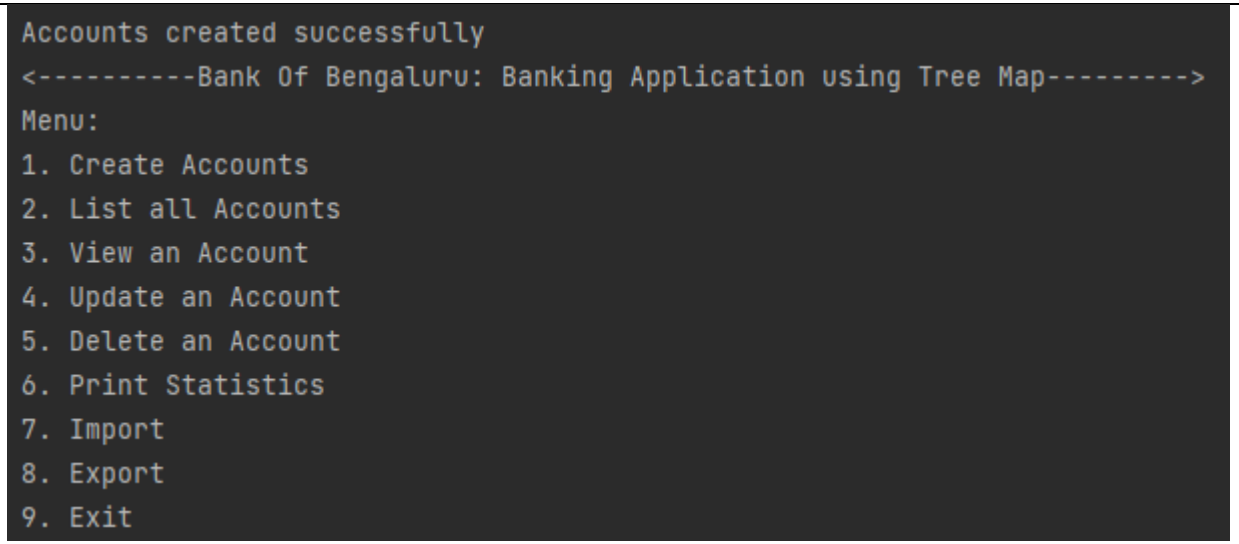
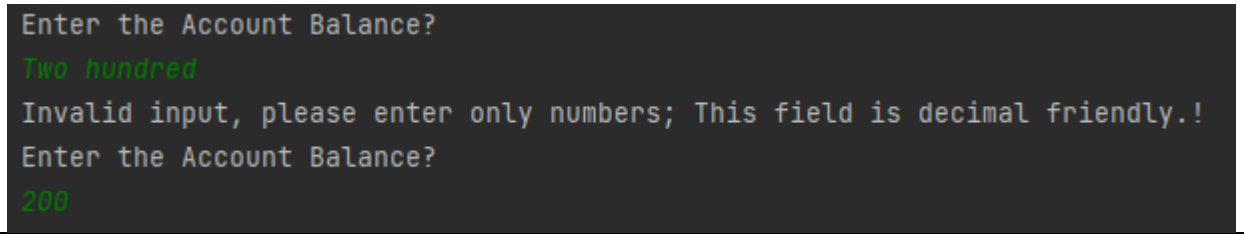
BANK OF BENGALURU: BANKING APPLICATION USING TREE MAP – JDBC

Poornima Chandrasekaran

1. Creating Accounts

# 1	Main Menu	<-----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit
# 2	Entering the number accounts	How many accounts you would like to create? 2 Creating Accounts...

# 3	Entering account details (true/ false/y/n/yes/no are accepted for isActive field)	How many accounts you would like to create? *2* Creating Accounts... Enter the name of the Account Holder? *Padmini C* Enter the Account Type? *Deposit* Enter the Account Balance? *8882* Is the Account Active? *true* Accounts created successfully Enter the name of the Account Holder? *Chandru U* Enter the Account Type? *Loan* Enter the Account Balance? *992* Is the Account Active? *false* Accounts created successfully

# 4	Account creation confirmation, and main menu	
# 5	Error handled while trying to enter characters for Account Id	N/A (as the Id is auto generated by the DB)
# 6	Error handled while trying to enter characters for Balance	

# 7	Error handling for entering other than the defined account type	Enter the Account Type? *Salary* Invalid choice, please choose Deposit,Savings or Loan Enter the Account Type? *oan* Invalid choice, please choose Deposit,Savings or Loan Enter the Account Type? *Loan* Enter the Account Balance?
# 8	Name restriction. Should be 3 characters at least	How many accounts you would like to create? *1* Creating Accounts... Enter the name of the Account Holder? *Le* Enter the Account Type? *Savings* Enter the Account Balance? *9888* Is the Account Active? *true* Please check if Name contains atleast three characters and please have a minimum balance of Rs 100 Account 0 Creation Failed, Please Create Another Account <----------Bank Of Bengaluru: Banking Application using Tree Map--------->

