Application Requirements

When starting out as a programmer or moving into a new area, one of the first challenges is to grasp an understanding of how to put the basics together. No matter what platform your code is intended to run on, be it 'Rasberry Pi' or a desktop computer, you need to learn how to use the tools provided.

This course demonstrates how to create a Desktop application with a rich Graphical User Interface (GUI) typical of applications found on Windows, Linux and Macintosh personal computers.

To give the application some purpose I decided to scope out a small application based on an idea I had been mulling over for some time. The idea was based around the game "BattleFleet 1900" which is a pre-dreadnought navel game. The web site providing information about the game can be found on the "The War Times Journal"

To keep the application small, whilst allowing the demonstration of a number of areas, the scope of the application is restricted to general features that can be reused in any desktop application you might want to write.

So let's take a look at some of the things we want our application to support.

The application

The application offers a core set of features and options frequently found in mainstream applications.

- A window frame with title bar, icon at the top left of the frame and on the top right, three frame controls to maximise, minimise and close the frame. The frame should be resizable and allow repositioning on the desktop
- The frame should contain a menu bar to allow the user to exit the application with top level options of: -
    - File
    - Edit
    - View
    - Help
- Under the file option there should be options for: -
    - New
    - Open
    - Save
    - Save As
    - Exit

- Under the Edit option there should options for: -
    - Edit Fleet Name
- Under the View option there should be options for: -
    - Group by Class
    - Group by Type
- Under the Help option there should be the option:
    - About
- The menu bar illustrates how to implement keyboard short cuts and separators between options.
- The application provides a system of logging which provides information about the application which can be used for debugging once the program is in use.
- The application provides information about the software and its creator in the form of a dialog box which appears when the Help/About option is selected from the menu
- The application displays a graphical image with a progress bar to show the user how far through the loading and start up sequence the program has reached. This is typically referred to as a splash screen.
- The application main frame displays a logo for the application in the top left of the frame.
- The Java code is packaged up into an executable application which can then be distributed to other machines running Windows operating systems. The executable application will show the application icon.