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***CMIS 141***

**Test Plan**

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| --- | --- | --- | --- |
| **Test Case #** | **Input** | **Expected Output** | **Output** |
| **1a** | question = “1” | There were 1309 passengers on the Titanic. | There were 1309 passengers on the Titanic.  **PASS** |
| **1b** | question = “12” | n/a | **ERROR! “12” is not one of the case switch choices.**  **FAIL** |
| **2a** | content = new Scanner(new File(args[0]) | The “Titanic.txt” file will be read into the program and the data will be utilized through an array. | The data file is read into the program, and the information it holds will be entered into an array.  **PASS** |
| **2b** | Content = new Scanner(new File(args[1]) | n/a | **ERROR! There is only one command line argument needed, so args[1] will be empty.**  **The program will print a File Not Found error message.**  **FAIL** |
| **3a** | if (row[1].equals("0")) {  counter++;  } | The program should add up and find the total number of dead passengers. | With the rest of the method, the program should display:  Total number of passengers that died on the Titanic: 500  **PASS** |
| **3b** | if (row[7].equals("0")) {  counter++;  } | n/a | **ERROR! Row[7] does not exist and the program will return runtime error: ArrayOutOfBoundsException**  **FAIL** |
| **4a** | Duration.between(this.begin, this.end).getSeconds() | Elapsed time in seconds was: x | Elapsed time in seconds was: x (however long the program runs in seconds)  **PASS** |
| **4b** | Duration.between(this.begin, this.begin).getSeconds() | Elapsed time in seconds was: x | **ERROR! Since there is no duration between the same values, the program will not print the right duration and will always print 0 seconds.**  **FAIL** |

**Test Plan Error Discussion**

1. Test Case 1b failed because a number that is not available in the switch case was entered. One has to enter the numbers ‘1-9’ to get information about the Titanic’s passengers or ‘Q’ to exit the program.
2. Test Case 2b failed because args[1] is empty and holds no values. The program will only print a “File Not Found” error message. In order for the program to function properly, args[0] has to be utilized and defined with the “Titanic.txt” file.
3. Test Case 3b failed because row[7] does not exist. It is outside the boundaries of the array, and will cause runtime errors if used. The array has to be between ‘0 and 5’ in order for the program to work correctly.
4. Test Case 4b failed because the duration of the program wasn’t printed correctly. The instance variables were the same and printed the instance that was taken at the beginning of the program. The program, if left like this, will never print the correct duration of the program and will always print zero seconds.

**Output Screenshot**

