Instructions to IAIT for installing software used in CSSE courses for 2011-2012 laptops

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***June 29*, 2011**

Please install the following software in the order listed (other orders will work too, but the order listed is best in some regards).

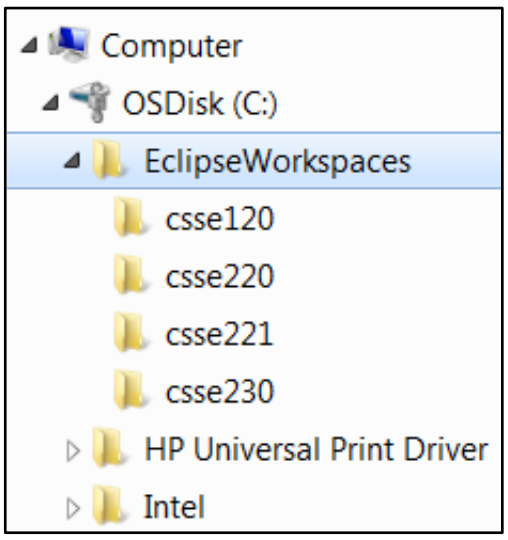
Once you have installed the software on your test laptop, please let us review it briefly to be sure that we did not miss anything.

Throughout:

- Accept the license agreement but otherwise accept all defaults, unless the instructions below explicitly say otherwise.
- Continue the installation even if the installation indicates potential security problems, for example:
    - If *User Account Control* asks whether you want to allow the installation program to make changes to this computer, respond *Yes*.
    - If the installation indicates that you need *Administrator privileges*, respond *Yes.*
    - Select *Run* even if you get a Security Warning that the *publisher could not be verified*.
- Users (as *localmgr* or their local account or logged onto Rose-Hulman or whatever) need to read ***and write*** to many of the folders that are created. **Set permissions appropriately.**

You must have internet access for some of the following. These instructions assume a 32-bit installation of Windows 7; many of the programs installed here also have 64-bit versions.

1. **Folders** for CSSE 120, 220, 221 and 230 software projects:



   a. Create a folder: **`C:\EclipseWorkspaces`**

   b. Users need to be able to read ***and write*** to this folder and its subfolders. **Set permissions appropriately.**

   c. Create subfolders (that inherit appropriate rights):

      `C:\EclipseWorkspaces\csse120`

      `C:\EclipseWorkspaces\csse220`

      `C:\EclipseWorkspaces\csse221`

      `C:\EclipseWorkspaces\csse230`

   Note: We want these folders directly under *C:* instead of in *My Documents* because some of the software needs to use workspaces that are in a path that has no spaces.

2. **Java**:

   a. Install **Java SE 6 Update 26** by running:

      http://www.rose-hulman.edu/class/csse/binaries/JavaDevKit/jdk-6u26-windows-i586.exe

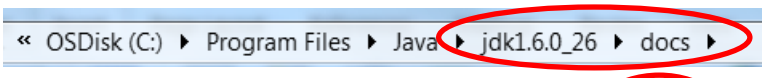
   b. Install the **documentation** for the above by unzipping this[1]:

   http://www.rose-hulman.edu/class/csse/binaries/JavaDevKit/jdk-6u25-fcs-bin-b04-apidocs-04_Apr_2011.zip

   and placing its unzipped ***docs*** folder directly below the ***jdk1.6.0_26*** folder (*not* the *jre6* folder) created by the previous step:

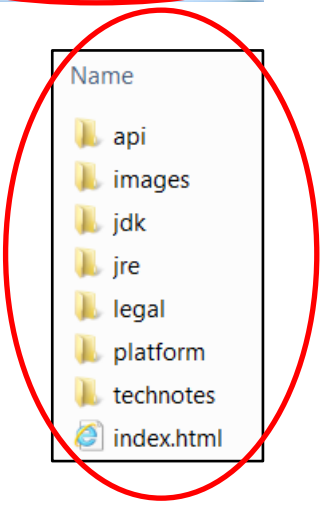
      `C:\Program Files\Java\jdk1.6.0_26`

   As a double-check, confirm that you end with a folder:



      `C:\Program Files\Java\jdk1.6.0_26\docs`

   that has seven folders and one file beneath it, as shown.



[1] For large files like this, it may be faster to save the zipped file somewhere convenient on your computer, then unzip it, placing the unzipped files as directed, then delete the *zip* file.

3. **Python**:

   a. Install **Python 3.2** by running:

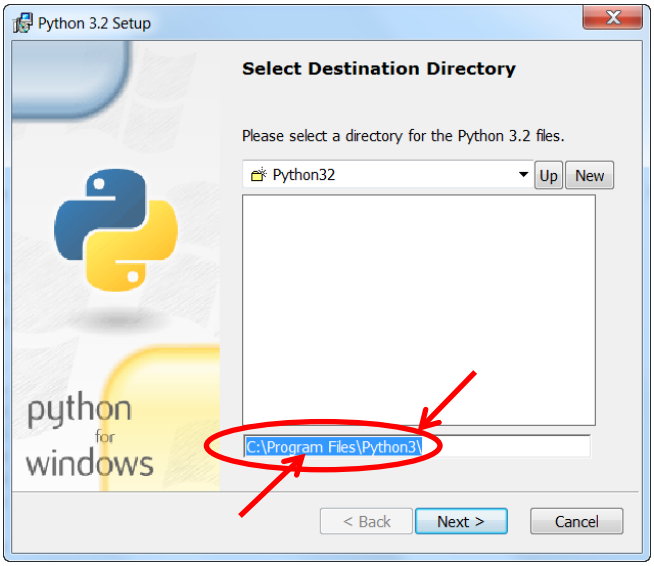
      http://www.rose-hulman.edu/class/csse/binaries/Python/python-3.2.msi

      Important: Change the installation folder from the default *C:\Python32* to

      C:\Program Files\Python3

      *(Note: just **Python3**, NOT Python32.)*

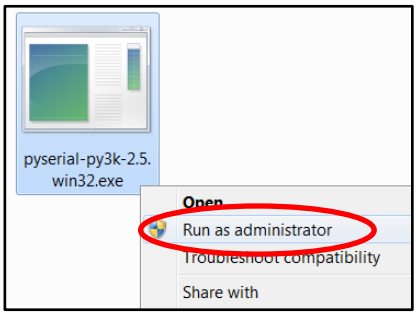
      Other than that (and accepting the license agreement), accept all defaults (including installing for *all* users).

