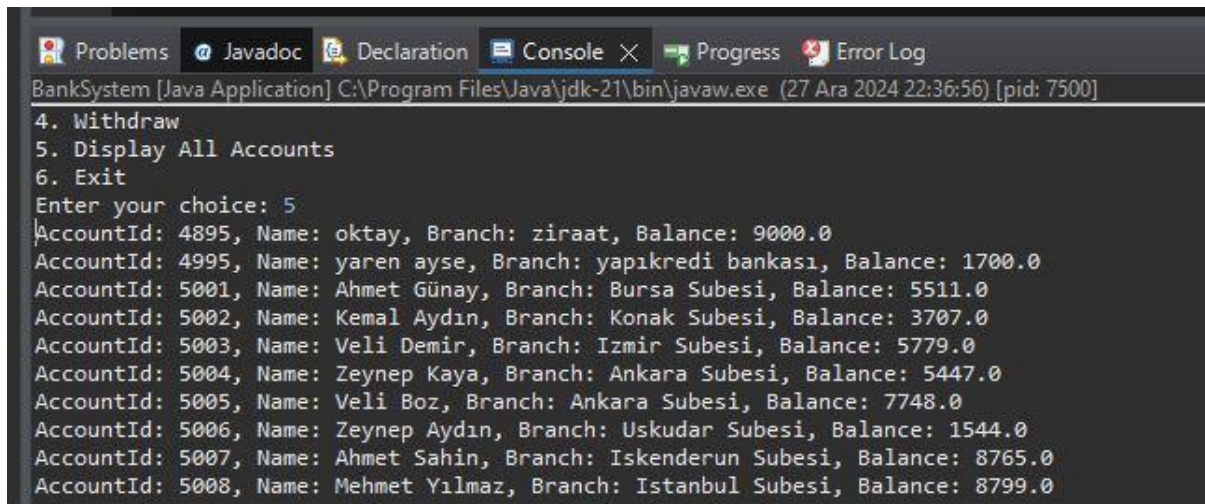


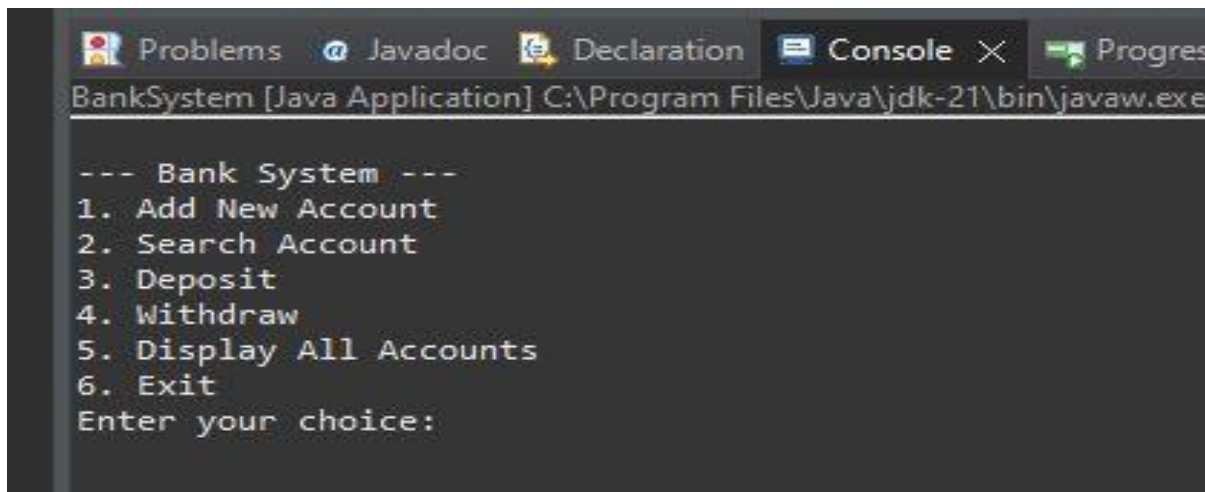
## OKTAY CAN SEVİMGİN – 221805001

**Load initial data (10 pts):** When the program runs for the first time, the records in “inputBst.txt” file must be inserted into a binary search tree in order. You can insert the data directly from the txt file or (if you have a problem while loading the file) you can insert the data as hard code in the code behind.



```
BankSystem [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (27 Ara 2024 22:36:56) [pid: 7500]
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 5
AccountId: 4895, Name: oktay, Branch: ziraat, Balance: 9000.0
AccountId: 4995, Name: yaren ayse, Branch: yapikredi bankasi, Balance: 1700.0
AccountId: 5001, Name: Ahmet Günay, Branch: Bursa Subesi, Balance: 5511.0
AccountId: 5002, Name: Kemal Aydın, Branch: Konak Subesi, Balance: 3707.0
AccountId: 5003, Name: Veli Demir, Branch: Izmir Subesi, Balance: 5779.0
AccountId: 5004, Name: Zeynep Kaya, Branch: Ankara Subesi, Balance: 5447.0
AccountId: 5005, Name: Veli Boz, Branch: Ankara Subesi, Balance: 7748.0
AccountId: 5006, Name: Zeynep Aydın, Branch: Uskudar Subesi, Balance: 1544.0
AccountId: 5007, Name: Ahmet Sahin, Branch: Iskenderun Subesi, Balance: 8765.0
AccountId: 5008, Name: Mehmet Yılmaz, Branch: Istanbul Subesi, Balance: 8799.0
```

