

COMP 202 Tutorial 1

Intro + How to install JDK + Dr.Java/Eclipse

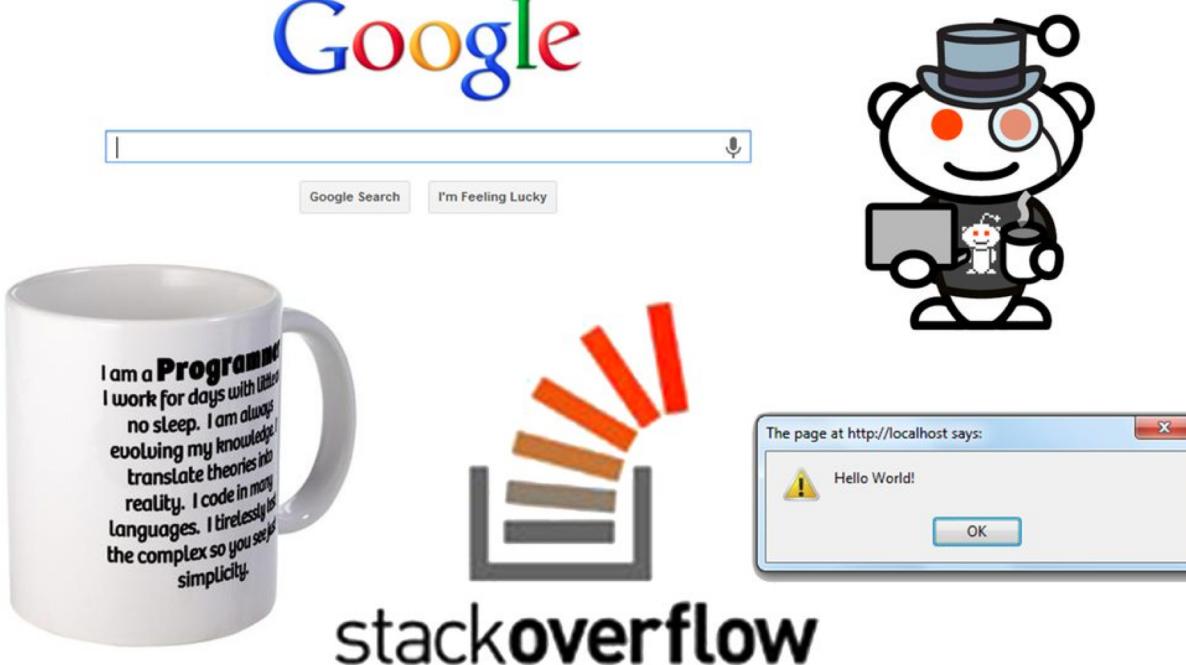
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OH: TH 1:30 – 2:30

jikun.kang@mail.mcgill.ca
OH: TBD

Programming

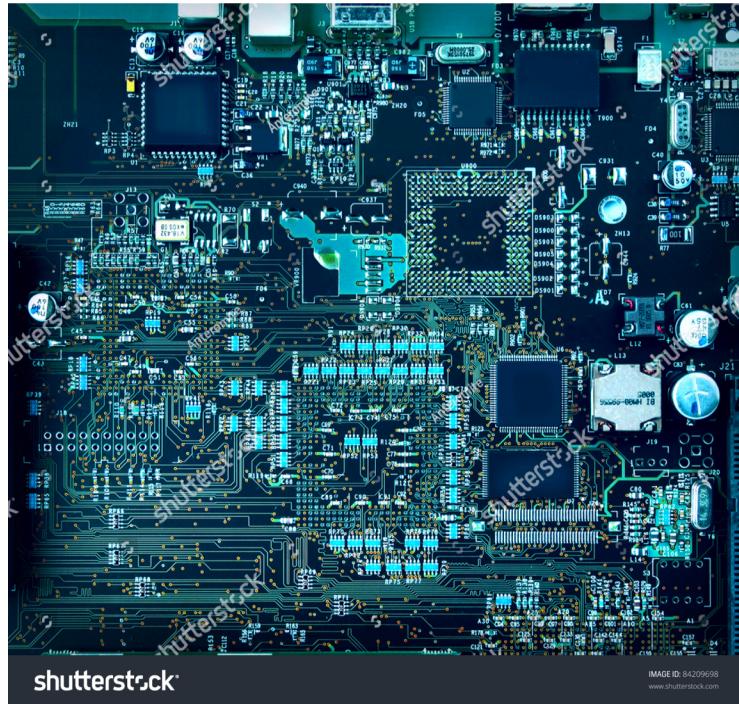
The “I’m a professional programmer”
starterkit.