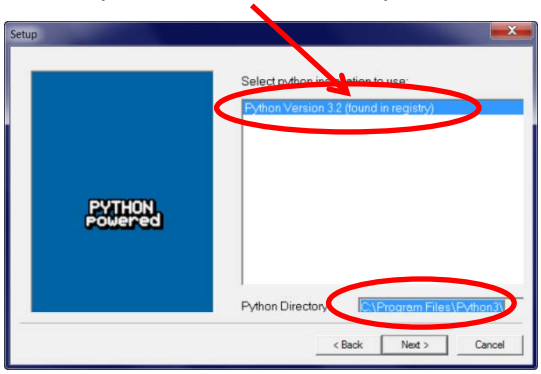


   b. Install **pyserial** by downloading and saving the following file:

http://www.rose-hulman.edu/class/csse/binaries/Python/serialAndWin32/pyserial-py3k-2.5.win32.exe

      Then right-click on it and select "*Run as Administrator*" to install. The installation should notice the Python3 folder created by a previous step.



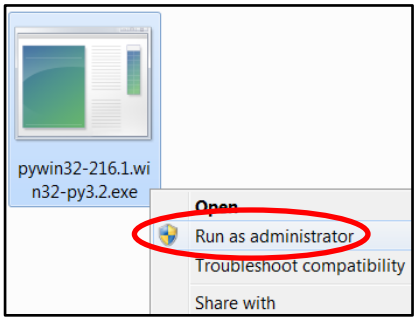


      As with all these installation programs, delete them after running them, if you chose to save them on your computer.

   c. Install **pywin32** by downloading and saving the following file:

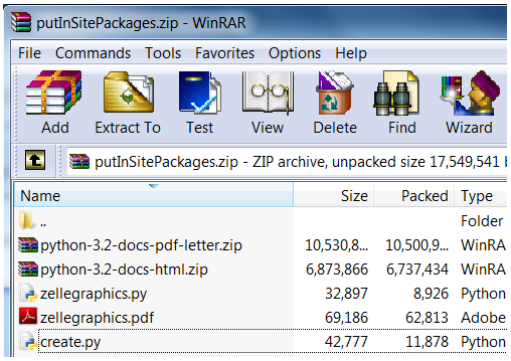
http://www.rose-hulman.edu/class/csse/binaries/Python/serialAndWin32/pywin32-216.1.win32-py3.2.exe

      Then right-click on it and select "*Run as Administrator*" to install. The installation should notice the Python3 folder created by a previous step.



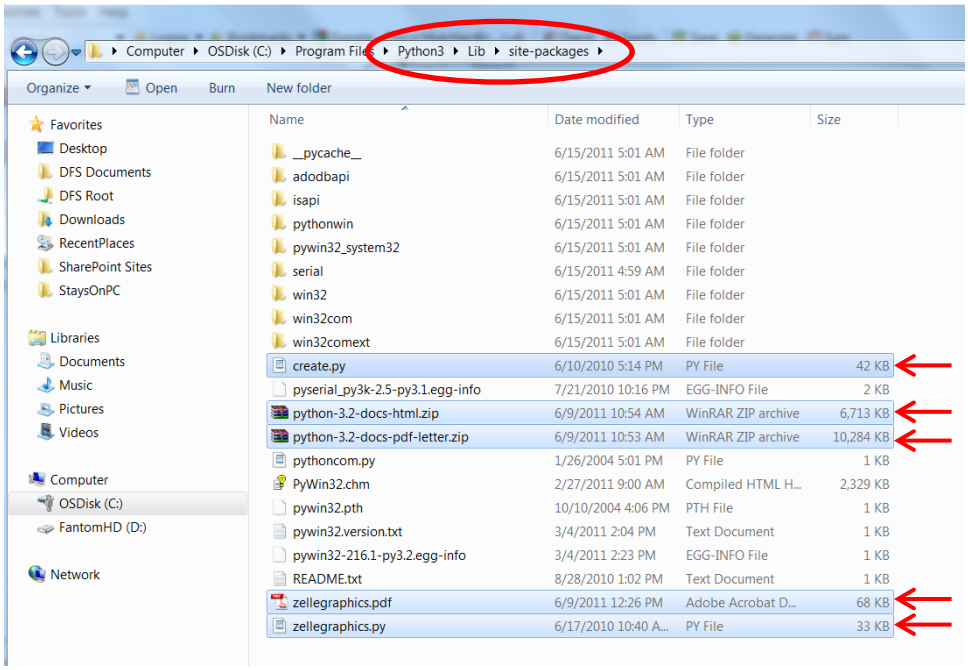
d. Install **zellegraphics** and **pycreate** by unzipping this:

http://www.rose-hulman.edu/class/csse/binaries/Python/putInSitePackages.zip



and placing its 5 files into the folder:

`C:\Program Files\Python3\Lib\site-packages`



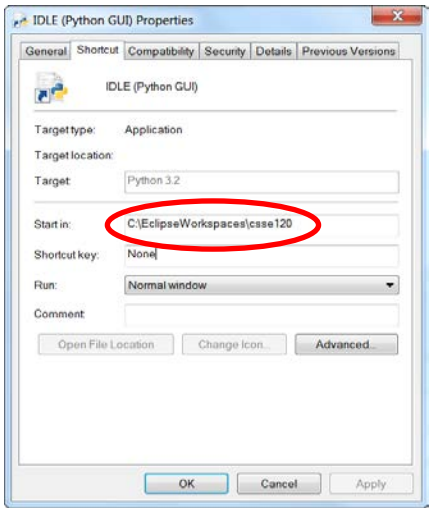
e. Set Python's **IDLE** to the correct start-up folder by:

i. From the Start Menu, expand ***All Programs ~ Python 3.2***.

