

COM2108 Functional Programming Assignment 2

Testing

| Function | Test Case | Function Call | Result |
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| pack | General test to ensure output is as intended. | pack | List of all 52 cards. |
| sCard | Input a card that has a successor. | sCard (Ace, Spades) | (Two, Spades) |
| | Apply sCard as a map onto all cards apart from Kings. | map sCard (take 48 pack) | List of all successor cards as intended. |
| | Input a King card which does not have a successor. | sCard (King, Hearts) | Error |
| pCard | Input a card that has a predecessor. | pCard (Eight, Spades) | (Seven, Spades) |
| | Apply pCard as a map onto all cards apart from Aces. | map pCard (take 48 (drop 4 pack)) | List of all predecessor cards as intended. |
| | Input a King card which does not have a predecessor. | pCard (Ace, Hearts) | Error |
| isAce | Input a valid card which is an Ace. | isAce (Ace, Spades) | True |
| | Input a valid card which is not an Ace. | isAce (Five, Diamonds) | False |
| | Input an empty list/erroneous input. | isAce [] | Error |

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| isKing | Input a valid card which is a King. | isKing (King, Hearts) | True |
| | Input a valid card which is not a King. | isKing (Five, Clubs) | False |
| | Input an empty list/erroneous input. | isKing [] | Error |
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| shuffle | Test function with default 64 random seed. | shuffle | List of cards which have been shuffled randomly, as intended. |
| | Test function with several random seeds. | shuffle | List of cards which have been shuffled randomly, as intended in each case. |
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| eODeal | Function called multiple different times with different random seeds (for shuffle). | eODeal | EOBoard returned with correct layout and structure for each case. |
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| toFoundations | Test using an EOBoard which has all the cards in order (structured as EOBoard) i.e. from (Ace, Clubs) to (King, Spades). | toFoundations eODeal (eODeal functions use pack instead of shuffle) | All cards are moved to the foundations in the correct order. Output as intended. |
| | Test using an EOBoard which has been shuffled with 'default seed' 64. | toFoundations eODeal | Some cards moved to foundations. All moves valid, no more moves available. Output as intended. |

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| | Test using several EOBoards which has been shuffled with multiple different seeds. | toFoundations eODeal | Some cards moved to foundations. All moves valid, no more moves available. Output as intended. |
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