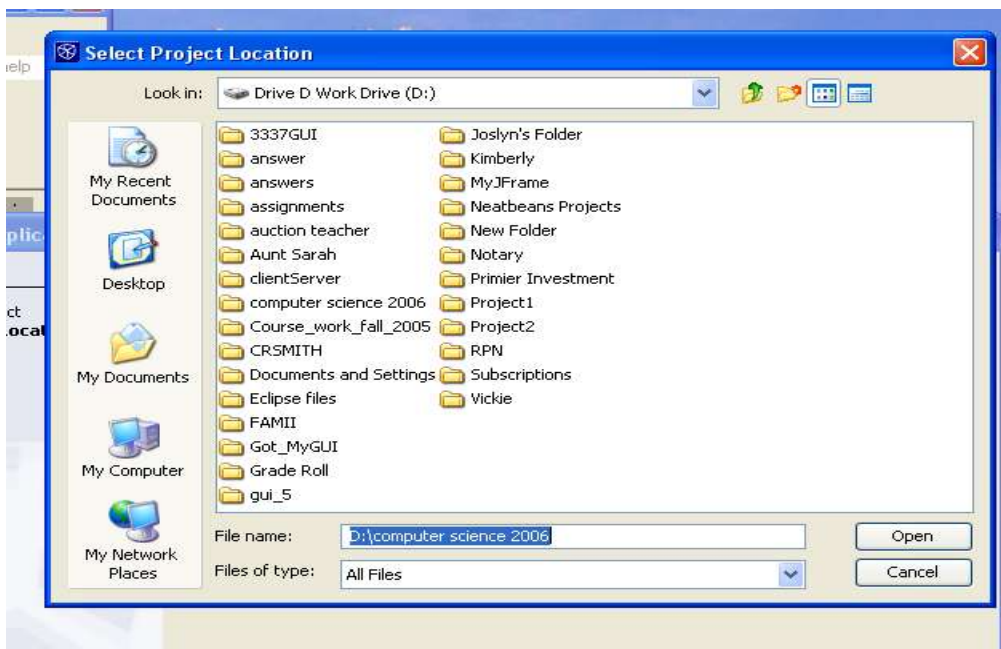


Figure 10. Locating Disk Drive and Directory in which to create Project.

By now you should get a new screen similar to **Figure 11**. Notice that the **Project Location** field and the **Project Folder** field are filled in for you automatically.

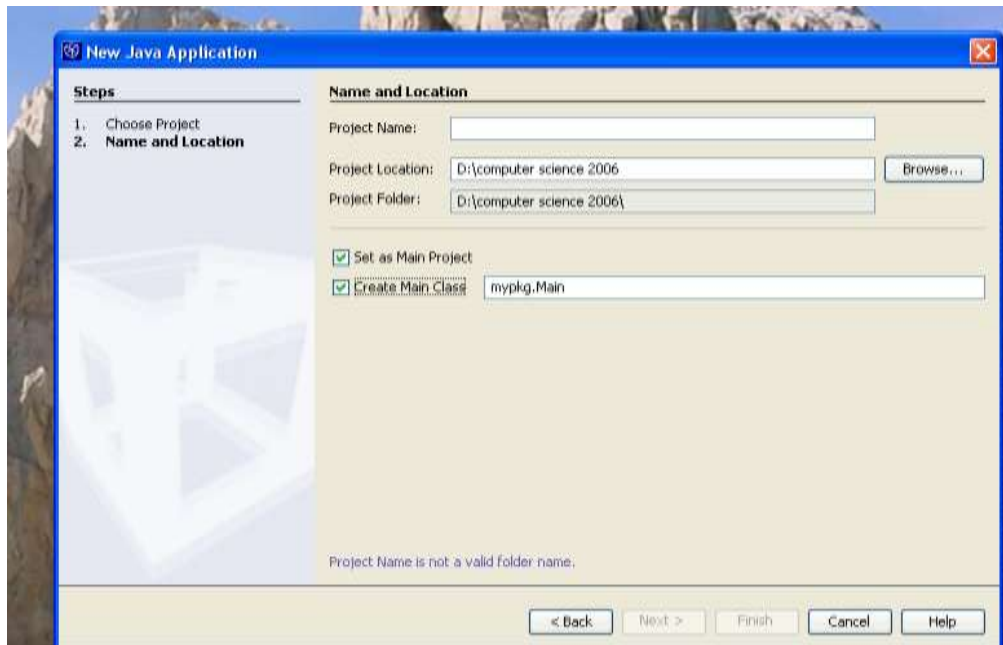


Figure 11 Fields are automatically filled in.