Processing information

- How does a computer “read” and “process” code?
- What are the systems/architecture in place to make these happen?

Computers: a system of signals and switches



Bunch of



Compilers, text editors, IDEs

```
#include  
<stdio.h>  
int main()  
{  
printf("Hello")  
;  
return 0;  
}
```

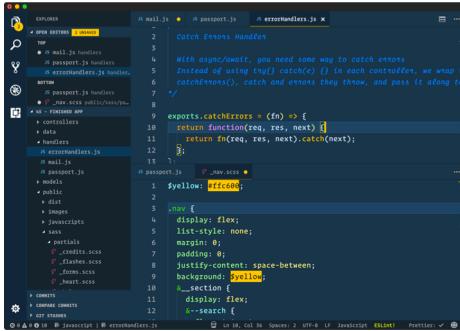
Source code



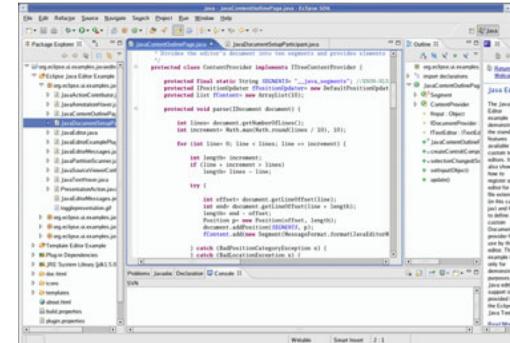
```
100010101010101  
000100101010111  
011111100110000  
001011001101010  
010111011100011  
011111001111000  
000110011110101  
010010010101000
```

Executable code

Text Editors



IDEs



Steps

1. Download Java
2. Install Java
3. Update Path environmental variable
(Windows only)
4. Verify Installation

1. Download Java

1. Open your web browser
2. Type URL:
<https://www.oracle.com/technet/work/java/javase/downloads/jdk8-downloads-2133151.html> to go to Oracle download page
3. Click Accept License Agreement
4. Download the JDK according to your OS

The screenshot shows the Oracle Java SE Development Kit 8 Downloads page. The left sidebar lists categories like Java SE, Java EE, Java ME, etc. The main content area has tabs for Overview, Downloads (which is selected), Documentation, Community, Technologies, and Training. Below the tabs, it says "Java SE Development Kit 8 Downloads". It thanks users for downloading the JDK and explains its purpose. It also lists "See also:" links. A large table below shows "Java SE Development Kit 8u191" download options for various platforms. A red arrow points from the "Accept License Agreement" checkbox in the middle-left section to the same checkbox in the middle-right section.

Java SE Development Kit 8u191

You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

Accept License Agreement Decline License Agreement

| Product / File Description | File Size | Download |
|-------------------------------------|-----------|---|
| Linux ARM 32 Hard Float ABI | 72.97 MB | jdk-8u191-linux-arm32-vfp-hflt.tar.gz |
| Linux ARM 64 Hard Float ABI | 69.92 MB | jdk-8u191-linux-arm64-vfp-hflt.tar.gz |
| Linux x86 | 170.89 MB | jdk-8u191-linux-i586.rpm |
| Linux x86 | 185.69 MB | jdk-8u191-linux-i586.tar.gz |
| Linux x64 | 167.99 MB | jdk-8u191-linux-x64.rpm |
| Linux x64 | 182.87 MB | jdk-8u191-linux-x64.tar.gz |
| Mac OS X x64 | 245.92 MB | jdk-8u191-macosx-x64.dmg |
| Solaris SPARC 64-bit (SVR4 package) | 133.04 MB | jdk-8u191-solaris-sparcv9.tar.Z |
| Solaris SPARC 64-bit | 94.28 MB | jdk-8u191-solaris-sparcv9.tar.gz |
| Solaris x64 (SVR4 package) | 134.04 MB | jdk-8u191-solaris-x64.tar.Z |
| Solaris x64 | 92.13 MB | jdk-8u191-solaris-x64.tar.gz |
| Windows x86 | 197.34 MB | jdk-8u191-windows-i586.exe |
| Windows x64 | 207.22 MB | jdk-8u191-windows-x64.exe |

