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**References used:**

Computer Systems: A Programmer's Perspective by Randal E. Bryant, David R. O'Hallaron

This reference explained the base how to write the heap code in c. It also explained the way to solve the 4 heaps.

**IDE:** github codespace code

**To start:** everything should be run from the <code> directory.

```
$ cd code
```

**How to run test script for all test:**

```
$ ./testall.sh
```

The script will run all the code against the test program and compare the results.

The results will be in the <diff> folder

**How to run test script for all test:**

```
$ ./hsim: [-hv] [-o <output-path>] [-l {implicit or explicit}] [-f {first or best}] [-i <input file>]
```

-h:	Optional help flag that prints usage info
-v:	Optional verbose flag that displays input info
-o <path of output file>:	Path of output file;
-l <free-list type>:	Free-list type, {implicit or explicit}
-f <fit type>:	Fit type, {first or best}
-i <input file>:	Name of file containing input commands

**Example:** `./hsim -o output -l implicit -f fit -i input/1.in`

I did not get anything besides some of the implicit-list first-fit to pass the test.