- (d) Next, in the text field marked **Project Name**, ignore whatever the default name is and type your own project name. In my case I call it **Understanding NetBeans**. See **Figure 12**. Notice that **NetBeans** fill in your project name at the field **Project Folder** also.

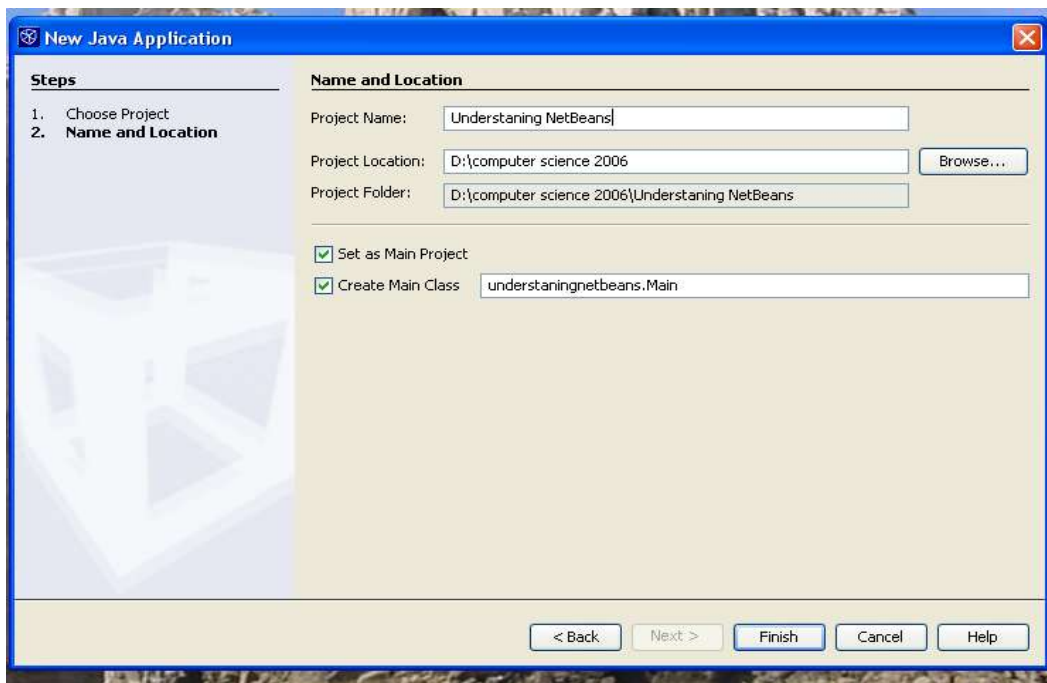


Figure 12 Filling in Project Name

(e) Because you want to have control over the things that you do in your **Project**, uncheck the selections marked:

- **Set as Main Project**, and
- **Create Main class**

See **Figure 13**.

