

How to Install Java onto your system

1. In your browser enter the URL: [Java SE](#)
2. Choose: **Java SE Downloads** → Java Platform (JDK) 7 → jdk-7-windows-i586.exe.
3. Accept the License Agreement and choose the correct platform (Windows), and click the Download button. You will be downloading the file jdk-7-windows-i586.exe.
4. Save the file (somewhere where you know where you saved it since you will need to run it.)
5. Double-click the installer and follow the instructions.
6. You now need to tell your computer where it can find the import Java files. The best instructions to complete your installation can be found at the Sun site:

You need to add C:\Program Files\Java\jdk1.7.0\bin to the **PATH** variable. (If you have installed a different version of Java compiler, e.g., jdk1.6.0_18, you should add C:\Program Files\Java\jdk1.6.0_18\bin to the **PATH** variable.)

How you do this will depend on what operating system you are using.

- i) In **Windows 95/98** add or change the PATH statement in the autoexec.bat file

PATH current items; C:\Program Files\Java\jdk1.7.0\bin

- ii) In **Windows NT** - Start, Settings, Control Panel, System, Environment Vars, New or Edit: Add:

;C:\Program Files\Java\jdk1.7.0\bin Click Set or OK

- iii) In **Windows 2000** - Start, Settings, Control Panel, System, Advanced: New or Edit :

Add: C:\Program Files\Java\jdk1.7.0\bin Click OK

- iv) In **Windows ME** - Start, Run, type **msconfig**, highlight Path, edit, add

;C:\Program Files\Java\jdk1.7.0\bin Click OK

- v) In **Windows XP** - Start, Control Panel, double click System icon, open System Control Panel,

Advanced, click "Environment Variables", highlight Path, edit, add to path:

;C:\Program Files\Java\jdk1.7.0\bin Click OK

- vi) In **Windows Vista** - Start, Control Panel, System and Maintenance, System, Advanced system settings, click "Environment Variables", highlight Path, edit, add to path:

;C:\Program Files\Java\jdk1.7.0\bin Click OK

or

Click Start, right-click Computer and choose Properties,

Advanced system settings, click "Environment Variables", highlight Path, edit, add to path:

;C:\Program Files\Java\jdk1.7.0\bin Click OK

- vii) **Windows 7** - Start, Control Panel, System and Security, System, Advanced system settings (left column), click "Environment Variables", highlight Path, edit, add to path:

;C:\Program Files\Java\jdk1.7.0\bin Click OK

or

Click Start, right-click Computer and choose Properties,

Advanced system settings, click "Environment Variables", highlight Path, edit, add to path:

;C:\Program Files\Java\jdk1.7.0\bin Click OK

Note: I had to use ;C:\Program Files (x86)\Java\jdk1.7.0\bin since I had installed the 64 bit version previously. This is probably not the case for you.

7. The CLASSPATH variable also needs to be modified. The best instructions to set the classpath variable can be found at the Sun site:

<http://java.sun.com/javase/6/docs/technotes/tools/windows/classpath.html>

(search for: Using the CLASSPATH environment variable)

On my system I had to add the classpath variable to the **Environment** by clicking **new** and set it to:

C:\Program Files\Java\jdk1.7.0\jre\lib;C:\Program Files\Java\jdk1.7.0;;

8. You may have to reboot your computer when the installation is complete.

Test to see if your installation is working

After you've rebooted, in Notepad enter the following program:

```
public class hello
{
    public static void main(String[] args)
    {
        System.out.println("Hello World!");
    }
}
```

Save it as **hello.java** in the C:\ directory

9. Start, run, command

10. Enter: `cd ..` as many time as it take to get to C:\> (this should be the folder where you stored hello.java)

11. Enter: `javac hello.java`

There should be a slight pause and the another C:\> should appear

12. Enter: `java hello`

13. Your program should print out: **Hello world!**

14. Enter: `exit` to close the DOS window

Congratulation - you now have Java running on your system.

