T1A3 – Terminal app

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Are you a:
(1) Existing user
(2) New user
(3) Exit

Please enter your card number, first name or type 'return' to go back:

Please enter your security pin:

Please choose an option from the following
(1) Deposit
(2) Withdraw
(3) Show Balance
(4) View Transaction History
(5) Calculate interest
(6) Close Account
(7) Exit

Generated card number: 4219657676040836
Please enter your security pin:

Please enter your first name:

Please enter your last name:

Please enter your initial balance:

Please choose an option from the following
(1) Deposit
(2) Withdraw
(3) Show Balance
(4) View Transaction History
(5) Calculate interest
(6) Close Account
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```
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(1) Deposit
(2) Withdraw
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(6) Close Account
(7) Exit
[__]
```

```
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```python
elif user_choice == "3":
    print("Thank you for using our services!")
    print("Have a great day!")
    enter_continue()
    break
```

```python
elif user_choice == "2":
    while True:
        card_number = ""
        while True:
            for _ in range(16):
                digit = str(random.randint(0, 9))
                card_number += digit
            if len(card_number) == 16:
                break
```

```python
while True:
    user_selection_menu()
    user_choice = input("")
    clearterminal.clear_terminal()

    while user_choice not in ["1", "2", "3"]:
        invalid_choice()
        user_selection_menu()
        user_choice = input("")
        clearterminal.clear_terminal()

    if user_choice == "1":
        while True:
            search_input = enter_details()
            clearterminal.clear_terminal()

            if search_input == "return":
                return_user_select()
                break
```

```
Invalid choice. Please select again.
Are you a:
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(3) Exit
```

```python
while True:
    for i in range(1, 8):
        clearterminal.clear_terminal()
        print_menu(current_user)
        option = input()
        clearterminal.clear_terminal()

        try:
            option = int(option)
            if option == 1:
                deposit(current_user)
                enter_continue()
                break
            elif option == 2:
                while True:
                    withdraw(current_user)
                    enter_continue()
                    break
            elif option == 3:
                while True:
                    check_balance(current_user)
                    enter_continue()
                    break
            elif option == 4:
                while True:
                    view_transactions(current_user)
                    enter_continue()
                    break
            elif option == 5:
                principal = float(
                    input("Enter the principal amount: "))
                interest_rate_percent = float(
                    input("Enter the interest rate (in percentage): "))
                interest_rate = interest_rate_percent
                time_period = int(
                    input("Enter the time period (in years): "))
                calculate_interest(
                    principal, interest_rate, time_period)
                enter_continue()
            elif option == 6:
                close_account(current_user)
                current_user = card_info("", "", "", "")
                break
            elif option == 7:
                break
            else:
                raise ValueError()
        except ValueError:
            invalid_input
            enter_continue()
            clearterminal.clear_terminal()
            continue

        if option == 6 or 7:
            print("Thank you for using our services!")
            print("Have a great day!")
            enter_continue()
            break
```

```python
with open("user_data.json", "r") as file:
    user_data = json.load(file)
    user_matches = [holder for holder in user_data if
        holder["card_number"] == search_input or
        holder["first_name"].lower() == search_input.lower() or
        holder["last_name"].lower() == search_input.lower()]

if len(user_matches) > 0:
    current_user_data = user_matches[0]
    current_user = card_info(current_user_data["card_number"],
        current_user_data["pin"],
        current_user_data["first_name"],
        current_user_data["last_name"],
        current_user_data["balance"])

    user_pin = security_pin()
    clearterminal.clear_terminal()

    if not user_pin.isdigit() or current_user.get_cardpin() != int(user_pin):
        if not user_pin.isdigit():
            invalid_pin_input()
        else:
            pin_not_match()

        enter_continue()
        clearterminal.clear_terminal()
        continue

    # Load transaction history from JSON file
    if "transactions" in current_user_data:
        current_user.transactions = current_user_data["transactions"]

    break

else:
    no_matching_user()
    enter_continue()
    clearterminal.clear_terminal()
```

```python
# Create the user_data.json file if it doesn't exist
file_path = "./user_data.json"
if not os.path.isfile(file_path):
    with open(file_path, "w") as file:
        file.write("[]")
```

Challenges during development

- Json
- Initial idea
- Feature bloat

Ethical issues

- Data security
- Informed consent