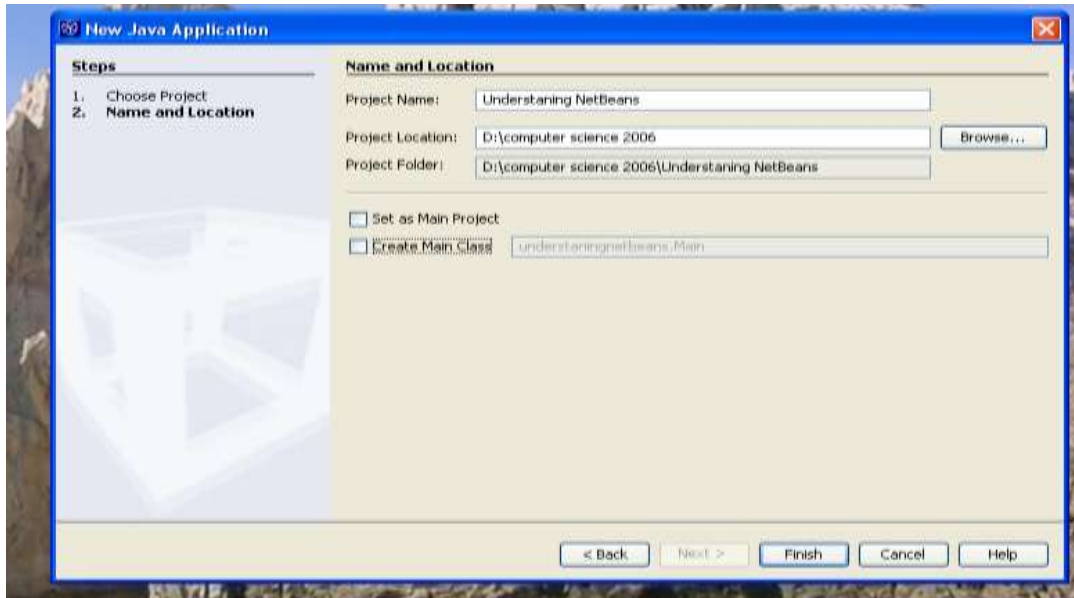


Figure 13 Uncheck items Set as Main Project and Create Main Class

(f) Click the button marked **Finish**. Wait a while. You should have a screen similar to **Figure 14**.

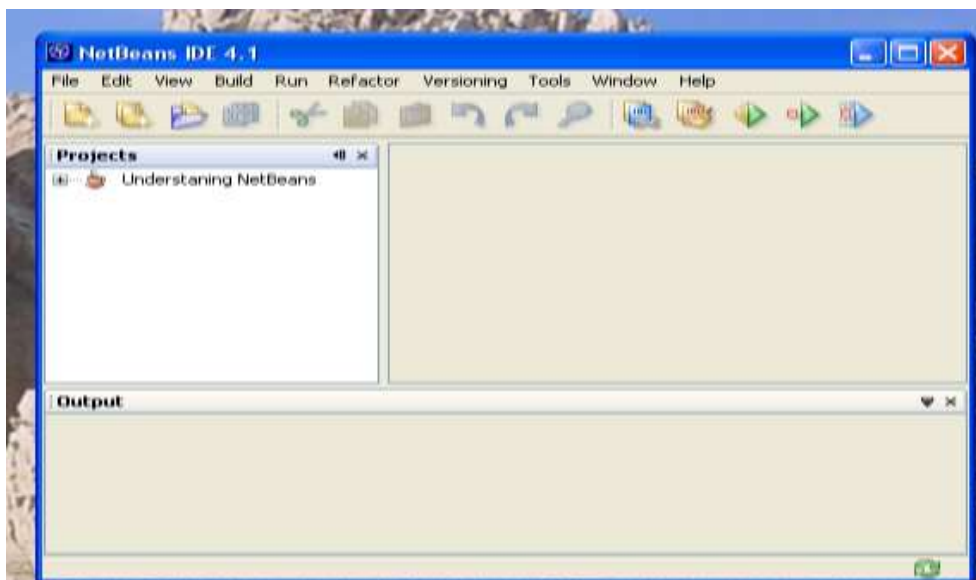


Figure 14 The Project has been Created.

Creating a Java File

To create a java program file do the following

- (a) Using **Figure 14**, select → **File** → **New File**. See **Figure 15**.