2. Import as we go! - concurrent execution.

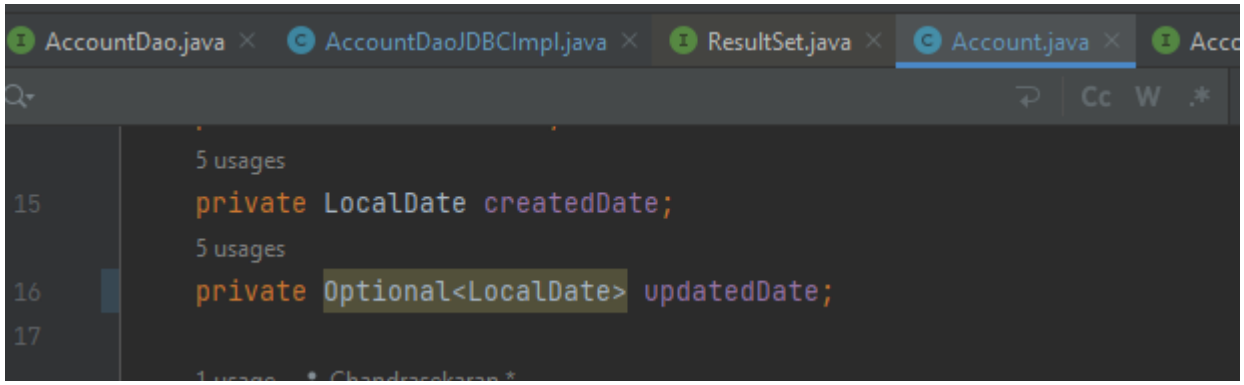
BANK OF BENGALURU: BANKING APPLICATION USING TREE MAP – JDBC

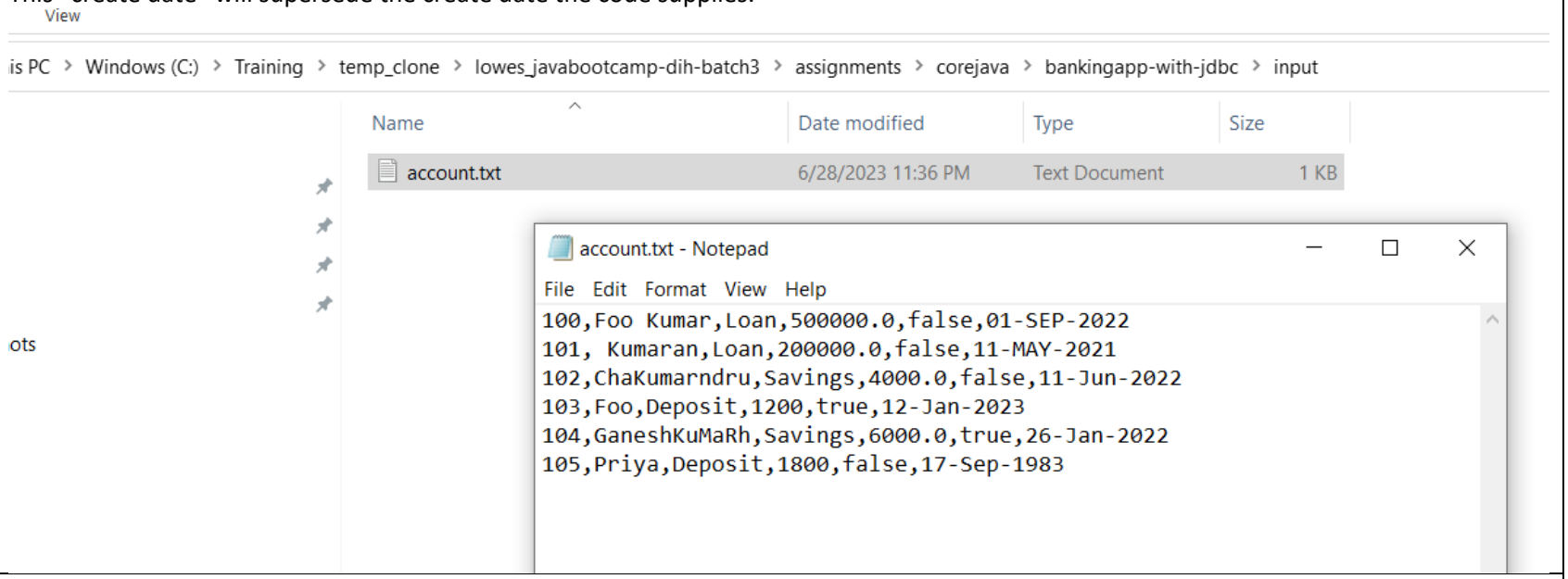
Poornima Chandrasekaran

#1	**Snapshot of existing data**	

```
2
Fetching Accounts...
Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=9, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null}
Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null}
Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null}
Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=2023-06-29}
Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null}
Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null}
Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
<----------Bank Of Bengaluru: Banking Application using Tree Map--------->
```

Create date is supplied by the code for each account type and updated date is the current date when an update takes place. Updated date is an optional field here.