ii. Right-click on ***IDLE (Python GUI)*** and select ***Properties***.

iii. Set the ***Start in:*** field to

`C:\EclipseWorkspaces\csse120`



4. **MinGW** (for C programming):

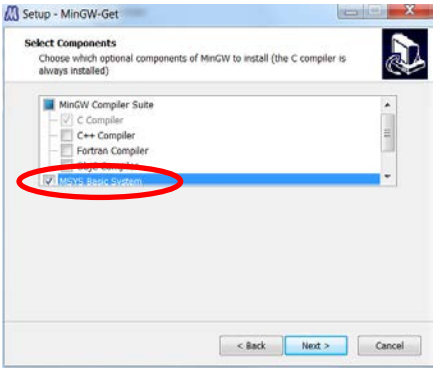
   a. Install **MinGW** by running:

      http://www.rose-hulman.edu/class/csse/binaries/MinGW/mingw-get-inst-20110530.exe

      Your browser may warn that "*This file is not commonly downloaded and may harm your computer*." Run anyway. The installation will download various files from the web.

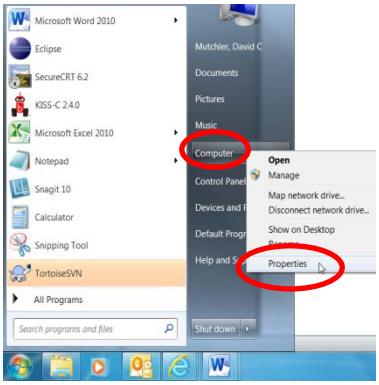
      Important:

      - Accept ***the default installation folder*** of **`C:\MinGW`**. The installation instructions strongly recommend using that folder (and not installing inside **`C:\Program Files`**).
      - At the ***Select Components*** dialog, **check the *MSYS Basic System***, as shown to the right.

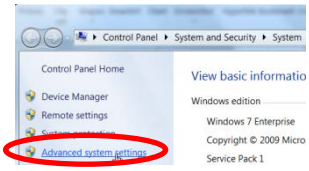


   b. Add the **`C:\MinGW\bin`** folder to the Windows *path* variable. One way to do this is:

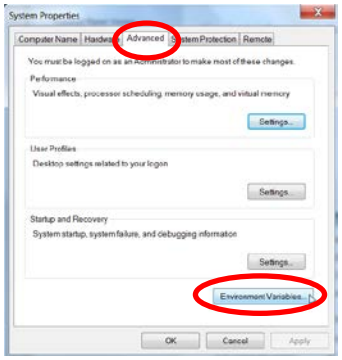
      i. Right-click on ***Computer*** in the Start Menu and select ***Properties***.



      ii. Select ***Advanced Systems Settings***.



      iii. In the *System Properties* dialog that opens, select the ***Advanced*** tab, then press ***Environment Variables*** on that tab.

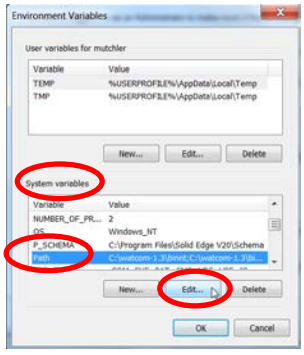


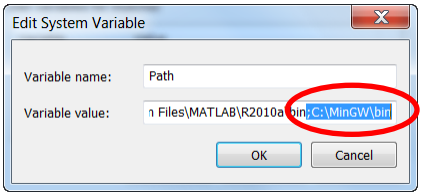
      iv. In the *Environment Variables* dialog that opens, in the ***System variables*** pull-down menu, scroll down and select the ***Path*** variable, then select ***Edit***.

      v. Carefully add the following (including the semicolon) to the end of the *Variable value* field

         `;C:\MinGW\bin`

         (We suggest using the right arrow key to reach the end of the field.) Press *OK* as many times as needed to complete the installation.





5. Install **TortoiseSVN** by running:

http://www.rose-hulman.edu/class/csse/binaries/TortoiseSVN/TortoiseSVN-1.6.16.21511-win32-svn-1.6.17.msi

At the end of its installation, it will ask you to restart the computer; do so.

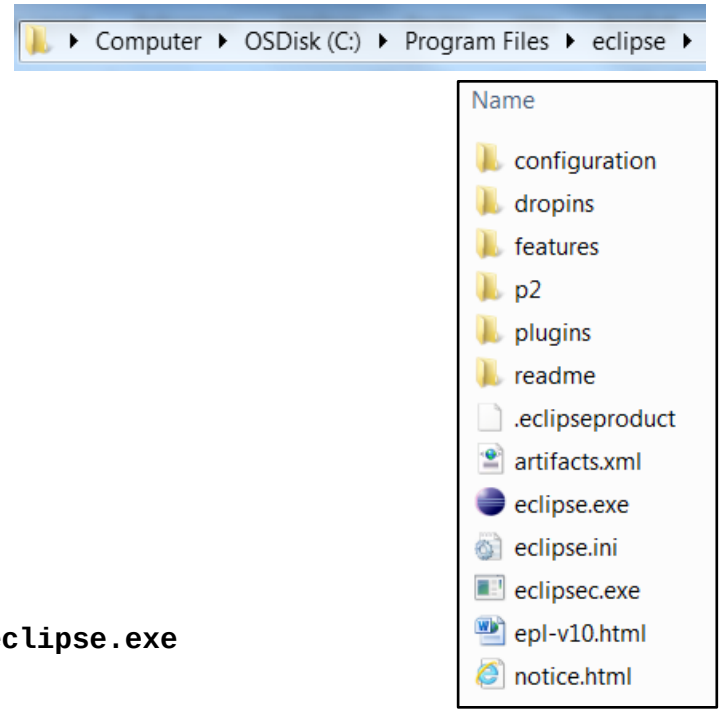
6. **Eclipse**:

   a. **Install Eclipse** by unzipping this:

   http://www.rose-hulman.edu/class/csse/binaries/Eclipse/eclipse-java-indigo-win32.zip

   and placing the unzipped ***eclipse*** folder directly below:

   `C:\Program Files`

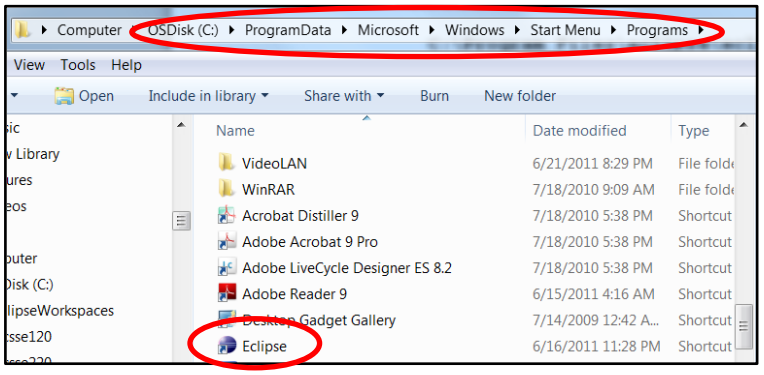


   b. Place a **shortcut** to

   `C:\Program Files\eclipse\eclipse.exe`

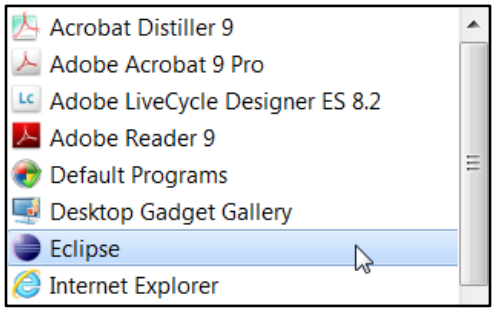
   in the folder:

   `C:\ProgramData\Microsoft\Windows\Start Menu\Programs`



   Name the shortcut ***Eclipse***.

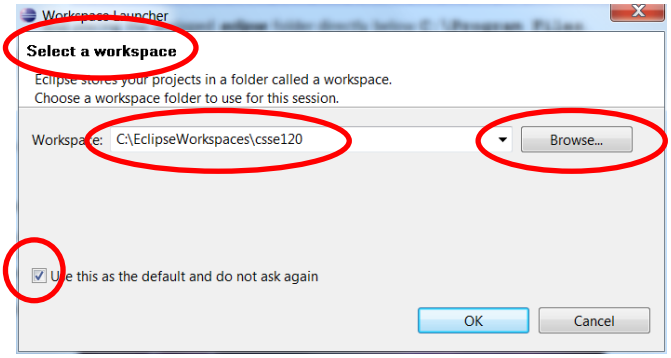
   This will place it within ***All Programs*** of the ***Start Menu***.



7. **When you open Eclipse for the first time, set the workspace by**:

   a. **Open** Eclipse.

   b. You should see the ***Select a workspace*** dialog shown to the right. Do ***NOT*** press *OK* yet. Instead, select ***Browse***.[2]

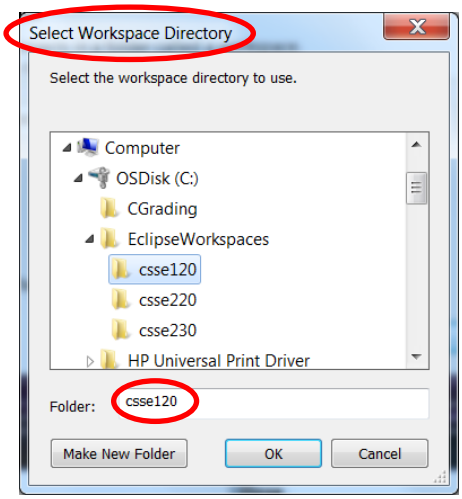


   c. In the ***Select Workspace Directory*** that opens, select the

      `C:\EclipseWorkspaces\csse120`

      folder, as shown to the right.

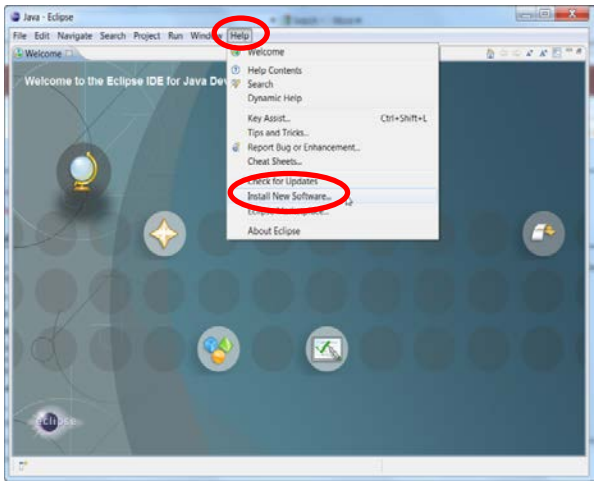
      Press *OK* to bring you back to the ***Select a workspace*** dialog.