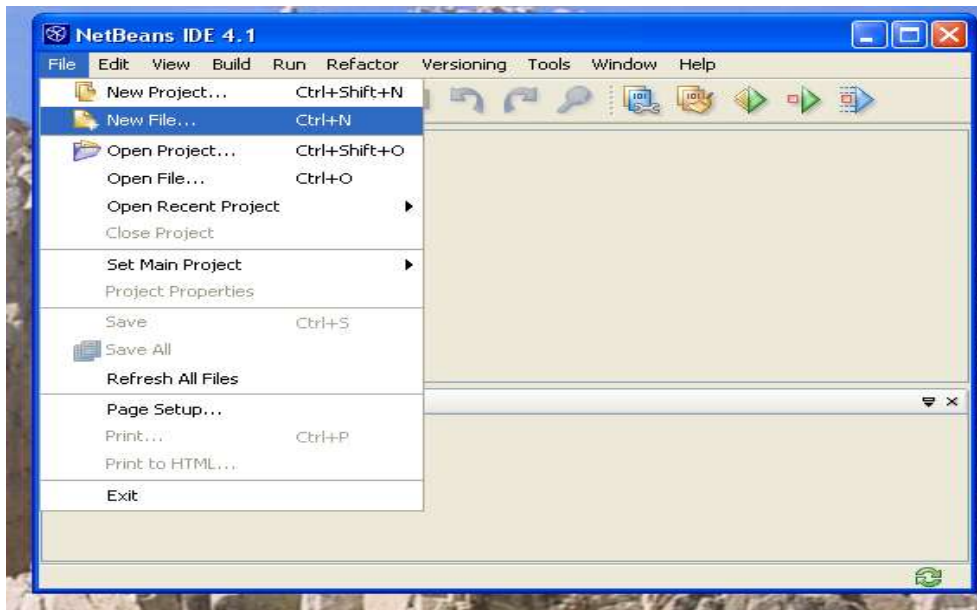


Figure 15 Creating a Java File.

- (b) On the new window, **Figure 15**, select **Categories: Java Classes** and **File Types: Empty Java File**. See **Figure 16**, and click the **Next** button.

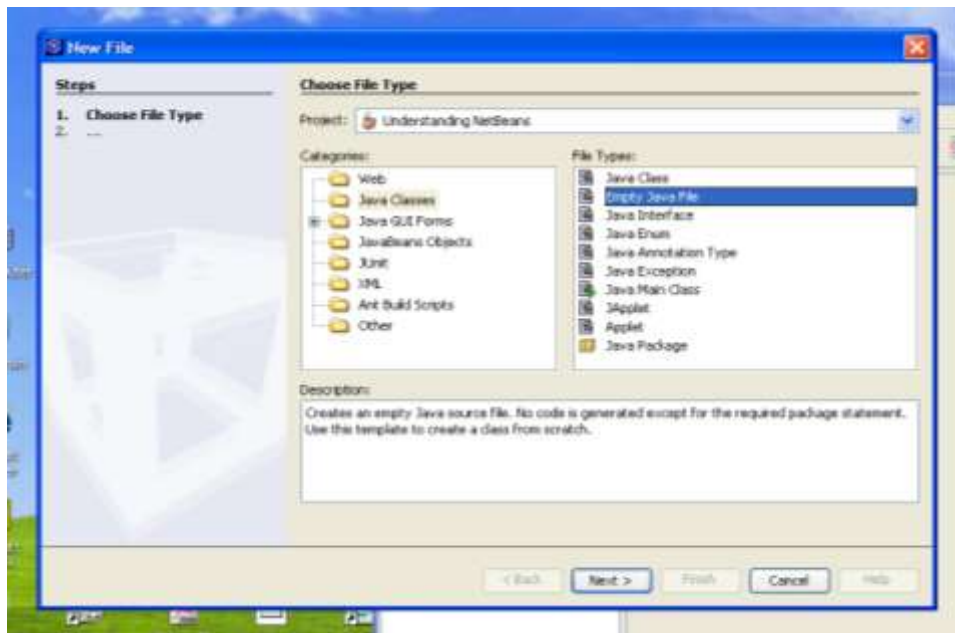


Figure 16 Selecting File Category and File Type.

- (c) Enter the name of the java class file you wish to develop, and press the **Finish** button. You should see a screen similar to **Figure 17**. In my case I name the file **Book**. **NetBeans** will automatically append **.java** to the name of the file you supplied. In this case, **Book.java**.