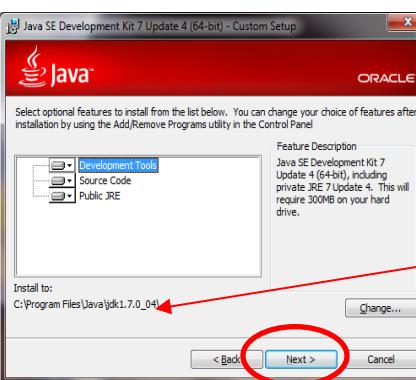
2. Install Java

1. Double click to run the download file
2. Just follow the prompt in Installer window

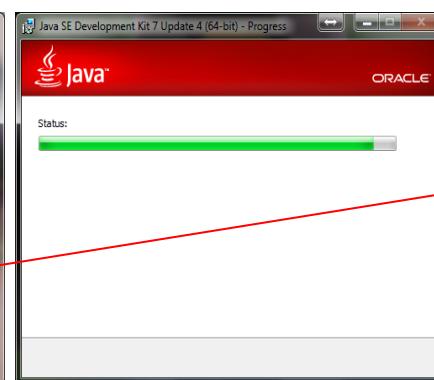
1



2

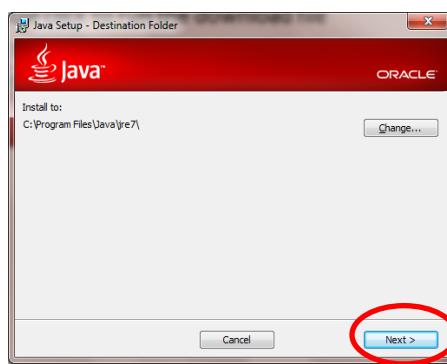


3



Using the default path

4



5



6



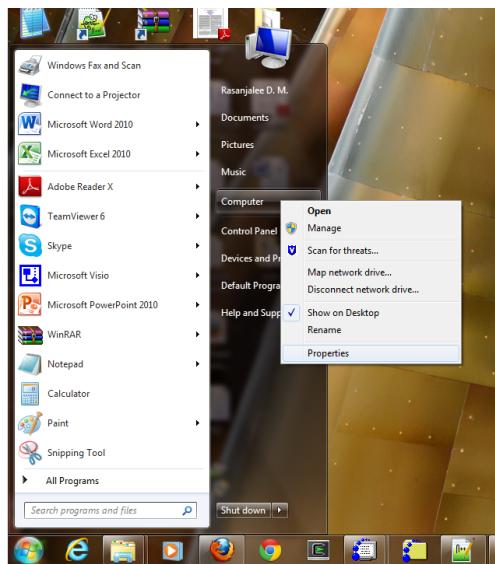
7



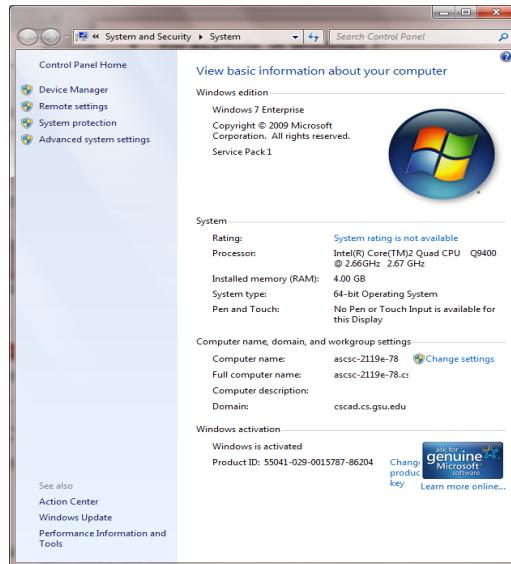
- For example, in Windows 7:

REF: <http://docs.oracle.com/javase/7/docs/webnotes/install/windows/jdk-installation-windows.html#Check>