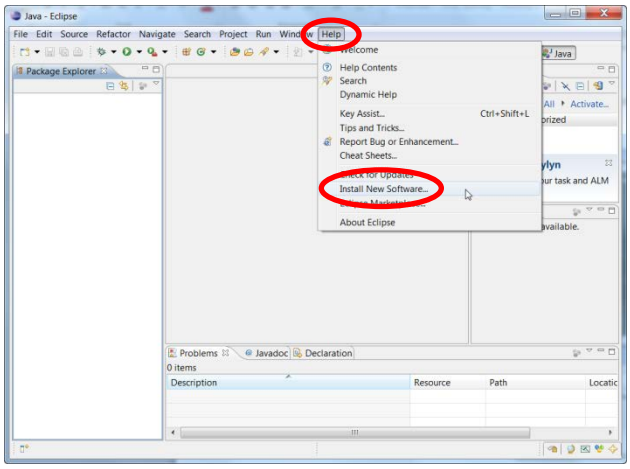


   d. **Check the box** labeled "*Use this as the default and do not ask again*." Then press *OK* to continue into Eclipse.

[2] If you do not see the ***Select a workspace*** dialog the first time that you open Eclipse, or if you accidentally press *OK* before browsing to the correct workspace folder, you may have accidentally created a workspace folder in an unintended place, or even a new *user* folder beneath *C:\Users*. Get help as needed to correct that error.

8. Install **Subclipse** from within Eclipse by:





a. After opening Eclipse the first time, you will see the *Welcome* screen (left screenshot above). Subsequent sessions normally open to the *Workbench* (right screenshot above). In either case, select: ***Help ~ Install New Software***

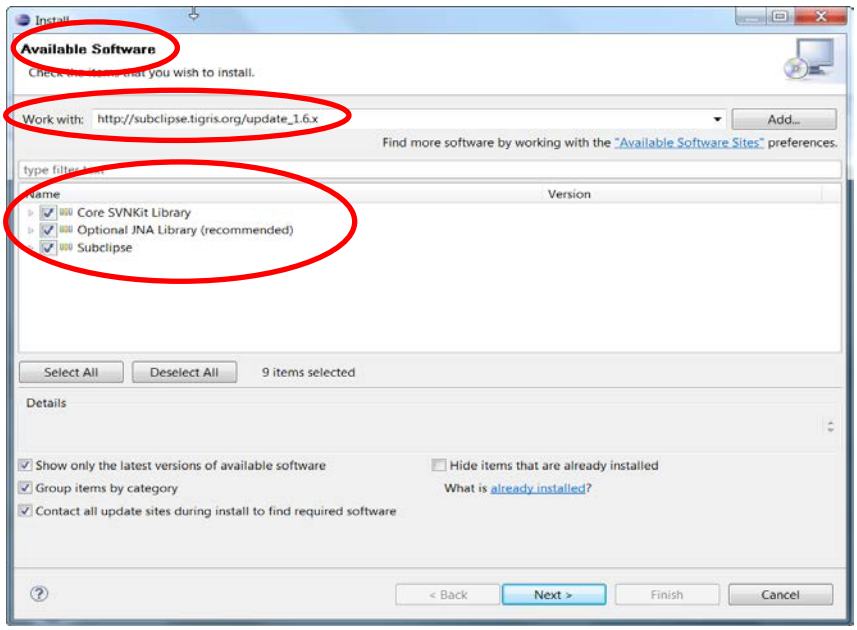
b. In the ***Available Software*** dialog that opens, type

`http://subclipse.tigris.org/update_1.6.x`

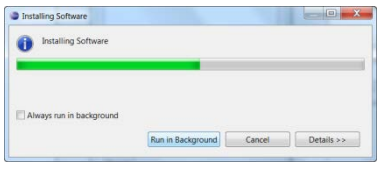
in the ***Work with:*** field and press ***Enter***.

After several seconds, three checkboxes will appear. ***Check all three checkboxes***.

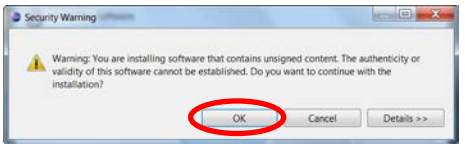
(Including sub-items, this will select 9 items.)



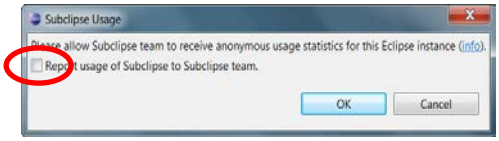
c. Press *Next* and *Next* to continue installing Subclipse. Accept licenses and trust certificates as needed and continue despite any *Security Warning* that you might see. The *Installing Software* dialog may take several minutes and be slow to start.



When asked to restart Eclipse, do so.



When Eclipse restarts, you may see a ***Subclipse Usage*** dialog. If you see this at any point, ***uncheck the box*** and continue.



9. Install **Pydev** from within Eclipse by proceeding similarly to the installation of Subclipse (see the screenshots for that installation, above, as needed):

   a. From the *Welcome* screen or the *Workbench* in Eclipse, select:

      Help ~ Install New Software

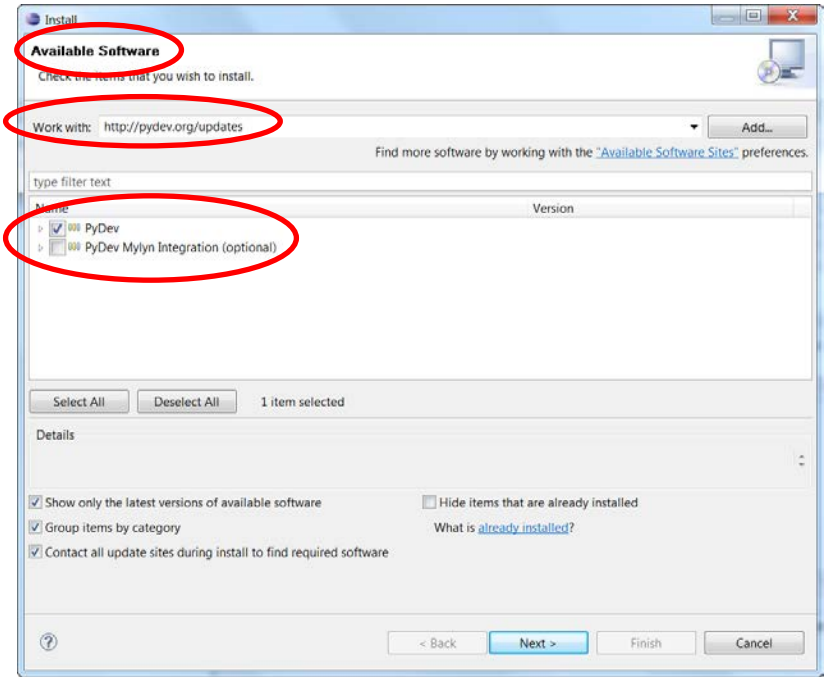
   b. In the ***Available Software*** dialog that opens, type

