

Trevor Mee
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:
 - BinPacking.hpp
 - BinPacking.cpp
 - main.cpp
 - Makefile
 - proj4 (executable)
 - items.txt
 - UsersManual.pdf (this file)
 - UMLDiagram.png
3. Environment: This program has been tested on the UWF SSH Server and will run there.
4. Compiling. This program includes a `Makefile`. At the command line, navigate into the `src` directory. Once inside the `src` directory, type `make`. The program produces an executable entitled `proj4`.

Running the program: Make sure `items.txt` is located in the project's root directory (above the `src` directory; the same directory as this file). Then, navigate into the `src` directory and issue the command `./proj4` to run the program. No command-line arguments are required or checked. Note that the optimal solution will take multiple minutes to run. Obtaining the optimal solution took approximately 4 minutes on my machine.

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

Policy	Total Bins Used
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Optimal Solution	5
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Online Algorithm	
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First Fit	6
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Next Fit	7
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Best Fit	6
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Offline Algorithm	
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First Fit	5
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Best Fit	5
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Optimal Solution:

b1: 0.81 0.19

b2: 0.755 0.245

b3: 0.5 0.5

b4: 0.41 0.37 0.22

b5: 0.33 0.33 0.33

Online First Fit:

b1: 0.41 0.33 0.245

b2: 0.19 0.5 0.22

b3: 0.755

b4: 0.33 0.5

b5: 0.33 0.37

b6: 0.81

Online Next Fit:

b1: 0.41 0.33 0.245

b2: 0.19 0.5

b3: 0.755

b4: 0.33 0.22

b5: 0.5 0.33

b6: 0.81

b7: 0.37

Online Best Fit:

b1: 0.41 0.33 0.245

b2: 0.19 0.5

b3: 0.755 0.22

b4: 0.33 0.5

b5: 0.33 0.37

b6: 0.81

Offline First Fit:

b1: 0.81 0.19

b2: 0.755 0.245

b3: 0.5 0.5

b4: 0.41 0.37 0.22

b5: 0.33 0.33 0.33

Offline Best Fit:

b1: 0.81 0.19

b2: 0.755 0.245

b3: 0.5 0.5

b4: 0.41 0.37 0.22

b5: 0.33 0.33 0.33