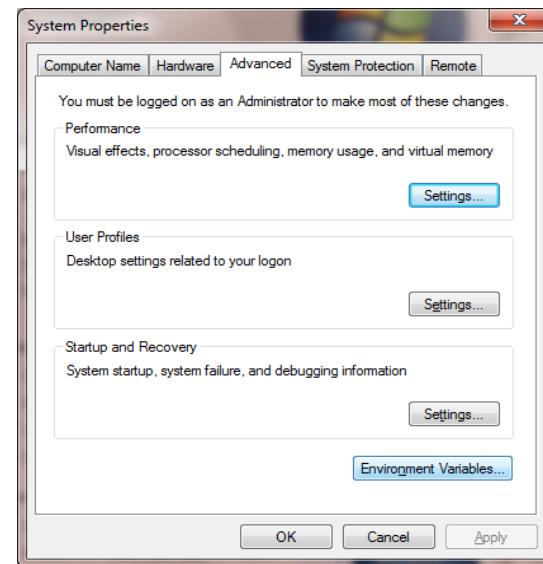
1.



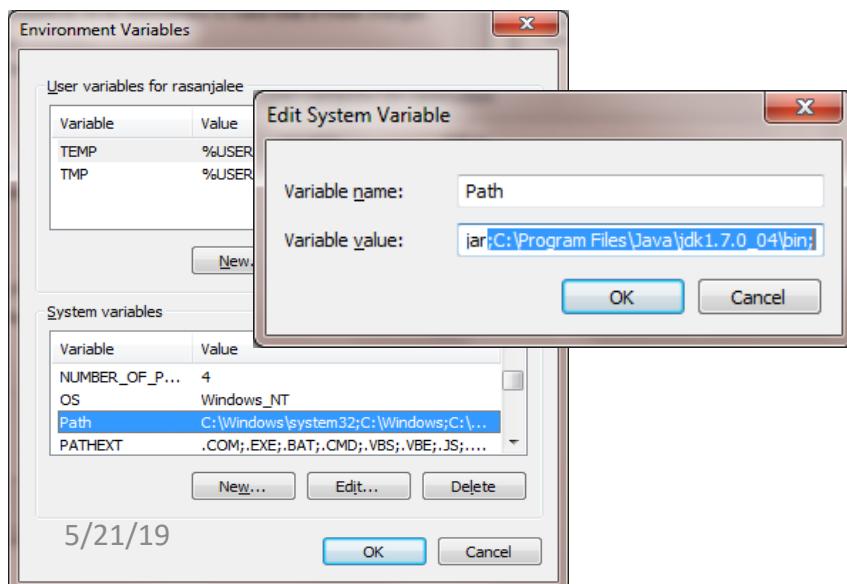
2.



3.



4.



5.

Add the location of the bin folder of the JDK installation for the PATH variable in **System Variables** in Environmental variables.

The following is a typical value for the PATH variable:

C:\WINDOWS\system32;C:\WINDOWS;C:\Program Files\Java\jdk1.8.1\bin

Verify Installation

- Go to command prompt and type *javac*
- It should display *javac* usage with options if installed correctly



A screenshot of a Windows Command Prompt window titled "cmd C:\Windows\system32\cmd.exe". The window displays the usage information for the "javac" command. The text is as follows:

```
Microsoft Windows [Version 6.1.7601]
Copyright <c> 2009 Microsoft Corporation. All rights reserved.

C:\Users\rasanjalee>javac
Usage: javac <options> <source files>
where possible options include:
  -g                         Generate all debugging info
  -g:none                     Generate no debugging info
  -g:{lines,vars,source}       Generate only some debugging info
  -nowarn                     Generate no warnings
  -verbose                    Output messages about what the compiler is doing
  -deprecation                Output source locations where deprecated APIs are u
sed
  -classpath <path>           Specify where to find user class files and annotati
on processors
  -cp <path>                  Specify where to find user class files and annotati
on processors
  -sourcepath <path>          Specify where to find input source files
  -bootclasspath <path>       Override location of bootstrap class files
  -extdirs <dirs>             Override location of installed extensions
  -endorseddirs <dirs>        Override location of endorsed standards path
  -proc:{none,only}            Control whether annotation processing and/or compil
ation is done.
  -processor <class1>[,<class2>,<class3>...] Names of the annotation processors
to run; bypasses default discovery process
  -processorpath <path>        Specify where to find annotation processors
  -d <directory>              Specify where to place generated class files
  -s <directory>              Specify where to place generated source files
  -implicit:{none,class}      Specify whether or not to generate class files for
implicitly referenced files
  -encoding <encoding>         Specify character encoding used by source files
  -source <release>           Provide source compatibility with specified release

  -target <release>           Generate class files for specific VM version
  -version                     Version information
  -help                        Print a synopsis of standard options
  -Akey[=value]                 Options to pass to annotation processors
  -X                          Print a synopsis of nonstandard options
  -J<flag>                   Pass <flag> directly to the runtime system
  -Werror                      Terminate compilation if warnings occur
  @<filename>                 Read options and filenames from file

C:\Users\rasanjalee>
```