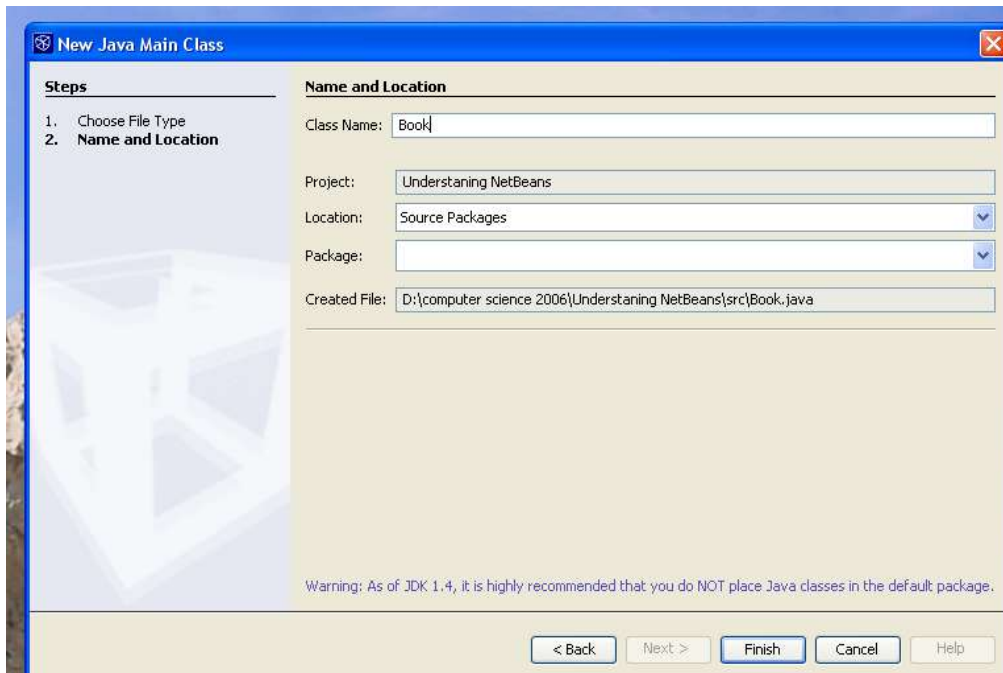


Figure 17. Name the Java file Book

- (d) This empty window **Figure 18** is the window in which you will type a single Java class file. There is another way to create a new window, but stick with this format for now.

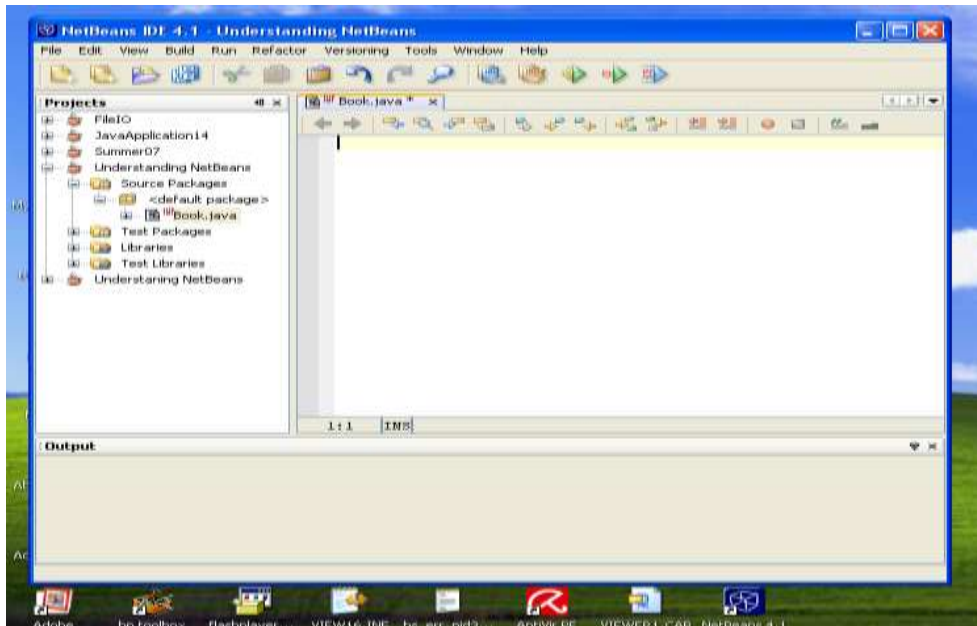


Figure 18 An empty window in which to type a single Java file.

- (e) Type the definition for the class called **Book.java**. In this exercise a book has a **title**, the **isbn**, and a **price** associated with it. See Figure 19.