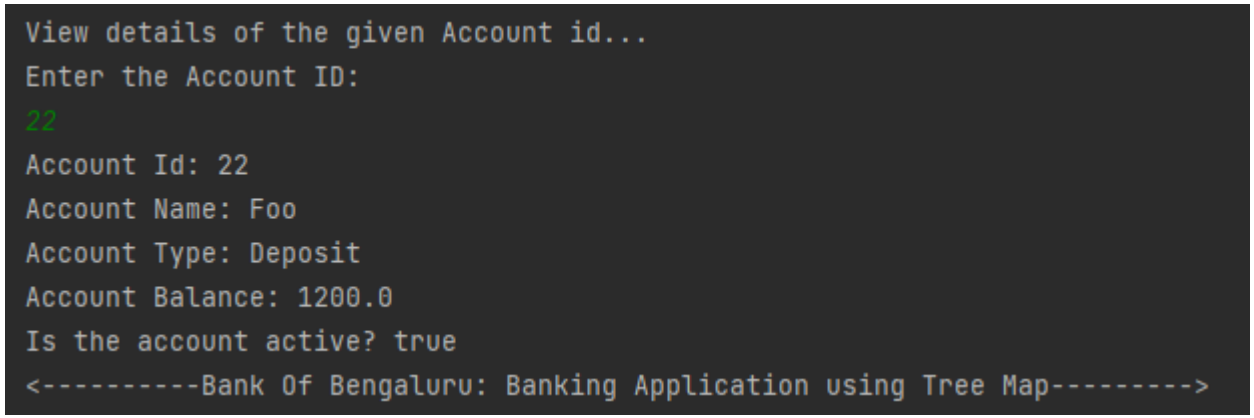


#2	**Snapshot of the file (create date is towards the end)**	This "create date" will supersede the create date the code supplies. 
#3	**Actual file I used, with create date being towards the end**	 account.txt
#4	**File path is relative**	

#5	**Thread started but manual addition permitted**	main Import Started <----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit Thread[pool-1-thread-1,5,main] Waiting to start importing *1* How many accounts you would like to create? *1* Creating Accounts... Enter the name of the Account Holder? *Poo new* Enter the Account Type? *Loan* Enter the Account Balance? *9999* Is the Account Active? *true* Accounts created successfully <----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit pool-1-thread-1 Accounts data imported successfully.	

#6	**Import completion thread confirmation**	`pool-1-thread-1 Accounts data imported successfully.`

#7	**Showing all account**	`Fetching Accounts...`
		`Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}`
		`Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}`
		`Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}`
		`Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}`
		`Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}`
		`Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}`
		`Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}`
		`Account{id=9, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null}`
		`Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null}`
		`Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null}`
		`Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}`
		`Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}`
		`Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=2023-06-29}`
		`Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null}`
		`Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null}`
		`Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}`
		`Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}`
		`Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}`
		`Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null}`
		`Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null}`
		`Account{id=22, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null}`
		`Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}`
		`Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null}`
		`Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}`
		`<----------Bank Of Bengaluru: Banking Application using Tree Map--------->`

#8	**Finding the account Id**	
#9	**Printing the statistics**	

```
***** Printing the Statistics *****
No of accounts with Balance over 1 lac is: 6
-------------------------------------------
***Number of accounts by the Account Type***
{Deposit=5, Savings=5, LOAN=7, Loan=5, DEPOSIT=2}
Account Type: Deposit; Count: 5
Account Type: Savings; Count: 5
Account Type: LOAN; Count: 7
Account Type: Loan; Count: 5
Account Type: DEPOSIT; Count: 2
-------------------------------------------
***Number of accounts by the Account Type: Sorted***
Account Type: DEPOSIT; Count: 2
Account Type: Deposit; Count: 5
Account Type: LOAN; Count: 7
Account Type: Loan; Count: 5
Account Type: Savings; Count: 5
-------------------------------------------
***Average Balance by the Account Type:
{DEPOSIT=458986.0, Deposit=1560.0, LOAN=6055.428571428572, Loan=380000.0, Savings=5200.0}
-------------------------------------------
***Account Ids containing the name: Kumar
1
5
8
9
10
12
19
20
21
23
```