**Menu (10 pts):** The program must have a menu that enables the user to select the required operation. Your program must perform the operations between instruction 3 and instruction 7.




```
BankSystem [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice:
```

**Insert a new account (20 pts):** If the user selects this operation, she/he is prompted to enter accountId, customer name surname, branch name, and balance. The record is added to the tree, sorted numerically due to the accountId. If you examine the sample illustration in Figure 2, all records are placed numerically ordered due to the accountId.

```
Problems Javadoc Declaration Console X Progress Error Log
BankSystem [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (27 Ara 2024 22:41:50) [pid:
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 1
Enter AccountId:
5089
Enter Customer Name:
Oktay Can
Enter Branch Name:
Aydin Subesi
Enter Initial Balance:
9600
|
```

```
AccountId: 4895, Name: oktay, Branch: ziraat, Balance: 9000.0
AccountId: 4995, Name: yaren ayse, Branch: yapikredi bankası, Balance: 1700.0
AccountId: 5001, Name: Ahmet Günay, Branch: Bursa Subesi, Balance: 5511.0
AccountId: 5002, Name: Kemal Aydın, Branch: Konak Subesi, Balance: 3707.0
AccountId: 5003, Name: Veli Demir, Branch: Izmir Subesi, Balance: 5779.0
AccountId: 5004, Name: Zeynep Kaya, Branch: Ankara Subesi, Balance: 5447.0
AccountId: 5005, Name: Veli Boz, Branch: Ankara Subesi, Balance: 7748.0
AccountId: 5006, Name: Zeynep Aydın, Branch: Uskudar Subesi, Balance: 1544.0
AccountId: 5007, Name: Ahmet Sahin, Branch: Iskenderun Subesi, Balance: 8765.0
AccountId: 5008, Name: Mehmet Yilmaz, Branch: Istanbul Subesi, Balance: 8799.0
AccountId: 5009, Name: Ali Karaca, Branch: Akyaka Subesi, Balance: 288.0
AccountId: 5010, Name: Selin Aydın, Branch: Haymana Subesi, Balance: 4132.0
AccountId: 5089, Name: Oktay Can, Branch: Aydin Subesi, Balance: 9600.0
```



**Search for an account (10 pts):** If the user selects this operation, she/he is prompted to enter an accountId. If the accountId exists in the tree, then all attributes of the account are listed. If the account is not in the tree, the message “Account not found in the binary search tree” must be printed to the screen.

```
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 2
Enter AccountId to search:
5089
AccountId: 5089, Name: Oktay Can, Branch: Aydin Subesi, Balance: 9600.0
```

```
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 2
Enter AccountId to search:
5090
Account not found in the binary search tree.
```

**Deposit money (15 pts):** If the user selects this operation, she/he is prompted to enter an accountId. If the accountId exists in the tree, the user is prompted to enter the deposit amount. At the end, the balance of that specific account is increased by the deposit value. The accountId, customer name surname, and the updated balance must be printed to the screen.

```
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 3
Enter AccountId to deposit:
5089
Enter Deposit Amount:
600
Updated Account: AccountId: 5089, Name: Oktay Can, Balance: 10200.0
```

**Withdraw money (15 pts):** If the user selects this operation, she/he is prompted to enter an accountId. If the accountId exists in the tree, the user is prompted to enter the withdrawal amount. At the end, the balance of that specific account is decreased by the withdrawal value. The accountId, customer name surname, and the updated balance must be printed to the screen.

```
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 4
Enter AccountId to withdraw:
5089
Enter Withdrawal Amount:
750
Updated Account: AccountId: 5089, Name: Oktay Can, Balance: 9450.0
```

**Print in-order (10 pts):** The accountId, customer name surname, branch name, and balance attributes of all records are printed according to "in-order traversal".

```
--- Bank System ---
1. Add New Account
2. Search Account
3. Deposit
4. Withdraw
5. Display All Accounts
6. Exit
Enter your choice: 5
AccountId: 4895, Name: oktay, Branch: ziraat, Balance: 9000.0
AccountId: 4995, Name: yaren ayse, Branch: yapikredi bankasi, Balance: 1700.0
AccountId: 5001, Name: Ahmet Günay, Branch: Bursa Subesi, Balance: 5511.0
AccountId: 5002, Name: Kemal Aydın, Branch: Konak Subesi, Balance: 3707.0
AccountId: 5003, Name: Veli Demir, Branch: Izmir Subesi, Balance: 5779.0
AccountId: 5004, Name: Zeynep Kaya, Branch: Ankara Subesi, Balance: 5447.0
AccountId: 5005, Name: Veli Boz, Branch: Ankara Subesi, Balance: 7748.0
AccountId: 5006, Name: Zeynep Aydın, Branch: Uskudar Subesi, Balance: 1544.0
AccountId: 5007, Name: Ahmet Sahin, Branch: Iskenderun Subesi, Balance: 8765.0
AccountId: 5008, Name: Mehmet Yilmaz, Branch: Istanbul Subesi, Balance: 8799.0
AccountId: 5009, Name: Ali Karaca, Branch: Akyaka Subesi, Balance: 288.0
AccountId: 5010, Name: Selin Aydın, Branch: Haymana Subesi, Balance: 4132.0
AccountId: 5089, Name: Oktay Can, Branch: Aydın Subesi, Balance: 9450.0
```

**OKTAY CAN SEVİMGİN – 221805001**