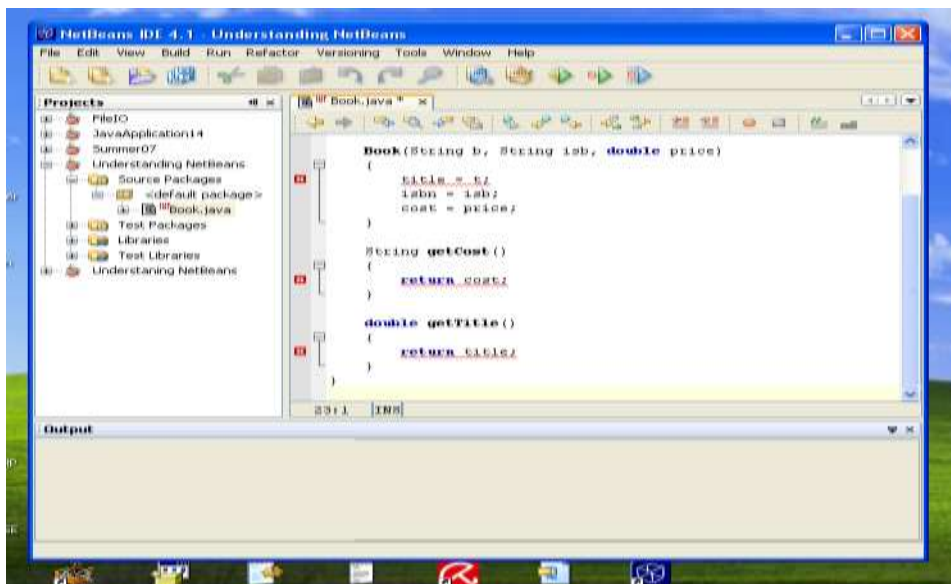


Figure 19 Typing the Java file called Book.

Compiling a Java File

Go to the menu in the second row of the **NetBeans** window and select **Build** → **Compile Book.java**. See Figure 20.

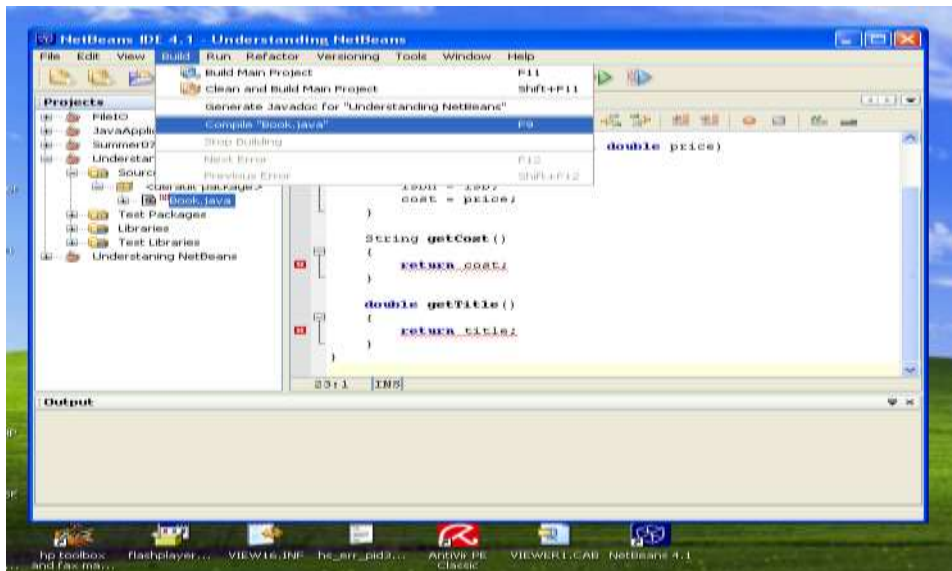


Figure 20. Locating the Compile option.

When you click on this option, you are submitting your Java program to the Java compiler to compile your class (**Book.java**) in this case. If the program is compiled successfully the window marked **Output** should be similar to **Figure 21**.