3. Listing all accounts

#1	Listing all the accounts created during the above steps	**Created date is generated by the code; and updated date is current date when the update takes place.** 2 Fetching Accounts... Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=9, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null} Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null} Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=2023-06-29} Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null} Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null} Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null} Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=22, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null} Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} <----------Bank Of Bengaluru: Banking Application using Tree Map--------->

#2 From the Database

training/postgres@Training

Query Editor | Query History

```
1  SELECT * FROM account;
```

Data Output | Explain | Messages | Notifications

	id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	updated_date date
1	1	Foo Kumar	Loan	500000	false	2022-09-01	[null]
2	5	GaneshKuMaRh	Savings	6000	true	2022-01-26	[null]
3	6	Priya	Deposit	1800	false	1983-09-17	[null]
4	2	Saminew	LOAN	9999	true	2023-03-01	2023-06-29
5	3	Poonew	LOAN	999	true	2023-03-01	2023-06-29
6	7	Saminathan	LOAN	19999	true	2023-03-01	2023-06-29
7	8	Foo Kumar	Loan	500000	false	2022-09-01	[null]
8	9	Kumaran	Loan	200000	false	2021-05-11	[null]
9	10	ChaKumarndru	Savings	4000	false	2022-06-11	[null]
10	11	Foo	Deposit	1200	true	2023-01-12	[null]
11	12	GaneshKuMaRh	Savings	6000	true	2022-01-26	[null]
12	13	Priya	Deposit	1800	false	1983-09-17	[null]
13	14	Saminathan New1	DEPOSIT	909090	true	2023-01-01	2023-06-29
14	15	Padmini C	DEPOSIT	8882	true	2023-01-01	[null]
15	16	Chandru U	LOAN	992	false	2023-03-01	[null]
16	17	Pratheema	LOAN	200	true	2023-03-01	[null]
17	18	Karthik	LOAN	200	true	2023-03-01	[null]
18	19	Foo Kumar	Loan	500000	false	2022-09-01	[null]
19	20	Kumaran	Loan	200000	false	2021-05-11	[null]
20	21	ChaKumarndru	Savings	4000	false	2022-06-11	[null]
21	22	Foo	Deposit	1200	true	2023-01-12	[null]
22	23	GaneshKuMaRh	Savings	6000	true	2022-01-26	[null]
23	24	Poo new	LOAN	9999	true	2023-03-01	[null]
24	25	Priya	Deposit	1800	false	1983-09-17	[null]

#3	Adding the new one	1 How many accounts you would like to create? 1 Creating Accounts... Enter the name of the Account Holder? DB Entry New Enter the Account Type? Loan Enter the Account Balance? 1111 Is the Account Active? true Accounts created successfully <----------Bank Of Bengaluru: Banking Application using Tree Map---------> 3 View details of the given Account id... Enter the Account ID: 26 Account Id: 26 Account Name: DB Entry New Account Type: LOAN Account Balance: 1111.0 Is the account active? true <----------Bank Of Bengaluru: Banking Application using Tree Map--------->

#4	Seeing it in the Database	training/postgres@Training Query Editor Query History `SELECT * FROM account where Id = 26;` Data Output Explain Messages Notifications

	id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	updated_date date
1	26	DB Entry New	LOAN	1111	true	2023-03-01	[null]

4. Viewing an account

#1	Entering the proper Account ID	3 View details of the given Account id... Enter the Account ID: 26 Account Id: 26 Account Name: DB Entry New Account Type: LOAN Account Balance: 1111.0 Is the account active? true <----------Bank Of Bengaluru: Banking Application using Tree Map--------->

5. Updating an account

BANK OF BENGALURU: BANKING APPLICATION USING TREE MAP – JDBC

Poornima Chandrasekaran

# 1	Updating on a valid account Id	4 Update an Account for a given Account id... Enter the Account ID: 22 Enter the name of the Account Holder? New DB entry Enter the Account Type? Loan Enter the Account Balance? 8888 Is the Account Active? true Account Updated <----------Bank Of Bengaluru: Banking Application using Tree Map--------->
# 2	Viewing all the accounts (including the updated one)	

		2 Fetching Accounts... Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=9, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null} Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null} Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=202 Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null} Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null} Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null} Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=26, name='DB Entry New', type='LOAN', balance=1111.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=22, name='New DB entry', type='LOAN', balance=8888.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} <----------Bank Of Bengaluru: Banking Application using Tree Map--------->
# 3	Trying to update an invalid account	

	Id; and getting error	3 View details of the given Account id... Enter the Account ID: 777 Account not found! <----------Bank Of Bengaluru: Banking Application using Tree Map--------->
# 4	You can see the date is changed for the update field	Account{id=22, name='New DB entry', type='LOAN', balance=8888.0, active=true, created on=01-Mar-2023, updated on=202

