

Practical 7: Programming with Java Swing and Graphics2D (Horstmann Chapter 5). 24 and 26 October 2006

1. You already have a directory `gp1\progs\`; if you haven't make it now.
2. In `gp1\progs\` make a directory `ch05` and copy all Horstmann's code folders from my public folder; you will have:

```
applet  car  color  emptyframe  intersection  rectangles
```

If you have problems speak to me.

3. Make sure you are in folder `emptyframe`.
 - (i) Compile `EmptyFrameViewer.java`;
 - (ii) Execute `EmptyFrameViewer`;
 - (iii) Does the Frame look okay? Compare with what is in the notes.
3. Make sure you are in still folder `emptyframe`.
 - (i) Copy `EmptyFrameViewer.java` to `EmptyFrameViewer2.java`;
 - (ii) Edit `EmptyFrameViewer2.java` so that `FRAME_WIDTH = 500`; and `FRAME_HEIGHT = 500`; and the frame titles is `Square Frame`.
 - (iii) Compile `EmptyFrameViewer2.java`;
 - (iv) Execute `EmptyFrameViewer2`;
 - (v) Does the Frame look okay?
 - (vi) Now edit `EmptyFrameViewer2.java` to create two Frames:

```
JFrame frame1 = new JFrame();
JFrame frame2 = new JFrame();

final int FRAME_WIDTH = 300;
final int FRAME_HEIGHT = 400;

frame1.setSize(FRAME_WIDTH, FRAME_HEIGHT);
frame2.setSize(150, 200);

frame1.setTitle("An Empty Frame 1");
frame2.setTitle("An Empty Frame 2");

frame1.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame2.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame1.setVisible(true);    frame2.setVisible(true);
```

- (vii) Compile and execute. Everything okay?
- (viii) Now change `frame2.setVisible(true)`; to `frame2.setVisible(false)`; . Compile and execute. What is the effect?

From now on the instructions will be less detailed.

4. Edit `EmptyFrameViewer2.java` and delete the first line `import javax.swing.*`; . Compile and see what the compiler says. Explain what is reported.
5. Now connect to `rectangles`. In the book, Horstmann uses two Java files: `RectangleViewer.java` and `RectangleComponent.java`. To make life easier, I have put the two in the same file. However, you should be aware the Java 'programs' may be distributed across a great many files, not just one or two.
8. Compile `RectangleViewer.java` and execute `RectangleViewer`.

9.
 - (i) Copy `RectangleViewer.java` to `RectangleViewer1.java`;
 - (ii) In `RectangleViewer1.java`, change the internal class name to `RectangleViewer1`.
 - (iii) Compile and execute `RectangleViewer1.java` and check that everything is okay.
 - (iv) Implement Self Check 3; two squares instead of two rectangles (see notes).
 - (v) Implement Self Check 4; one rectangle and one square (see notes).