## CS163 Test Plan

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**Develop the test plan:** *For each member function that you plan to write, think about how to test it – what flow of control exists in the member function and how would you test out all conditions:*

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| **Test Cases for Add card** | **Expected Result** | **Verified?**  **(yes/no)** |
| No cards (empty list) | Card should be added to head and next pointer set to null. |  |
| 1 card in list | There should be 2 cards in the list. |  |
| Multiple cards in list | All cards should be in the list. |  |
| Check return value | Should report correct number (0 or 1) based on situation. |  |

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| **Test Cases for Remove card** | **Expected Result** | **Verified?**  **(yes/no)** |
| No cards (empty list) | Exit, and check return value |  |
| None of the inputted numbers match | Should not delete anything. |  |
| Picked a matching number of a card | Delete the corresponding card. |  |
| **Test Cases for setup/push functions** | **Expected Result** | **Verified?**  **(yes/no)** |
| With one card in list | Should only have 1 pointer in array of pointers |  |
| Multiple cards in list | Should have matching number of cards in array of pointers |  |
| No cards in list | Array of pointers should be empty |  |
| Display the stack by calling the stack display function | Cards should be correctly copied. |  |

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| **Test Cases for Display all** | **Expected Result** | **Verified?**  **(yes/no)** |
| Empty list | Display nothing |  |
| 1 card in list | Display 1 card |  |
| Multiple cards in list | Display all cards |  |
| Display after removing a card | Should update without removed card |  |

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| **Test Cases for Remove card** | **Expected Result** | **Verified?**  **(yes/no)** |
| Empty list | Remove nothing. |  |
| 1 card in list | Remove card if match, set to empty list |  |
| Match in list not found | Delete nothing |  |
| Match in list found | Delete match, rest of list should remain intact. |  |

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| **Test Cases for play/pop/peek functions** | **Expected Result** | **Verified?**  **(yes/no)** |
| Try to draw a card | Should update without card, index should appropriately change. |  |
| Try to peek to a next card | Should show question, and index should not change. Next card should STILL be on stack. |  |

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| **Test Cases for write/load functions** | **Expected Result** | **Verified?**  **(yes/no)** |
| Write with empty list | Should empty out the text file. When loaded, it should not register any cards. |  |
| Write in cards | Should output properly to file with correct delimiters, and when loaded it should assign to each card data member correctly. |  |
| Write after “Quit without saving” in menu function | Should not change the file contents even if cards were added/removed during runtime. |  |
| Write after “Save and quit” in menu function | Should write over the contents of the file with the new cards and information. |  |