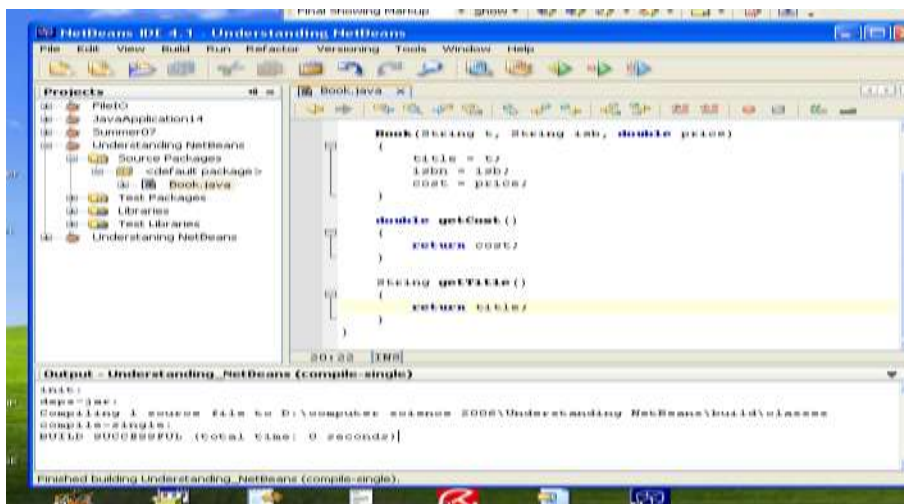


Figure 21. Compiling Java program file Book.java successfully

Creating A Test Class

Our next task is to write the test class. Select the option **File** → **New File**. Follow steps (a) to (e). I call my new class **TestBook**. See **Figure 22**.

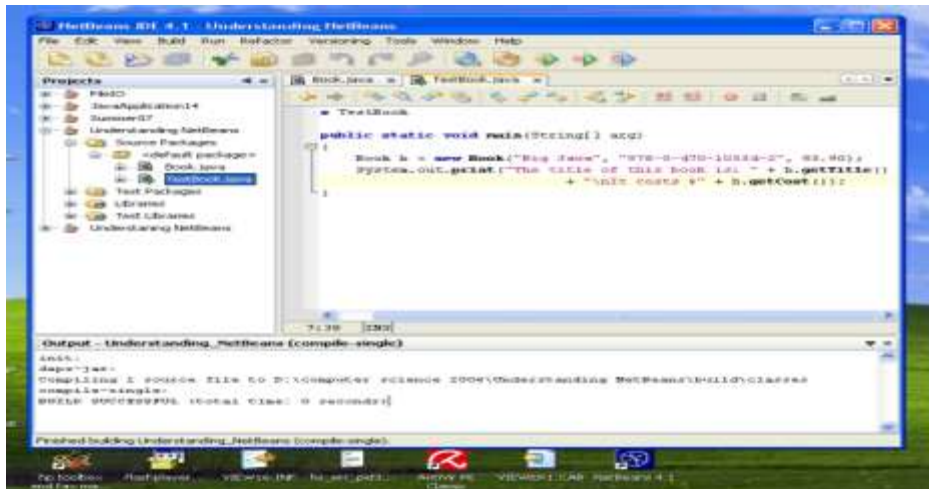


Figure 22 Writing a Test class.

Next, compile the code for **TestBook.java**. Follow similar steps as in the previous case for the class **Book.java**.

Executing a Java File

You can only run a program that has a **main** method, like class **Test.java**. To run your program select **Run** → **Run File** → **Run TestBook.java**. On doing so, you should get a screen similar to **Figure 23**.