How to Install JCreator onto your system

0. Install JCreator **only after** you've successfully installed Java.

1. download the setup file from the following url:

<http://www.jcreator.org/download/activate?id=2e3dcf6b090437e3b9d76a288a911d73>

2. Save jcrea450_setup.exe file and run it.

How to Install BlueJ onto your system

0. Install BlueJ **only after** you've successfully installed Java.
1. Go to <http://www.bluej.org/download/download.html> to download the latest version of BlueJ (version 3.0.4)

or

Go to <http://www.bluej.org/download/download-old.html> to download an old version.

2. Once you have loaded the file, go to the [Installation Instructions](#).

How to Install TextPad onto your system

0. Install TextPad only after you've successfully installed Java.
1. You may download a trial version of it from:

<http://www.textpad.com>
2. Click: **Download** menu on the top of the page.
3. Please note, this is not freeware. After you evaluate it, you are expected to pay for your copy.
4. After you have installed Textpad, you may have to go to Configure, Preferences, Tools, Add

To get control-1 to work for compiling, control-2 to execute a program.

About how to create Java program

Choice 1:

1. Using NotePad to produce a .java file.
2. Invoke 'Command Prompt'.
3. Using 'cd' command to go to the fold where you put your program.
4. Using 'javac <file name>' to compile your program.

5. Using 'java <file name without .java>' to run your program.

```
public class alq2 {
    /**
     * main method
     *
     * prompts input and calls the recursive method
     */
    public static void main(String[] args) {
        System.out.println("result of fn(" + m + ") is " +
            computeFN(m));
    }
    /**
     * computeFN - the definition of the function
     *
     * input: int
     * output: int
     * calculate  $f(N) = 3*f(N-3) + 4*f(N-2) - 5*f(N-1)$  where
     *  $f(0) = 1, f(1) = 1, f(2) = 3.$ 
     */

    public static int computeFN(int n)
    {
        if(n==0) return 1;
        else if(n==1) return 1;
        else if(n==2) return 3;
        else
            return 3 * computeFN(n-3) + 4 * computeFN(n-2) - 5 *
                computeFN(n-1);
    }
}
```

Choice 2:

1. Using 'JCreator' to create Java code, compile it and then run it.
2. If your program is to run with an input of integers, you need arrange a statement in the main method, before any other statements as below:

```
int m = (int)new
Integer(JOptionPane.showInputDialog("Enter an integer"));
```

(see the following example.)

```
import javax.swing.JOptionPane;
public class alq2 {
    /**
     * main method
     *
     * prompts input and calls the recursive method
     */
    public static void main(String[] args) {
        //input dialog
        int m = (int)new
        Integer(JOptionPane.showInputDialog("Enter an integer"));
        //calculate  $f(N) = 3*f(N-3) + 4*f(N-2) - 5*f(N-1)$  where
         $f(0) = 1, f(1) = 1, f(2) = 3.$ 
        System.out.println("result of fn(" + m + ") is " +
        computeFN(m));
    }
    /**
     * computeFN - the definition of the function
     *
     * input: int
     * output: int
     */
    public static int computeFN(int n)
    {
        if(n==0) return 1;
        else if(n==1) return 1;
        else if(n==2) return 3;
        else
            return 3 * computeFN(n-3) + 4 * computeFN(n-2) - 5 *
            computeFN(n-1);
    }
}
```

Exercise 1: Analyze implement the above Java program.

Exercise 2: Analyze implement the following Java program:

```
import java.io.*;

public class AsciiArray{
    public static void main(String args[]) {
        int index=0;
        byte[] b = new byte[(127-31)*2];
        for (int i=32; i<127; i++) {
            b[index++] = (byte)i;
            //break line after every 8 characters
            if (i%8==7) b[index++] = (byte)'\n';
            else b[index++] = (byte) '\t';
        }//for
        b[index++] = (byte) '\n';
        try {
            System.out.write(b);
        }
        catch(IOException e) {}
    }//main
}//class
```