



ATM BANKING SYSTEM

Java Mini Project



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Introduction

- An Automated Teller Machine (ATM) is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller.
- Anyone with a credit card or debit card can access cash at ATM.
- The basic one allows the customer to only draw cash and receive a report of the account balance.
- Another one is a more complex machine that accepts the deposit, provides credit card payment facilities and reports account information.
- It is an electronic device that is used by only bank customers to process account transactions.
- Our project of ATM banking system combines all the above functionalities under a single system.



Functions

- The system has a verification process in which the clients are provided with a Card number and a Pin.
- Authorisation to the account is not provided with an invalid pin or an invalid card number.
- Once the user is logged in, the user is provided with various banking services like Cash Withdrawal, Deposit Cash, Check their account balance and transfer funds to other accounts.
- The Withdraw Cash feature enables the client to withdraw cash from their bank account.
- The Deposit Cash feature enables the client to Deposit money to their bank account.
- The Transfer Funds feature enables the client to transfer funds to other accounts.
- A special function is included where the client can view his/her transfer history.
- The client can also check their account balance at the ATM.

Working

- At first the client is prompted to enter their card number and their respective pin to login to their banking services. An invalid card number or invalid pin prompts an unauthorized credentials message. After authorization the client is taken to the Services Portal.

- In the Service Portal the client is provided with various functions like Withdraw, Transfer, Deposit, View Transfer History and Check Account Balance
- In Withdraw Portal the client enters an amount to withdraw. If the amount entered exceeds the limit or the bank balance “Withdraw Limit Exceeded” message and “Insufficient Bank Balance” message prompts respectively. On entering a credible amount, the cash is withdrawn and their account balance is updated.
- In Deposit Portal the client enters an amount to deposit. If the amount to be deposited exceeds the limit, “Deposit Limit Exceeded” message prompts. On entering a credible amount, the cash is deposited and their account balance is updated.
- In Transfer Portal the client enters the beneficiary card and the amount to be transferred. On submit the account balance of both the clients will be updated. If incorrect beneficiary card number is given “Invalid Beneficiary Card Number” message prompts. If the amount entered exceeds bank balance of the client then a “Insufficient Bank Balance” message is prompted.
- Under the services window, the Transfer History will show the details of all the transfers made from that account.
- The Check Balance option displays the bank balance of the client.
- The client can Log Out if he is satisfied with his service and are redirected to login page where another client can then make use of the ATM.

Screenshots

Database Screenshots

Atm table

```
SQL> select* from atm;
```

CARD_N	HOLDER_NAM	PIN	BALANCE
100000	Shankar	1000	56399
110000	Preeth	1234	2590
120000	Kumar	1111	20199
130000	Jacob	0000	10999
140000	Felix	2222	999

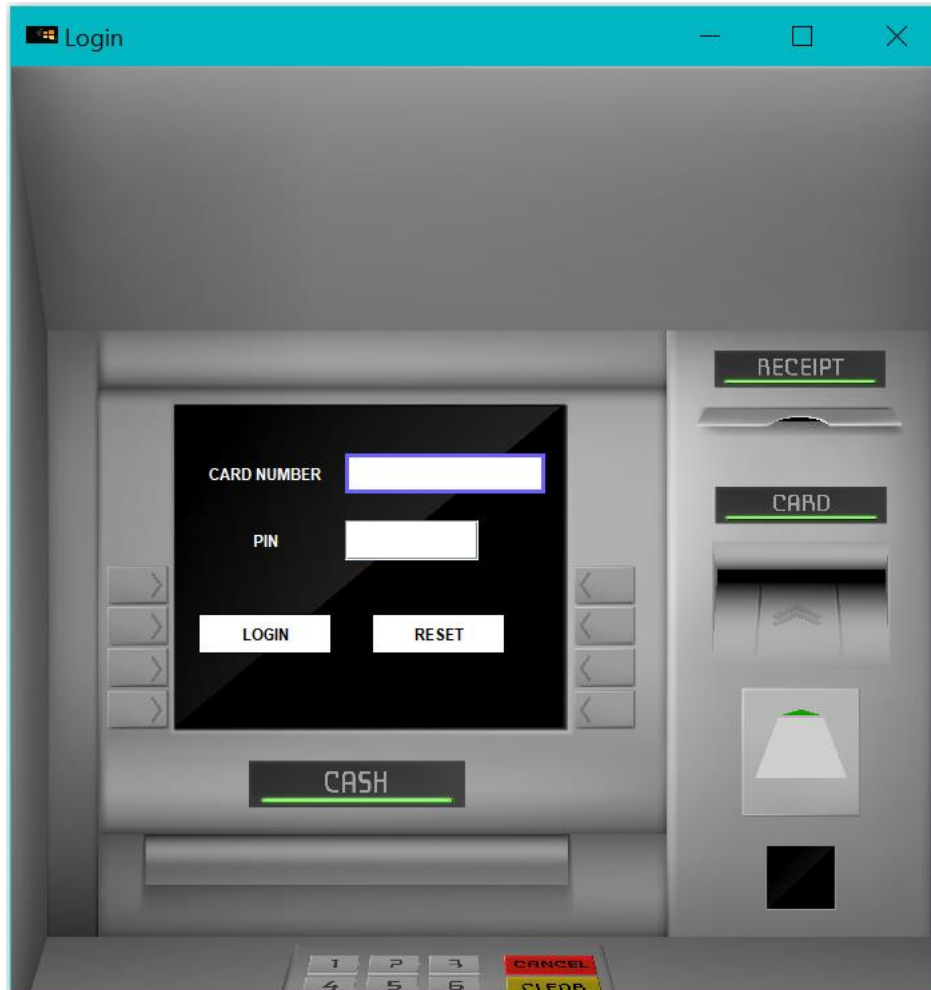
Transfer table

```
SQL> select* from transfer;
```

