**Sarah Wallis  
Data Structures and Algorithms II  
Project 4  
User's Manual**

**Setup and Compilation**  
1. Download and unzip the submission from eLearning on a Linux box in the multi-platform lab.  
2. The submission includes:

* bin-container.cpp
* bin-container.hpp
* bin.cpp
* bin.hpp
* items.txt (Default items for packing algorithms)
* main.cpp
* makefile
* packing-controller.cpp
* packing-controller.hpp
* UMLDiagram.png
* UsersManual.docx (this file)

3. Environment: This program has been tested in the multi-platform lab and will run there.

4. Compiling. This program includes a Makefile. At the command line in Linux, type make. The program produces an executable entitled main.

**Running the program.** Issue the command ‘./main’ No command line arguments are required or checked.

**Output:** All output goes to the console. Output will be similar to this:

-------------------------------------

| Policy | Total Bins Used |

-------------------------------------

|Optimal Solution | 6 bins |

-------------------------------------

|Online Algorithm | |

-------------------------------------

| First Fit | 6 bins |

-------------------------------------

| Next Fit | 7 bins |

-------------------------------------

| Best Fit | 6 bins |

-------------------------------------

|Offline Algorithm| |

-------------------------------------

| First Fit | 6 bins |

-------------------------------------

| Best Fit | 6 bins |

-------------------------------------

Optimal:

b1: 0.410 0.340 0.245

b2: 0.190 0.590

b3: 0.755

b4: 0.330 0.220 0.339

b5: 0.510 0.370

b6: 0.810

Online First Fit:

b1: 0.410 0.340 0.245

b2: 0.190 0.590 0.220

b3: 0.755

b4: 0.330 0.510

b5: 0.339 0.370

b6: 0.810

Online Next Fit:

b1: 0.410 0.340 0.245

b2: 0.190 0.590

b3: 0.755

b4: 0.330 0.220

b5: 0.510 0.339

b6: 0.810

b7: 0.370

Online Best Fit:

b1: 0.410 0.340 0.245

b2: 0.190 0.590 0.220

b3: 0.755

b4: 0.330 0.510

b5: 0.339 0.370

b6: 0.810

Offline First Fit:

b1: 0.810 0.190

b2: 0.755 0.245

b3: 0.590 0.410

b4: 0.510 0.370

b5: 0.340 0.339 0.220

b6: 0.330

Offline Best Fit:

b1: 0.810 0.190

b2: 0.755 0.245

b3: 0.590 0.410

b4: 0.510 0.370

b5: 0.340 0.339 0.220

b6: 0.330