#		
5	Updating the entry before	

training/postgres@Training

Query Editor | Query History

```
1  SELECT * FROM account
```

Data Output | Explain | Messages | Notifications

	id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	updated_date date
6	7	Saminathan	LOAN	19999	true	2023-03-01	2023-06-29
7	8	Foo Kumar	Loan	500000	false	2022-09-01	[null]
8	10	ChaKumarndru	Savings	4000	false	2022-06-11	[null]
9	11	Foo	Deposit	1200	true	2023-01-12	[null]
10	12	GaneshKuMaRh	Savings	6000	true	2022-01-26	[null]
11	13	Priya	Deposit	1800	false	1983-09-17	[null]
12	14	Saminathan New1	DEPOSIT	909090	true	2023-01-01	2023-06-29
13	15	Padmini C	DEPOSIT	8882	true	2023-01-01	[null]
14	16	Chandru U	LOAN	992	false	2023-03-01	[null]
15	17	Pratheema	LOAN	200	true	2023-03-01	[null]
16	18	Karthik	LOAN	200	true	2023-03-01	[null]
17	19	Foo Kumar	Loan	500000	false	2022-09-01	[null]
18	20	Kumaran	Loan	200000	false	2021-05-11	[null]
19	21	ChaKumarndru	Savings	4000	false	2022-06-11	[null]
20	23	GaneshKuMaRh	Savings	6000	true	2022-01-26	[null]
21	24	Poo new	LOAN	9999	true	2023-03-01	[null]
22	25	Priya	Deposit	1800	false	1983-09-17	[null]
23	26	DB Entry New	LOAN	1111	true	2023-03-01	[null]
24	22	New DB entry	LOAN	8888	true	2023-03-01	2023-06-29

```
Fetching Accounts...
Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null}
Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null}
Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=202
Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null}
Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null}
Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null}
Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null}
Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=26, name='DB Entry New', type='LOAN', balance=1111.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=22, name='New DB entry', type='LOAN', balance=8888.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
```

#		
6	Updating the entry after	

```
Update an Account for a given Account id...
Enter the Account ID:
22
Enter the name of the Account Holder?
New DB entry updated
Enter the Account Type?
Deposit
Enter the Account Balance?
9999
Is the Account Active?
true
Account Updated
<----------Bank Of Bengaluru: Banking Application using Tree Map--------->
```

```
Account{id=22, name='New DB entry updated', type='DEPOSIT', balance=9999.0, active=true, created on=01-Jan-2023, updated on=20
<----------Bank Of Bengaluru: Banking Application using Tree Map--------->
```

```
1   SELECT * FROM account  where id = 22
```

Data Output | Explain | Messages | Notifications

	id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	updated_date date
1	22	New DB entry updated	DEPOSIT	9999	true	2023-01-01	2023-06-30

6. Deleting an account

# 1	Valid account deletion, and confirmation; Viewing the account to ensure it is gone	<----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit *5* Delete an Account for given Account ID... Enter the Account ID to be deleted: *9* Account Deleted <----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit

```
2
Fetching Accounts...
Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29}
Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29
Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null
Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null}
Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=
Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null}
Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null}
Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null}
Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null}
Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null
Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null}
Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null}
Account{id=26, name='DB Entry New', type='LOAN', balance=1111.0, active=true, created on=01-Mar-2023, updated on=null}
Account{id=22, name='New DB entry', type='LOAN', balance=8888.0, active=true, created on=01-Mar-2023, updated on=2023-06-
<----------Bank Of Bengaluru: Banking Application using Tree Map--------->
```

#		
2	Deleting an account before	

```
3
View details of the given Account id...
Enter the Account ID:
22
Account Id: 22
Account Name: New DB entry updated
Account Type: DEPOSIT
Account Balance: 9999.0
Is the account active? true
<----------Bank Of Bengaluru: Banking Application using Tree Map--------->
Menu:
```

```
1   SELECT * FROM account  where id = 22
```

Data Output | Explain | Messages | Notifications

	id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	updated_d date
1	22	New DB entry updated	DEPOSIT	9999	true	2023-01-01	2023-06-3

#		
3	Deleting an account after	5 Delete an Account for given Account ID... Enter the Account ID to be deleted: 22 Account Deleted

Query Editor | Query History

```
1  SELECT * FROM account  where id = 22
```

Data Output | Explain | Messages | Notifications

id [PK] bigint	name text	type text	balance double precision	active boolean	created_date date	update date

