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**Bin Packing Test Cases**

**Test Case Description**

We will be building and testing two different bin packing algorithms. Both algorithms respect the rules of bins, both perform in the same time complexity, and both algorithms are expected to fill bins efficiently. As such, most test cases can be shared between both algorithms.

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**Test Case Construction**

1. Input: Nothing  
   Expected Output: 1 bin, 0% full
2. Input: 1 object equal in size to 1 bin  
   Expected Output: 1 bin, 100% full
3. Input: 1 object larger than 1 bin  
   Expected Output: 1 bin, 0% full, and an error
4. Input: n objects of size 1/n bin  
   Examples: 2 objects of size ½ bin; 3 objects of size 1/3 bin  
   Expected Output: 1 bin, 100% full
5. Input: n objects of size greater than 1/n bin  
   Example: 3 objects of 2/3 bin  
   Expected output: n bins, each more than 50% full
6. Input: A number of unequal objects adding up to size 1 bin  
   Example: insert 0.2, 0.3, 0.5  
   Expected output: 1 bin, 100% full