FROM_CARD	TO_CARD	AMOUNT	TRANSFER_	TRANSFER_TIM	BALANCE
100000	110000	100	06-NOV-20	10:25:47	93499
100000	120000	100	06-NOV-20	10:25:57	93399
100000	130000	5000	06-NOV-20	10:28:59	88399
100000	120000	10000	06-NOV-20	10:30:23	68399
100000	110000	1000	06-NOV-20	11:00:38	56499

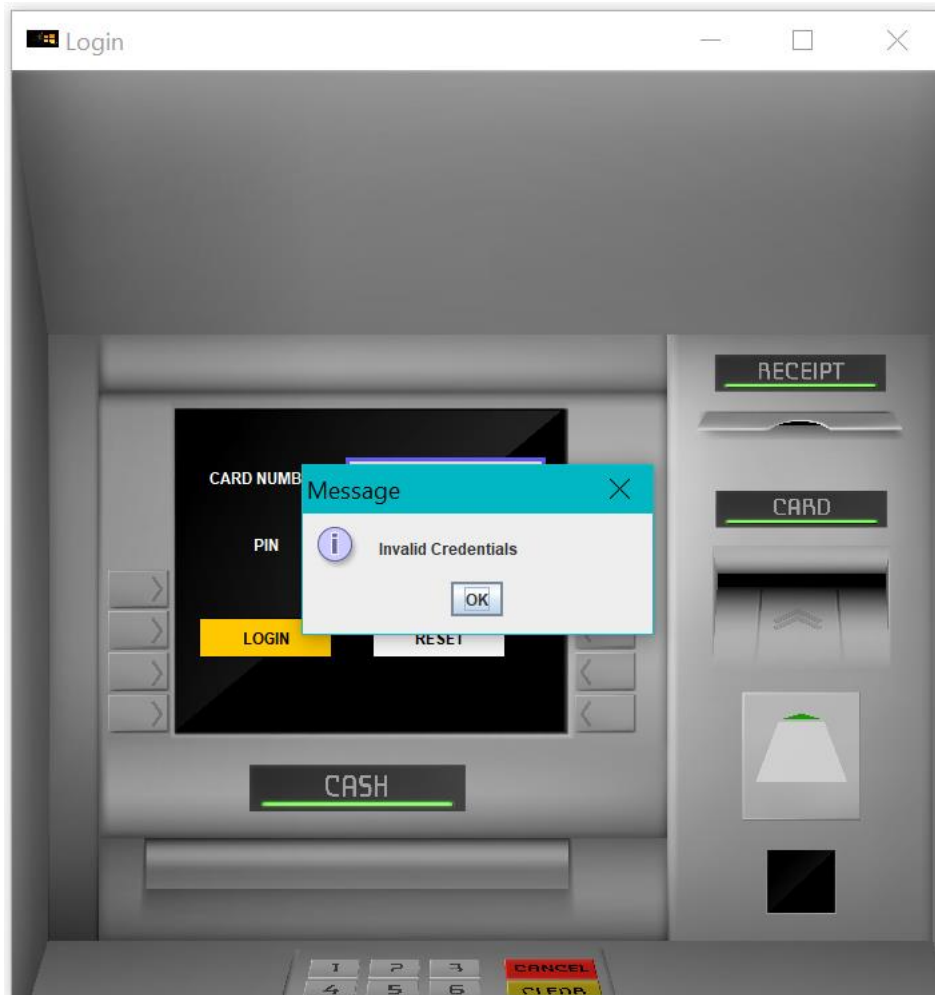
Application Screenshots

Login Window



