Setting up Eclipse IDE Environment with WindowBuilder

JAVA

Ensure Java 8 or later is installed, see
http://www.oracle.com/technetwork/java/javase/downloads/index.html

ECLIPSE

Go to www.eclipse.org and choose the 32 or 64-bit download of "Eclipse for RCP and RAP Developers". Note that whether you choose 32 or 64-bit is determined by your Java install – both MUST be at the same level (32 or 64). This is a zip file – extract the Eclipse folder and to execute Eclipse, merely run the Eclipse.exe within it. There is no further 'install' of Eclipse.

WINDOW BUILDER PLUG-IN

1. Run Eclipse, click on 'Help', then 'Install New Software…'
2. In the screen that you get, paste the following into the 1st box: The Eclipse Project Updates - http://download.eclipse.org/windowbuilder/WB/release/4.6/   (which is the site of where it lives); then click the 'Add' button on the right
3. After it's had a think and a look at the site (showing 'Pending..' as it checks it), the Name panel will have just 1 entry, for Windowbuilder – check that box
4. Work through all the Next… screens till you get to the end
5. When its finished, restart Eclipse, go to the Eclipse 'Help', 'Check Installation Details' – you'll find a whole bunch of SWT & Windowbuilder entries in the list as proof of your install.

DOWNLOAD THE HRE SOURCE 'Starter code'
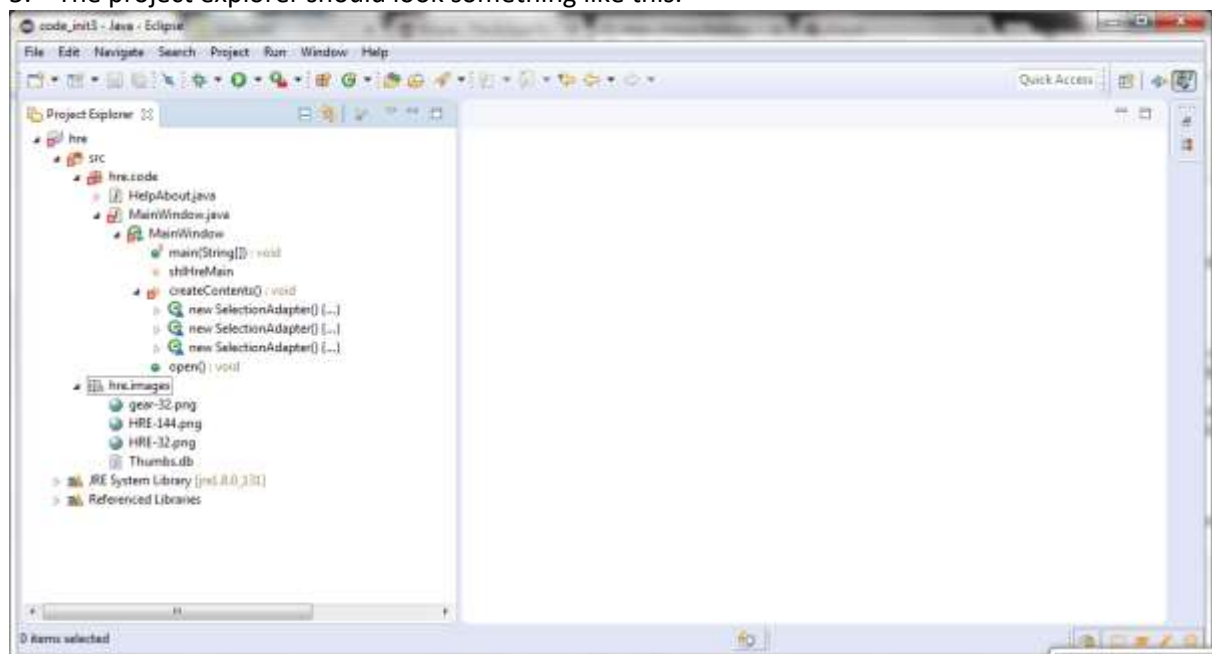
1. Create a folder on your computer called <base_directory>\src\hre with two sub folders called code and images
2. In your web browser:
   a. navigate to the HRE GitHub source code at https://github.com/History-Research-Environment/HRE--History-Research-Environment/tree/master/A%20code%20start/hre
   b. Click on the code directory
   c. For each java file found:
      i. Click on the filename
      ii. Click on 'raw'
      iii. Right click in the window and select 'Save as…' and save the file in the <base_directory>/src/hre/code folder created earlier, selecting making sure the file has the same name as in the GitHub repository.
   d. Click on the images directory
   e. For each .png file found
      i. Click on the filename
      ii. Click 'Download'
      iii. Right click on the image and select 'Save image as…' and save the file in the <base_directory>/src/hre/images folder created earlier.
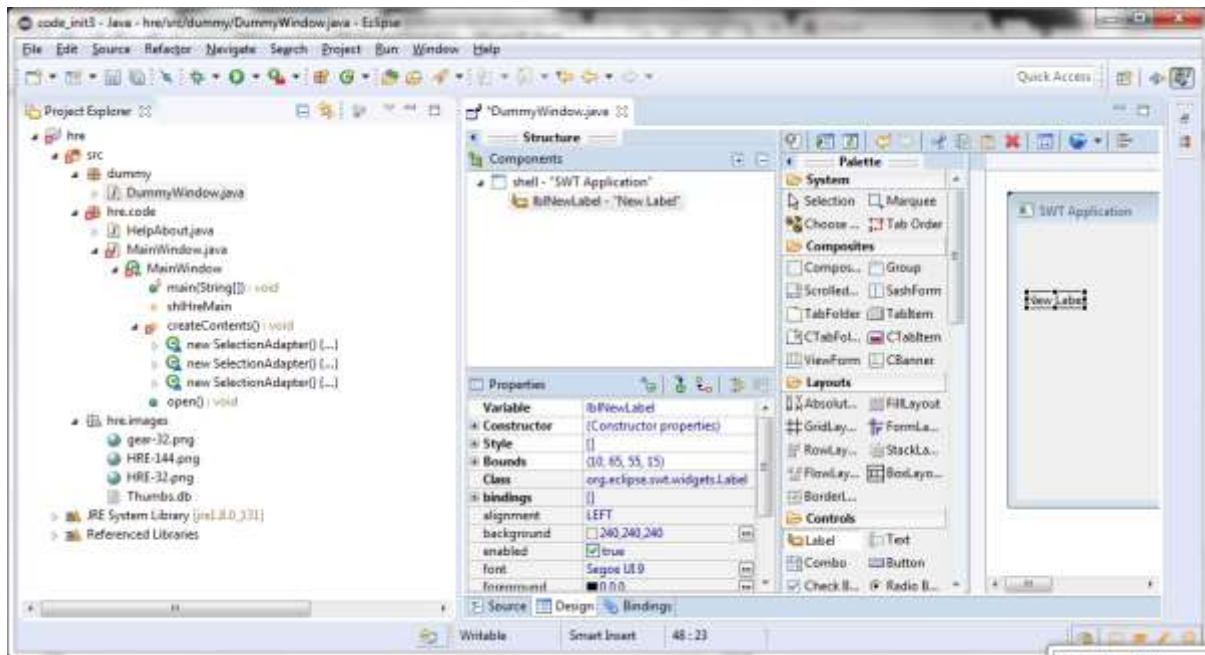
SETUP

