Bank YK

In the project, I created a bank system in Python.

The system demonstrates a real working bank website with several options-

1. Creating an account

2. Transfer money

3. Opening savings account

4. Taking a loan

5. Booking an appointment with a banker

This project leverages Object-Oriented Programming (OOP) principles along with the powerful data manipulation capabilities of pandas, a Python Data Analysis Library, to efficiently manage and process data, including data stored in Excel and text files.

```
                              Welcome to Bank YK
 1. Create a new account
 2. Log in to your account
 3. Exit
Enter your choice:
```

```
                              Welcome back!
1. Check balance
2. Make a transfer
3. Saving account services
4. Appointment services
5. Loan services
6. Delete account
7. Logout
```

Creating an account

The user is asked to fill in their info.

The system knows to check if there is an existing user for that person, as well as security for the password (the password must contain capital letter, small letter and a "special" letter, e.g. numbers).

```
Please enter your details
Username: Amy
                            Username already exists. Please choose a different username.
```

Transfer money

The user can transfer money to other accounts.

```
                            Transfer page
Enter receiver's username: Rachel
Enter the amount to transfer: 100
Are you sure you want to transfer 100.0 to Rachel? (yes/no): yes
```

Opening savings account

The user can open savings account. They can decide on a savings plan, how much money they want to put in the savings account and to see the due date. In addition, the user can decide to withdraw the money (without interest) and in due date the system is programmed to automatically give the user the money back including interest.

```
                        Saving account
1. Open a savings account
2. View savings account balance
3. Withdraw money from savings account
Choose a saving account option: 1
Do you want to open a savings account? (yes/no): yes
1. 30 days with 1% rate
2. 6 months with 1.5% rate
3. 1 year with 2% rate
4. 2 years with 3% rate
5. 5 years with 5% rate
Choose an option: 1
You have chosen 30 days with an interest rate of 101.0%.
Enter the amount to invest: 50
Confirm opening this account with an investment of $50.0? (yes/no): yes
Savings account opened successfully. Initial savings balance: $50.5, Interest earned: $50.5
```

```
                    Saving account
1. Open a savings account
2. View savings account balance
3. Withdraw money from savings account
Choose a saving account option: 2
Your savings account balance is: $50.5
Due date for savings account is: 2024-05-23
```

Taking a loan

The user can take a loan (only if they have enough money). They can decide on how much money to loan and for how long. The user can pay it back and system is programmed to automatically pay the loan back in due date. If there isn't enough money to pay back the loan, the account will be closed.

```
                              Loan services
1. Take a loan
2. Repay a loan
3. Show loan details
4. Return to main menu
Enter your choice: 1

Enter the loan amount: 50
Enter the loan duration in days: 5

Loan successfully taken. Loan balance: $52.5, Interest earned: $2.5
```

```
                              Loan services
1. Take a loan
2. Repay a loan
3. Show loan details
4. Return to main menu
Enter your choice: 3


                              Loan Details

Loan Balance: $52.5
Due Date: 2024-04-28
```

Booking an appointment with a banker

```
                              Appointment page
Make an appointment

Appointment Options:
1. View open appointments
2. Reserve an appointment
3. Cancel an appointment
4. Return to main menu
Enter your choice: 1
Open Appointments:
     Date      Hour Appointment
2024-05-07 09:30:00    Meeting B
2024-05-07 11:15:00    Meeting C
2024-05-07 15:45:00    Meeting D
2024-05-07 10:45:00    Meeting E
2024-05-07 09:30:00    Meeting F
2024-05-07 12:15:00    Meeting G
2024-05-07 13:45:00    Meeting H
2024-05-07 08:45:00    Meeting I
2024-05-07 14:30:00    Meeting J
2024-05-07 11:15:00    Meeting K
2024-05-07 14:00:00    Meeting L
2024-05-07 10:45:00    Meeting A
```

The user can book an appointment with the bank. They can see available dates and book an appointment. It's also possible to cancel the appointment.