

Blackbox Testing for function calculateUtilizationScore()

**Prototype:** float calculateUtilizationScore(int weight, double vol)

Return 0 = invalid

|        | <u>Description</u>   | <u>Test Data</u>                       | <u>Expected result</u> |
|--------|--|--|------------------------|
| Test1  | Test to see if the weight and volume are valid if the weight is a negative number.               | int weight = -1<br>double vol = 0.5    | Return 0               |
| Test2  | Test to see if the weight and volume are valid if the volume is a negative value                 | int weight = 400<br>double vol = -1    | Return 0               |
| Test3  | Test to see if the weight and volume are valid if the weight is equal to NULL                    | int weight = NULL<br>double vol = 0.25 | Return 0               |
| Test4  | Test to see if the weight and volume are valid if the volume is equal to NULL                    | int weight = 300<br>double vol = NULL  | Return 0               |
| Test5  | Test to see if the weight and volume are valid if the weight is equal to 0                       | int weight = 0<br>double vol = 1.0     | score = 0.02           |
| Test6  | Test to see if the weight and volume are valid if the volume is equal to 0                       | int weight = 300<br>double vol = 0     | score = 0.3            |
| Test7  | Test to see if the weight and volume are valid if both the weight and volume are equal to 0      | int weight = 0<br>double vol = 0       | score = 0              |
| Test8  | Test to see if the weight and volume are valid if both the weight and volume are negative values | int weight = -1<br>double vol = -1     | Return 0               |
| Test9  | Test to see if the weight and volume are valid if both the weight and volume are equal to NULL   | int weight = NULL<br>double vol = NULL | Return 0               |
| Test10 | Test to see if the weight and volume are valid if  | int weight = 300<br>double vol = 40.0  | score = 0.27           |

|        |  |                                       |             |
|--------|--|---------------------------------------|-------------|
|        | the volume is a large value  |                                       |             |
| Test11 | Test to see if the weight and volume are valid if the weight is a large value                    | int weight = 1200<br>double vol = 0.5 | score = 120 |
| Test12 | Test to see if the weight and volume are valid if both the weight and volume are expected values | int weight = 500<br>double vol = 1.0  | score = 25  |