7. Printing the statistics

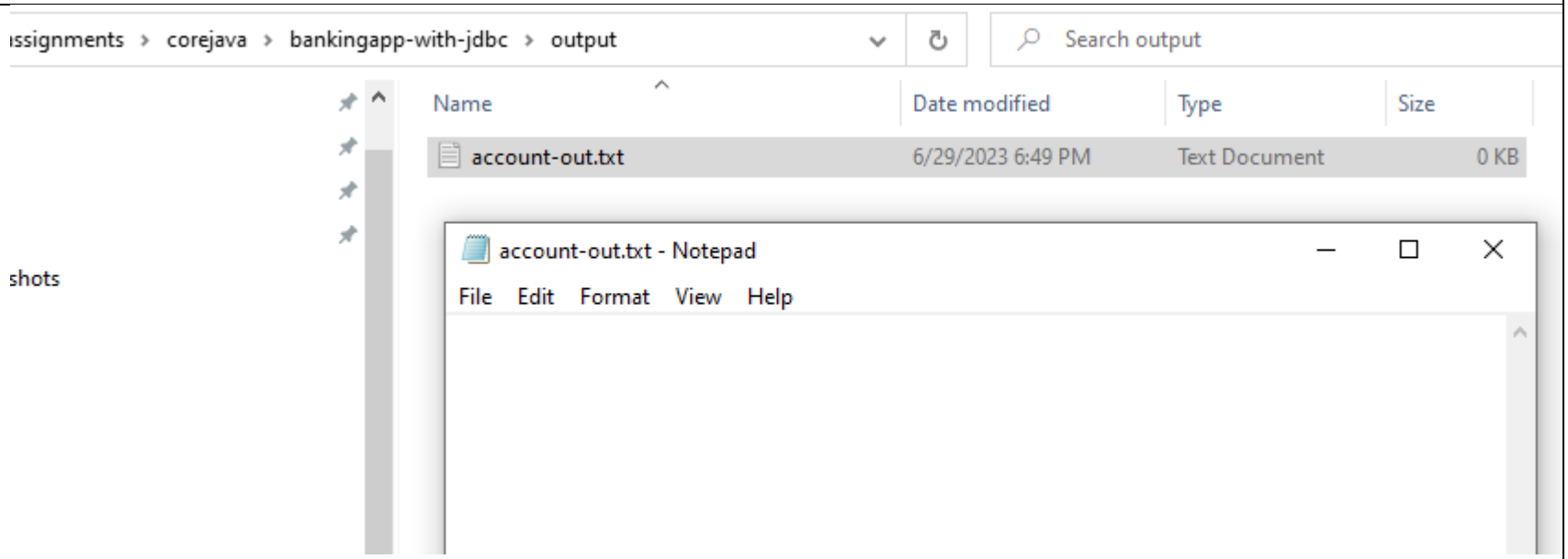
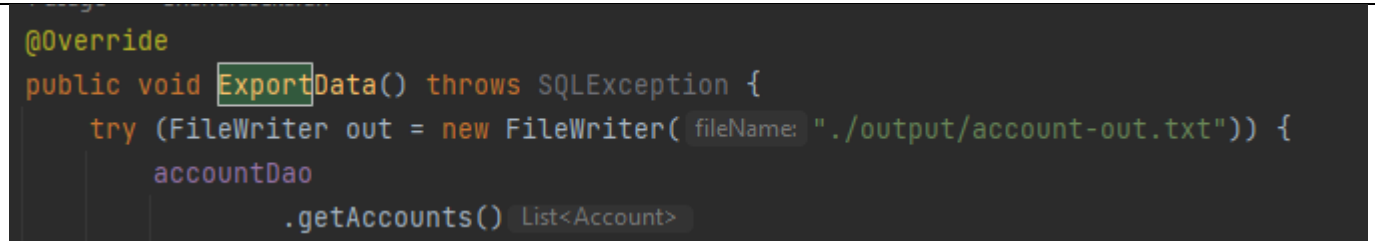
#1	**Printing the data statistics**	***** Printing the Statistics ***** No of accounts with Balance over 1 lac is: 5 ---------- ***Number of accounts by the Account Type*** {Deposit=4, Savings=5, LOAN=9, Loan=4, DEPOSIT=2} Account Type: Deposit; Count: 4 Account Type: Savings; Count: 5 Account Type: LOAN; Count: 9 Account Type: Loan; Count: 4 Account Type: DEPOSIT; Count: 2 ---------- ***Number of accounts by the Account Type: Sorted*** Account Type: DEPOSIT; Count: 2 Account Type: Deposit; Count: 4 Account Type: LOAN; Count: 9 Account Type: Loan; Count: 4 Account Type: Savings; Count: 5 ---------- ***Average Balance by the Account Type: {DEPOSIT=458986.0, Deposit=1650.0, LOAN=5820.777777777777, Loan=425000.0, Savings=5200.0} ---------- ***Account Ids containing the name: Kumar 1 5 8 10 12 19 20 21 23