      `http://pydev.org/updates`

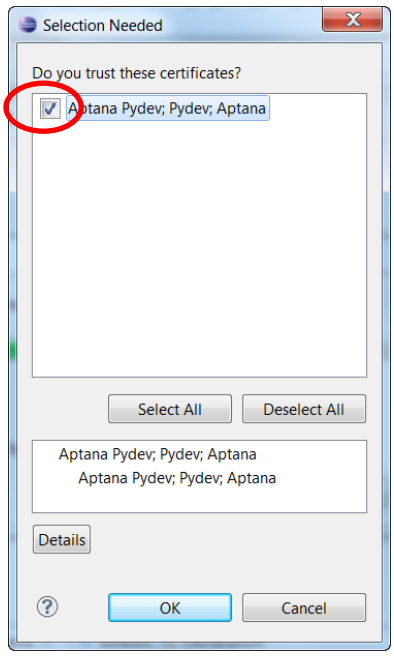
      in the ***Work with:*** field and press ***Enter***.

      After several seconds, two items will appear. Check the ***PyDev*** box.

      (Leave the other box, for *PyDev Mylyn integration*, unchecked.)



   c. Press *Next* and *Next* to continue installing Pydev. Accept licenses and trust certificates as needed and continue despite any Security Warning that you might see. The *Installing Software* dialog may take several minutes and be slow to start.



> ***Caution:*** When you see the ***Selection Needed*** dialog to the right, you must ***manually check the box*** before pressing *OK*.[3]

   When asked to restart Eclipse, do so.

   When Eclipse restarts, you may see a ***Subclipse Usage*** dialog. If you see this at any point, ***uncheck the box*** and continue.

[3] If you press *OK* without checking the box indicating that you trust the Pydev certificates, the installation may continue as if all is well. But it isn't, and you'll have to uninstall and then re-install Pydev.

10. Install **CDT (the C/C++ tools)** from within Eclipse by proceeding similarly to the installation of Subclipse (see the screenshots for that installation, above, as needed):

    a. From the *Welcome* screen or the *Workbench* in Eclipse, select:

       Help ~ Install New Software

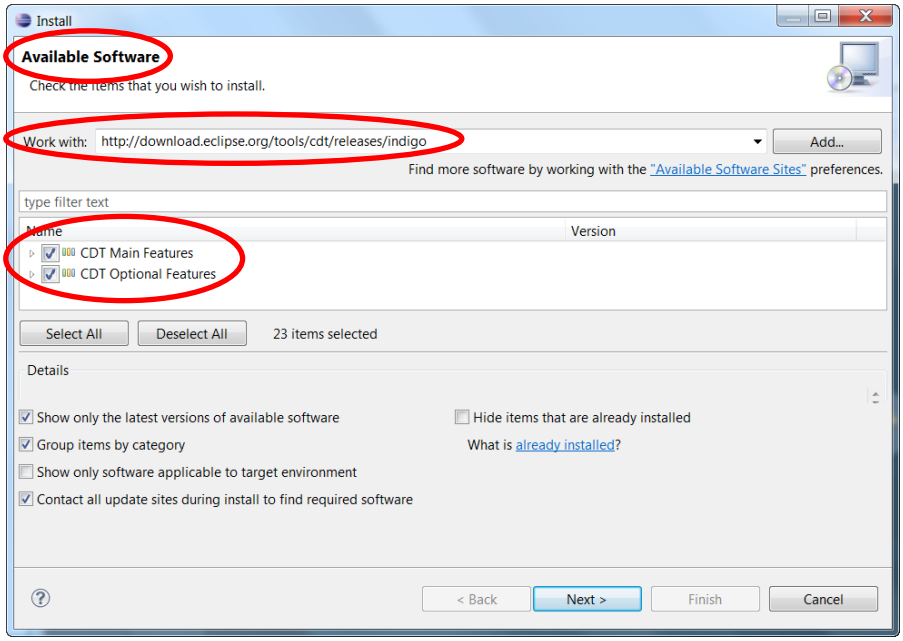
    b. In the ***Available Software*** dialog that opens, type

       `http://download.eclipse.org/tools/cdt/releases/indigo`

       in the *Work with:* field and press ***Enter***.

       After several seconds, two checkboxes will appear. ***Check both checkboxes.***

       (Including sub-items, this will select 23 items.)

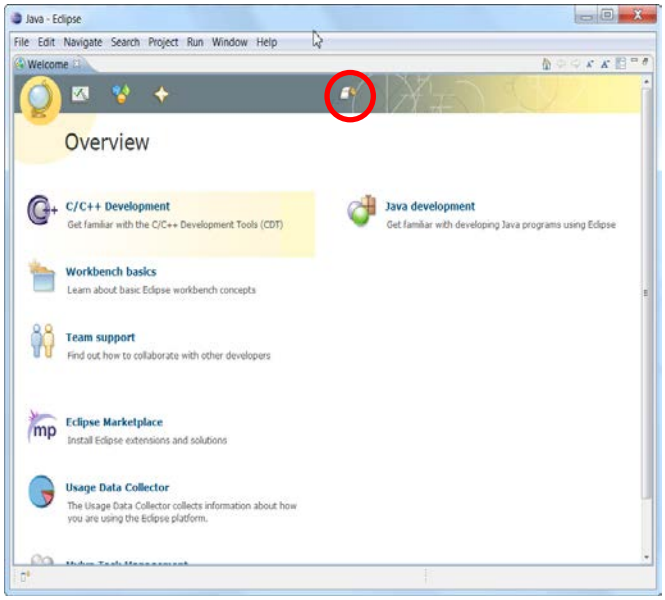


    c. Press *Next* and *Next* to continue installing CDT. Accept licenses and trust certificates as needed and continue despite any Security Warning that you might see. The *Installing Software* dialog may take several minutes and be slow to start.