1. Open Eclipse (yes, it takes a while). You will be asked for a workspace name, which can be any name you like, for example code_start. The eclipse workspace is where your project definitions will be stored
2. Go to Window -> Preferences -> WindowBuilder -> Swing -> Look and Feel; ensure that the 'Apply chosen LookAndFeel in main{} method' box is checked; also the <system> (default) box is checked.

CREATE PROJECT

1. In Eclipse, select: File->New->Project… -> WindowBuilder -> SWT Designer -> SWT/JFace Java Project
2. Enter a project name, e.g. hre
3. Untick the 'Use default location' box, click on browse and navigate to <base_directory> and select OK
4. Click 'Next', then click 'Finish'
5. The project explorer should look something like this:

6. In order to get the HRE MainWindow.java code compiling successfully, we need to include the org.eclipse.wb.swt package. This can be achieved by creation of a dummy package, as follows:
   a. Right click on the "hre" project name and select New -> Other -> WindowBuilder -> SWT Designer -> SWT -> Application Window
   b. Click 'Next'
   c. For package enter "dummy"
   d. For name enter "DummyWindow"
   e. Click 'Finish'
   f. On the "DummyWindow.java" window click the 'Design' tab at the bottom
   g. In the Palette->Controls section, click 'Label' and then click anywhere in the 'SWT Application' window
   h. The screen should now look something like this:

  i. In the Properties section of DummyWindow.java scroll down to the 'Image' entry and click on the '…' on the right hand side of this line

  j. Select 'Classpath resource' and then navigate to src\hre.images and click on 'HRE-144.png' and finally click 'OK'

  k. Close the "DummyWindow.java" screen (don't save changes)

  l. Right click on the dummy package, click 'Delete' and select 'OK'

  m. It should now be possible to run the HRE code by right clicking on "MainWindow.java" and selecting 'Run as…->Java Application'

  n. Note this makes "MainWindow.java" the main method for the application and the project can now be run by hitting CTRL-F11 or selecting 'Run' from the Eclipse Run menu item.

CREATE RUNNABLE & DISTRIBUTABLE JAVA PROGRAM

You may want to create a 'runnable' copy of the program at some stage (for yourself or others to test), assuming they have Java installed on their PCs. Bear in mind that this is at least a 20Mb file, so not something that can be emailed. To do so:

1. Right-click on the project name and select 'Export'
2. In the list, open the 'Java' entry, and select 'Runnable JAR file, then 'Next'
3. In the 'Launch configuration' window, select the name of the Java code – this is shown in the format 'XXX – YYY' where XXX is the name of the java src file within your project YYY
4. Enter a file name and location under 'Export destination'
5. Select the 2nd choice ('Package required libraries') in the 'Library handling' list
6. Click Finish and wait for the export to complete. This will create a JAR file that you can execute (to test) and/or distribute
7. NB: at step 3, if the project name is NOT in the list, do the following:
  a. Right click on the project's java code file name and select 'Run As'
  b. Click on the first choice ,'Java Application' (this creates a launch configuration)
  c. Retry Step 3 above.