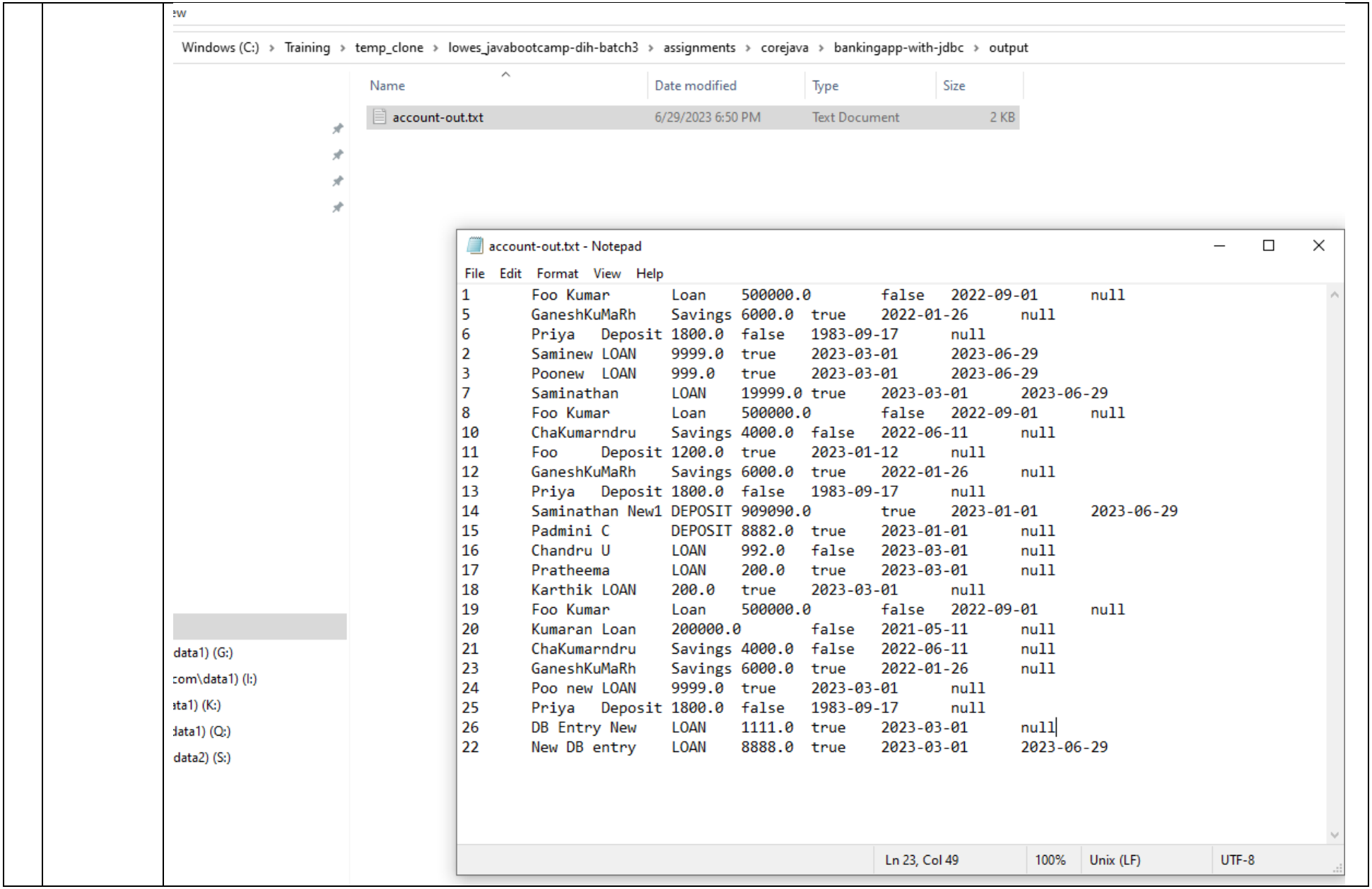
8. Export

#	Screenshot of the complete data	
1		2 Fetching Accounts... Account{id=1, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=5, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=6, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=2, name='Saminew', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=3, name='Poonew', type='LOAN', balance=999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=7, name='Saminathan', type='LOAN', balance=19999.0, active=true, created on=01-Mar-2023, updated on=2023-06-29} Account{id=8, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=10, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=11, name='Foo', type='Deposit', balance=1200.0, active=true, created on=12-Jan-2023, updated on=null} Account{id=12, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=13, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=14, name='Saminathan New1', type='DEPOSIT', balance=909090.0, active=true, created on=01-Jan-2023, updated on=2 Account{id=15, name='Padmini C', type='DEPOSIT', balance=8882.0, active=true, created on=01-Jan-2023, updated on=null} Account{id=16, name='Chandru U', type='LOAN', balance=992.0, active=false, created on=01-Mar-2023, updated on=null} Account{id=17, name='Pratheema', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=18, name='Karthik', type='LOAN', balance=200.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=19, name='Foo Kumar', type='Loan', balance=500000.0, active=false, created on=01-Sep-2022, updated on=null} Account{id=20, name='Kumaran', type='Loan', balance=200000.0, active=false, created on=11-May-2021, updated on=null} Account{id=21, name='ChaKumarndru', type='Savings', balance=4000.0, active=false, created on=11-Jun-2022, updated on=null} Account{id=23, name='GaneshKuMaRh', type='Savings', balance=6000.0, active=true, created on=26-Jan-2022, updated on=null} Account{id=24, name='Poo new', type='LOAN', balance=9999.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=25, name='Priya', type='Deposit', balance=1800.0, active=false, created on=17-Sep-1983, updated on=null} Account{id=26, name='DB Entry New', type='LOAN', balance=1111.0, active=true, created on=01-Mar-2023, updated on=null} Account{id=22, name='New DB entry', type='LOAN', balance=8888.0, active=true, created on=01-Mar-2023, updated on=2023-06-2 <----------Bank Of Bengaluru: Banking Application using Tree Map--------->

BANK OF BENGALURU: BANKING APPLICATION USING TREE MAP – JDBC

Poornima Chandrasekaran

