**Client Code**

**Function Prototype: main()**

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| **Key** | **Testing for** | **Test Case** | **Input/Test value** | **Expected Outcome** | **Observed Result** |
| M1 | Successful program execution | Testing if the program can successfully run | testlistSize = 500, tripleSumArrayPtr set to new dynamic array of size 500 | Program executes successfully |  |
| M2 | Program exits because of an inconsistency | Testing if the program will exit because list is too large compared to allowable instructions | testListSize = 256,000 tripleSumArrayPtr not assigned because list is too big per specs | Program outputs error message because list is too large |  |
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**Function Prototype: int TripleSumFunction(int listSize, int\* sumArray)**

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| **Key** | **Testing for** | **Test Case** | **Input/Test value** | **Expected Outcome** | **Observed Result** |
| TSF1 | Triple sum is found | A triple sum has been found in the if statement | listSize = 10, tripleSumArray has 10 random integers within, output a statement when a triple sum is found | Statement is output because a triple sum has been found |  |
| TSF2 | Triple sum is not found | A triple sum has not been found in the if statement | listSize = 10, tripleSumArray has 10 random integers within, output a statement when a triple sum is not found | Statement is output because a triple sum is not found |  |
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**Function Prototype: void CreateRandomNumbers(int\* sumArray, int& listSize)**

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| **Key** | **Testing for** | **Test Case** | **Input/Test value** | **Expected Outcome** | **Observed Result** |
| CRN1 | Creating random numbers | Are random numbers being created between -10000 and 10000 | N/A | Array is populated with randomized values between -10000 and 10000, each number created is output to screen in a small list |  |
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**Function Prototype: time\_t TimeClock(int\* sumArray, int listSize)**

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| **Key** | **Testing for** | **Test Case** | **Input/Test value** | **Expected Outcome** | **Observed Result** |
| TC1 | Timing the run of the TripleSum function | Is the time being correctly recorded for the TripleSum function | list is of size 2000 | Time taken is between 1 and 5 seconds, most likely closer to 1 second |  |
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