Installation guide

- JDK installation for Microsoft Windows:
 - https://docs.oracle.com/javase/8/docs/technotes/guides/install/windows_jdk_install.html#CHDEBCCJ
- JDK installation for Mac OS X:
 - https://docs.oracle.com/javase/8/docs/technotes/guides/install/mac_jdk.html#CHDBADCG
- JDK installation for Linux Platforms:
 - https://docs.oracle.com/javase/8/docs/technotes/guides/install/linux_jdk.html#BJFGGEFG

Where to download Dr.java

Type <http://www.drjava.org/> or google dr.java

The screenshot shows the Dr.java website's download section. At the top, it says "Current Stable Release" with the note "The current release of DrJava is drjava-beta-20160913-225446." Below this are three download buttons: "Download Jar File via HTTP", "Download Windows App via HTTP", and "Download Mac OS X App via HTTP". A red arrow points from the text "Click Here" to the "Download Windows App via HTTP" button. Further down, under "Old Stable Release", there are three more download buttons: "Download Jar File", "Download Windows App", and "Download Mac OS X App". A blue arrow points from the text "Click to download" to the "Download Windows App" button.

Current Stable Release
The current release of DrJava is drjava-beta-20160913-225446.

[Download Jar File via HTTP](#)
[Download Windows App via HTTP](#)
[Download Mac OS X App via HTTP](#)

If your browser has trouble with the buttons above, try right-clicking and selecting "Save Link As..." on these hyperlinks:
[\[Jar File\]](#) [\[Windows App\]](#) [\[Mac OS X App\]](#)

You can also browse a list of all released files (including source code and Javadocs) and release notes [here](#).

Old Stable Release
This stable release for DrJava is drjava-stable-20120818-r5686.

[Download Jar File](#)
[Download Windows App](#)
[Download Mac OS X App](#)

If your browser has trouble with the buttons above, try right-clicking and selecting "Save Link As..." on these hyperlinks:
[\[Jar File\]](#) [\[Windows App\]](#) [\[Mac OS X App\]](#)

Current Eclipse Plug-in
The current version of the DrJava Plug-in for Eclipse is drjava-eclipse-20090115-r4708.

[Download Plug-in via HTTP](#)

If your browser has trouble with the button above, try right-clicking and selecting "Save Link As..." on this hyperlink:
[\[Plug-in\]](#)

For information about how to download and use the plug-in, see our [Eclipse Plug-in](#) page.

Monitor Releases

You can use SourceForge's monitoring feature to receive an email each time a new version of DrJava is released. To sign up, first create a SourceForge account and log in. Then go to our [SourceForge project page](#) and click on the envelope icons next to both Stable Releases and Development Releases (in the "Latest File Releases" table).

DrJava has been partially funded by the [National Science Foundation](#), the [Texas Advanced Technology Program](#), and [Sun Microsystems, Inc.](#)

Where to download eclipse

- <https://www.eclipse.org/> or google eclipse

The screenshot shows the official website of the Eclipse Foundation. At the top, there's a navigation bar with links for Members, Working Groups, Projects, More, and a prominent orange 'Download' button. Below the navigation is a large banner with the text 'The Platform for Open Innovation and Collaboration'. Underneath the banner, a paragraph explains the foundation's mission: 'The Eclipse Foundation provides our global community of individuals and organizations with a mature, scalable and commercially-friendly environment for open source software collaboration and innovation.' Below this text are four orange buttons with icons: 'Members' (person icon), 'Working Groups' (link icon), 'Discover Projects' (project icon), and 'Business Value' (briefcase icon). The main content area features a dark background with a futuristic, glowing blue and purple light effect. At the top left of this area, the text 'Now Available' is displayed above the title 'Eclipse IDE 2018-12'. Below the title, a subtitle reads 'Get the latest version of the Eclipse IDE!'. At the bottom left, there are two buttons: 'Download' and 'Learn More'.

Now Available

Eclipse IDE 2018-12

Get the latest version of the Eclipse IDE!

Download Learn More