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def main():
    clients = load_clients()
    while True:
        s0_menu_items = ('Select client', 'Create client')
        choice = display_menu(s0_menu_items)
        if choice == None:
            print('exit system s0')
            exit()
        elif choice == 1:
            while True:
                choice = select_client(clients)
                if choice == None:
                    print('return to previous menu s00 -> s0')
                    break
                else:
                    active_client = choice
                    while True:
                        s1_menu_items = ('Transactions', 'View Portfolio', 'View Transactions')
                        choice = display_menu(s1_menu_items)
                        if choice == None:
                            print('return to previous menu s1 -> s00')
                            break
                        elif choice == 1:
                            while True:
                                s10_menu_items = ('Buy', 'Sell', 'Contribution', 'Withdrawal')
                                choice = display_menu(s10_menu_items)
                                if choice == None:
                                    print('return to previous menu s10 -> s1')
                                    break
                                elif choice == 1:
                                    # get buy input, wait for return to break out of loop
                                    buy_input(active_client)
                                    break
                                elif choice == 2:
                                    # get sell input, wait for return to break out of loop
                                    sell_input(active_client)
                                    break
                                elif choice == 3:
                                    # get contribution input, wait for return to break out of loop
                                    contribution_input(active_client)
                                    break
                                elif choice == 4:
                                    # get withdrawal input, wait for return to break out of loop
                                    withdrawal_input(active_client)
                                    break
                                else:
                                    print('FATAL ERROR: we should never get here s10 bad input')
                            elif choice == 2:
                                # view portfolio wait for None return to break out of loop
                                view_portfolio(active_client)
                                break
                            elif choice == 3:
                                #view transactions wait for None return to break out of loop
                                view_transactions()
                                break
                            else:
                                print("FATAL ERROR: should never get here s1 bad input")
                        elif choice == 2: # Create client
                            while True:
                                choice = input_client(clients)
                                if choice == None:
                                    print('return to previous menu s01 -> s0')
                                    break
                                else:
                                    new_client = choice
                                    print(f"Client {new_client['fname']} {new_client['lname']} created.s01 -> s0")
                                    break # break out of loop go to s0
                    else: print("FATAL ERROR: should never get here s0 bad input")

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