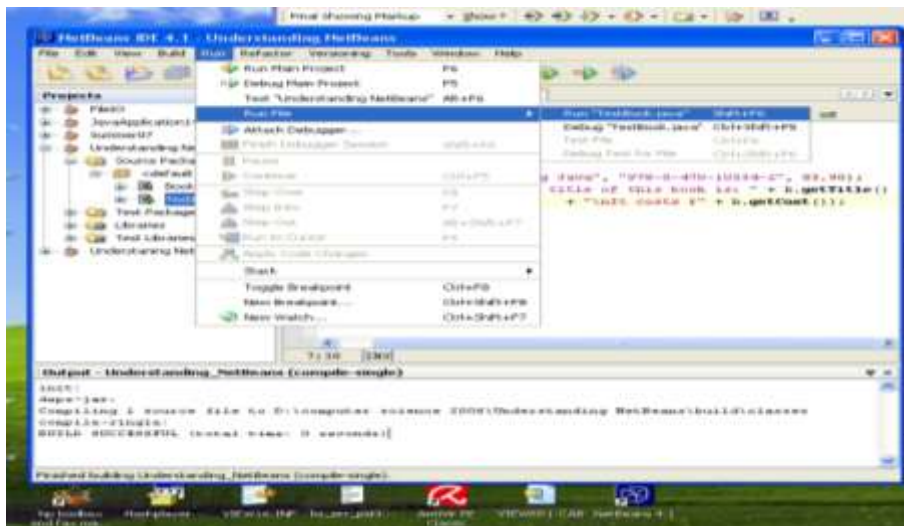


Figure 23 Locating the option to Run/Execute a Java program.

After you have clicked on the option your screen should look similar to **Figure 24**.

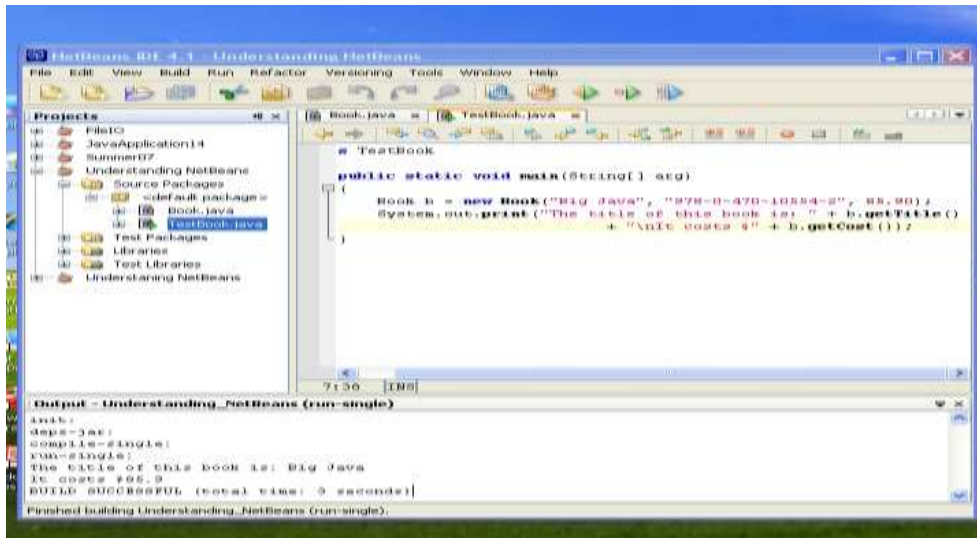


Figure 24. The result of Executing the Program.

Once this is done, the program runs, you get an output similar to what you see in the window marked **Output** of Figure 24.

See the exercise at the end of this manual. Create a workspace called **test01**, type the two classes in the same folder but store them in separate files - **Book.java** and **TestBook.java**. Compile **Book.java** first, then **TestBook.java**. Execute **TestBook.java**, both files will be executed.

Exercises

1. Type the following source code and save it in a file called **Book.java**

```
public class Book
{
    private String name, isbn;
    private double price;

    public Book(String n, String isb, double cost)
    {
        name = n;
        isbn = isb;
        price = cost;
    }

    public String getName()
    {
        return name;
    }

    public String getIsbn()
```

```

        {
            return isbn;
        }

        public double getPrice()
        {
            return price;
        }
    }

```

2. Compile the code
3. Type the following source code and save it in a file called **TestBook.java**

```

public class TestBook
{
    public static void main(String arg[])
    {
        Book b = new Book("High Road To Programming", "100-00-999",
125.50);

        System.out.println();
        System.out.println("Name of book: " + b.getName());
        System.out.println("The ISBN is : " + b.getIsbn());
        System.out.println("The price is : $" + b.getPrice());
        System.out.println();
    }
}

```

4. Compile the code
5. Execute the program
6. Show result to your lab instructor.

_____The End_____