# 2	**The empty file before export**	
# 3	**Export's relative path**	
# 4	**Exported file**	**You can see both "created date" and "updated date"**


Windows (C:) › Training › temp_clone › lowes_javabootcamp-dih-batch3 › assignments › corejava › bankingapp-with-jdbc › output
Name
Date modified
Type
Size
account-out.txt
6/29/2023 6:50 PM
Text Document
2 KB
data1) (G:)
com\data1) (I:)
ata1) (K:)
data1) (Q:)
data2) (S:)
account-out.txt - Notepad
File Edit Format View Help
1 Foo Kumar Loan 500000.0 false 2022-09-01 null
5 GaneshKuMaRh Savings 6000.0 true 2022-01-26 null
6 Priya Deposit 1800.0 false 1983-09-17 null
2 Saminew LOAN 9999.0 true 2023-03-01 2023-06-29
3 Poonew LOAN 999.0 true 2023-03-01 2023-06-29
7 Saminathan LOAN 19999.0 true 2023-03-01 2023-06-29
8 Foo Kumar Loan 500000.0 false 2022-09-01 null
10 ChaKumarndru Savings 4000.0 false 2022-06-11 null
11 Foo Deposit 1200.0 true 2023-01-12 null
12 GaneshKuMaRh Savings 6000.0 true 2022-01-26 null
13 Priya Deposit 1800.0 false 1983-09-17 null
14 Saminathan New1 DEPOSIT 909090.0 true 2023-01-01 2023-06-29
15 Padmini C DEPOSIT 8882.0 true 2023-01-01 null
16 Chandru U LOAN 992.0 false 2023-03-01 null
17 Pratheema LOAN 200.0 true 2023-03-01 null
18 Karthik LOAN 200.0 true 2023-03-01 null
19 Foo Kumar Loan 500000.0 false 2022-09-01 null
20 Kumaran Loan 200000.0 false 2021-05-11 null
21 ChaKumarndru Savings 4000.0 false 2022-06-11 null
23 GaneshKuMaRh Savings 6000.0 true 2022-01-26 null
24 Poo new LOAN 9999.0 true 2023-03-01 null
25 Priya Deposit 1800.0 false 1983-09-17 null
26 DB Entry New LOAN 1111.0 true 2023-03-01 null
22 New DB entry LOAN 8888.0 true 2023-03-01 2023-06-29
Ln 23, Col 49
100%
Unix (LF)
UTF-8

		account-out.txt
# 5	**Threaded execution for Export start**	main Export Started <----------Bank Of Bengaluru: Banking Application using Tree Map--------->Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit Thread[pool-1-thread-1,5,main] Waiting to start exporting

# 6	**Threaded execution for export complete**	main Export Started <----------Bank Of Bengaluru: Banking Application using Tree Map---------> Menu: 1. Create Accounts 2. List all Accounts 3. View an Account 4. Update an Account 5. Delete an Account 6. Print Statistics 7. Import 8. Export 9. Exit Thread[pool-1-thread-1,5,main] Waiting to start exporting pool-1-thread-1 Account data exported successfully.
# 7	**Message confirmation**	pool-1-thread-1 Account data exported successfully.

9. Exiting from the application

#1	Entering proper index to exit the application. Thank you, message appears!	Thank you for visiting Bank Of Bengaluru. Have a nice day!