       When asked to restart Eclipse, do so.

    d. When Eclipse restarts, you may be at a new Welcome screen, as shown to the right. No matter which Welcome screen you see, ***select the circled "ribbon"*** to continue to the Workbench.

       Then ***exit Eclipse***, to be ready for the next steps of these installation instructions.



11. Install **UMLet** and its **Eclipse plugin**, as follows:

    a. Install UMLet by unzipping this:

       http://www.rose-hulman.edu/class/csse/binaries/UMLet/umlet_11_2.zip

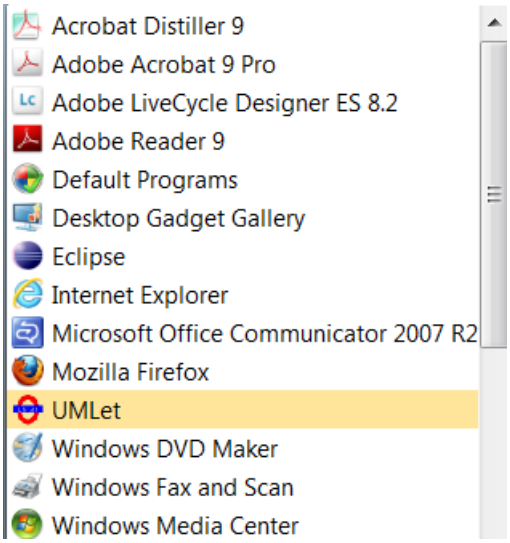
       and placing the unzipped ***umlet*** folder directly below

       `C:\Program Files`

    b. Place a **shortcut** to

       `C:\Program Files\Umlet\Umlet.exe`

       onto ***All Programs*** of the ***Start Menu***. Name the shortcut ***UMLet***.

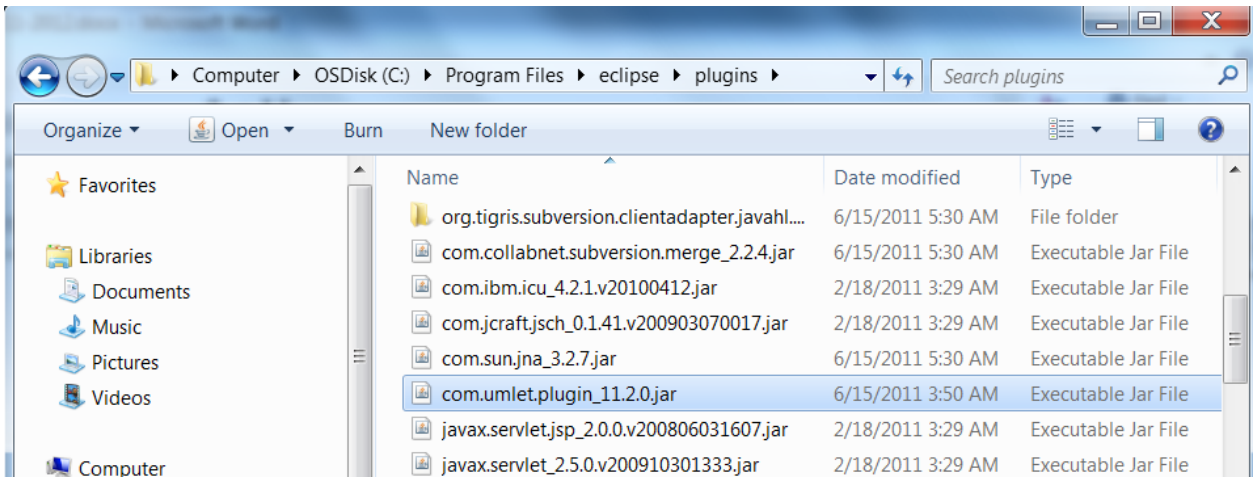


    c. Install the **Eclipse plugin for UMLet** by copying this file:

       http://www.rose-hulman.edu/class/csse/binaries/UMLet/com.umlet.plugin_11.2.0.jar

       into the folder:

       `C:\Program Files\eclipse\plugins`



Caution: Some browsers change the extension of a ***.jar*** file (like this one) to ***.zip***.
If so, manually change the extension back to .jar when you save the file.
Do NOT unzip (extract) the file.

12. Install the **iRobot Create Simulator** and its **Eclipse plugin**, as follows:

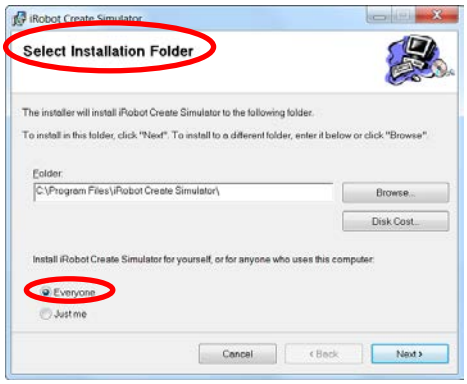
    a. Install the **iRobot Create Simulator** by running:

    http://www.rose-hulman.edu/class/csse/binaries/iRobotCreateSimulator/iRobotCreateSimulatorSetup.msi

    Your browser may warn that "*This file is not commonly downloaded and may harm your computer*." Run anyway.

