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| **Project Name: Aegis Project 1: Voting System Team#7** | |
| **Test Stage: Unit X System \_** | **Test Date:** 3/27/21 |
| **Test Case ID#:** Helper\_4: IRBallotToVec | **Name(s) of Testers:** Michael/Donald/Lucky/Grant |
| **Test Description:**  Tests that the string input taken for  an IR ballot correctly converts it into an int vector representing an IR ballot. |  |
| **Automated: yes X no \_\_\_** | **Indicate where you are storing the tests (what file) and the name of the method/functions being used.**  Stored in file:  Method names:   * IRBallotToVec(int, string) |
| **Results: Pass \_\_X\_\_\_** Fail **\_\_\_\_\_\_\_\_** |  |
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| **Preconditions for Test:**  The strings and int are set up correct as well as any other variables. | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
|  |  |  |  |  |  |
| 1 | Test that IRBallotToVec when given 0 for num returns an empty vector | int num\_0 = 0;  std::string empty = “”; | 0 | 0 |  |
| 2 | Test that IRBallotToVec returns a vector full of 0s when given an empty string but num > 0. | int num\_5 = 5;  std::string empty = “”; | 5 | 5 |  |
| 3 | Test that given a string containing 1, 2, 3, 4, and 5 votes that it produces the correct int vector. | std::string one\_vote = "1,,,,";  std::string two\_vote = "1,,2,,";  std::string three\_vote = "1,,3,2,";  std::string four\_vote = "1,2,3,,4";  std::string five\_vote = "5,4,3,2,1"; | EXPECT\_THAT(IRBallotToVec(5, one\_vote), testing::ElementsAre(1,0,0,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, two\_vote), testing::ElementsAre(1,3,0,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, three\_vote), testing::ElementsAre(1,4,3,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, four\_vote), testing::ElementsAre(1,2,3,5,0)) = true  EXPECT\_THAT(IRBallotToVec(5, five\_vote), testing::ElementsAre(5,4,3,2,1)) = true | EXPECT\_THAT(IRBallotToVec(5, one\_vote), testing::ElementsAre(1,0,0,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, two\_vote), testing::ElementsAre(1,3,0,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, three\_vote), testing::ElementsAre(1,4,3,0,0)) = true  EXPECT\_THAT(IRBallotToVec(5, four\_vote), testing::ElementsAre(1,2,3,5,0)) = true  EXPECT\_THAT(IRBallotToVec(5, five\_vote), testing::ElementsAre(5,4,3,2,1)) = true |  |

**Post condition(s) for Test:** 

The value returned should be the int vector that represents the IR ballot passed in as a string.