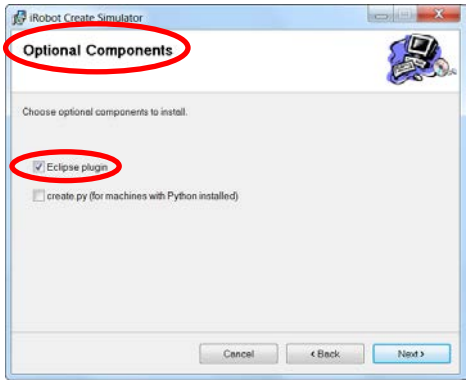
    Important:

    - At the ***Select Installation Folder*** dialog, **check *Everyone***, as shown to the right.



    - At the ***Optional Components*** dialog:
        - o **Check *Eclipse plugin***, but
        - o **leave *create.py* UN-checked**,

      as shown to the right.



    b. The above installation created a folder:

       `C:\Program Files\iRobot Create Simulator`

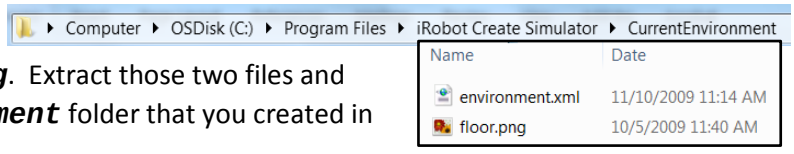
       In that folder, create a new subfolder called:

       `CurrentEnvironment`

       spelled exactly like that (including capitalization, no spaces).

    c. Find the ZIP file:

`C:\Program Files\iRobot Create Simulator\Resources\Environments\Default.zip`



       It has two files zipped inside it: ***`environment.xml`*** and ***`floor.png`***. Extract those two files and put them into the ***`CurrentEnvironment`*** folder that you created in the previous step.

    d. Open ***Eclipse***. Choose:

       Window ~ Preferences ~ iRobot Create Simulator

       Select the ***Browse*** button and browse to the simulator itself, which is:

       `C:\Program Files\iRobot Create Simulator\Roomba Simulator.exe`

       Press ***Open*** to select that file, then *OK* to exit the Preferences dialog.

13. You will do this step ***4 times***, for each of the 4 Eclipse workspaces:

- **C:\EclipseWorkspaces\csse120** **C:\EclipseWorkspaces\csse220**
  C:\EclipseWorkspaces\csse221 **C:\EclipseWorkspaces\csse230**

Each time, use the preferences file ***for that workspace***. The instructions below are for the ***csse120*** workspace.

a. Do ***File ~ Switch Workspace*** to switch to **C:\EclipseWorkspaces\csse120**.

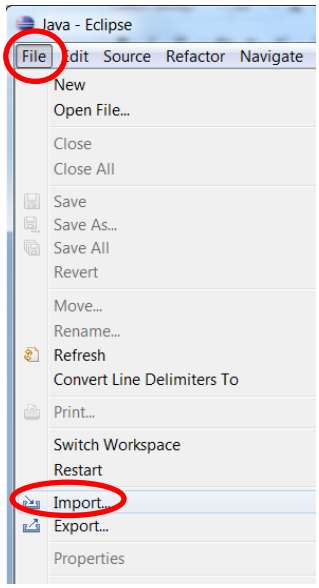
b. Unzip this zipped Eclipse preferences file for ***csse120***:

http://www.rose-hulman.edu/class/csse/binaries/Eclipse/EclipsePreferences-csse120-2011-06-28.zip

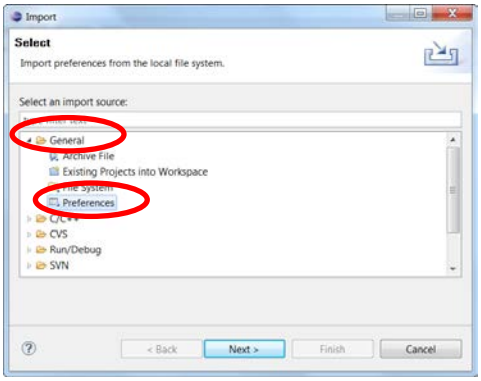
placing its sole unzipped file (*EclipsePreferences-csse120-2011-06.epf*) in any convenient place.

c. In the *Workbench* in Eclipse, select:

File ~ Import

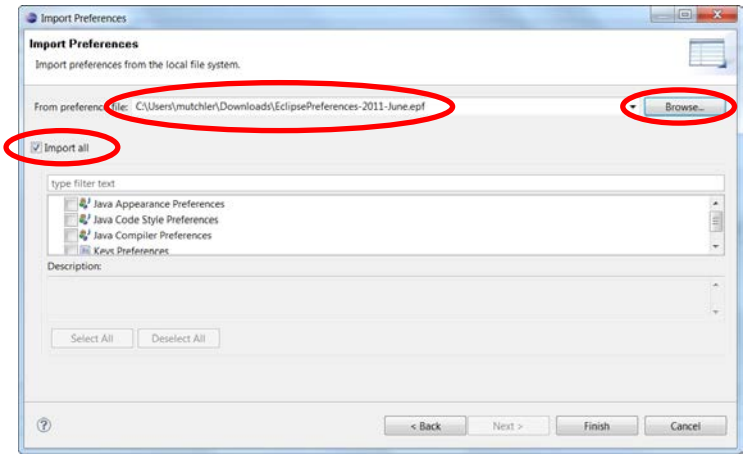


d. In the *Import* dialog that opens, expand ***General***, select ***Preferences*** below that, and press *Next*.



e. In the *Import Preferences* dialog that opens, select **Browse** and select the *EclipsePreferences-csse120-2011-06.epf* file that you unzipped and saved above.

Back in the *Import Preferences* dialog, **check *Import all***, then select *Finish*.



f. Delete the *EclipsePreferences-csse120-2011-06-28.epf* file that you unzipped and saved above.

14. Make sure that there are no spurious Eclipse folders/files left behind. Look especially to be sure that there is no ***.eclipse*** folder in ***C:\Users\test*** (or elsewhere).