A USER CAN LOGIN USING HIS CARD NUMBER AND HIS PIN NUMBER. THE APPLICATION CHECKS IT WITH THE DATABASE TO CHECK IF THE CREDENTIALS ARE CORRECT

Invalid Login Credentials Message



DURING LOGIN, IF THE USER ENTERS
INCORRECT CREDENTIALS THE APPLICATION
DISPLAYS “INCORRECT CREDENTIALS”
MESSAGE

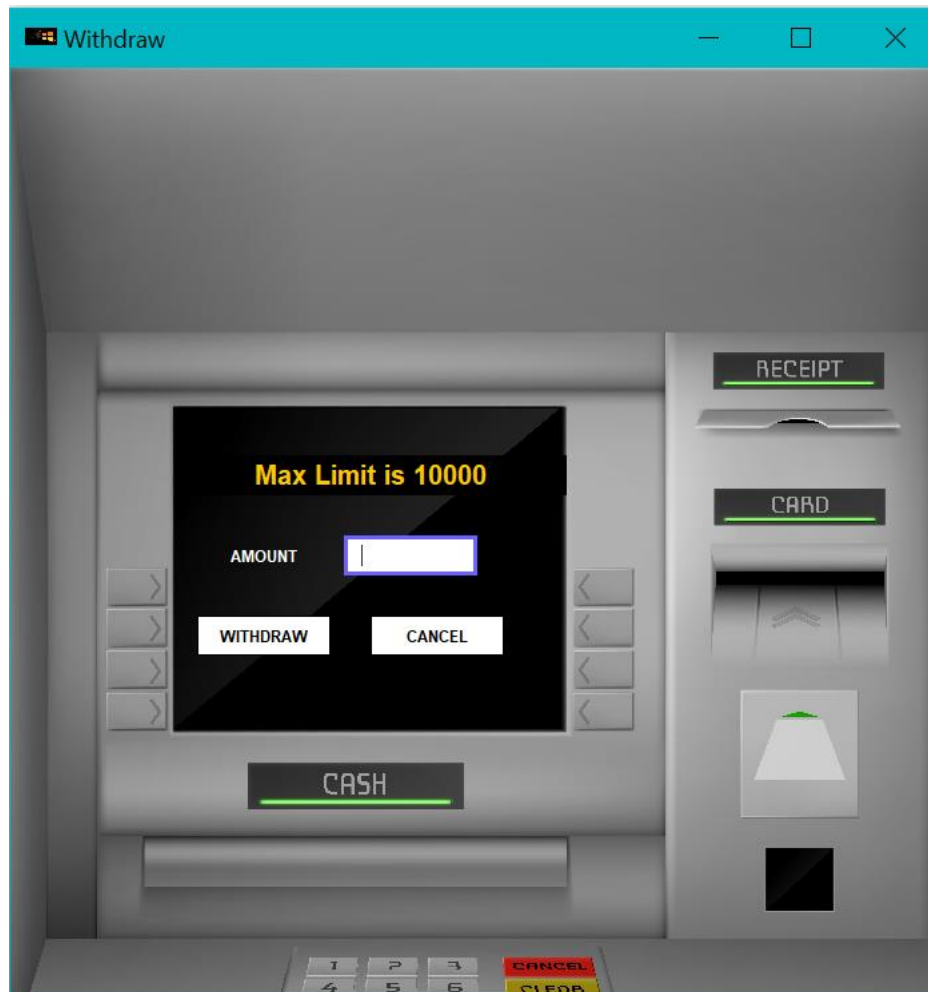
Services Menu



THE SERVICES MENU HAS 6 OPTIONS

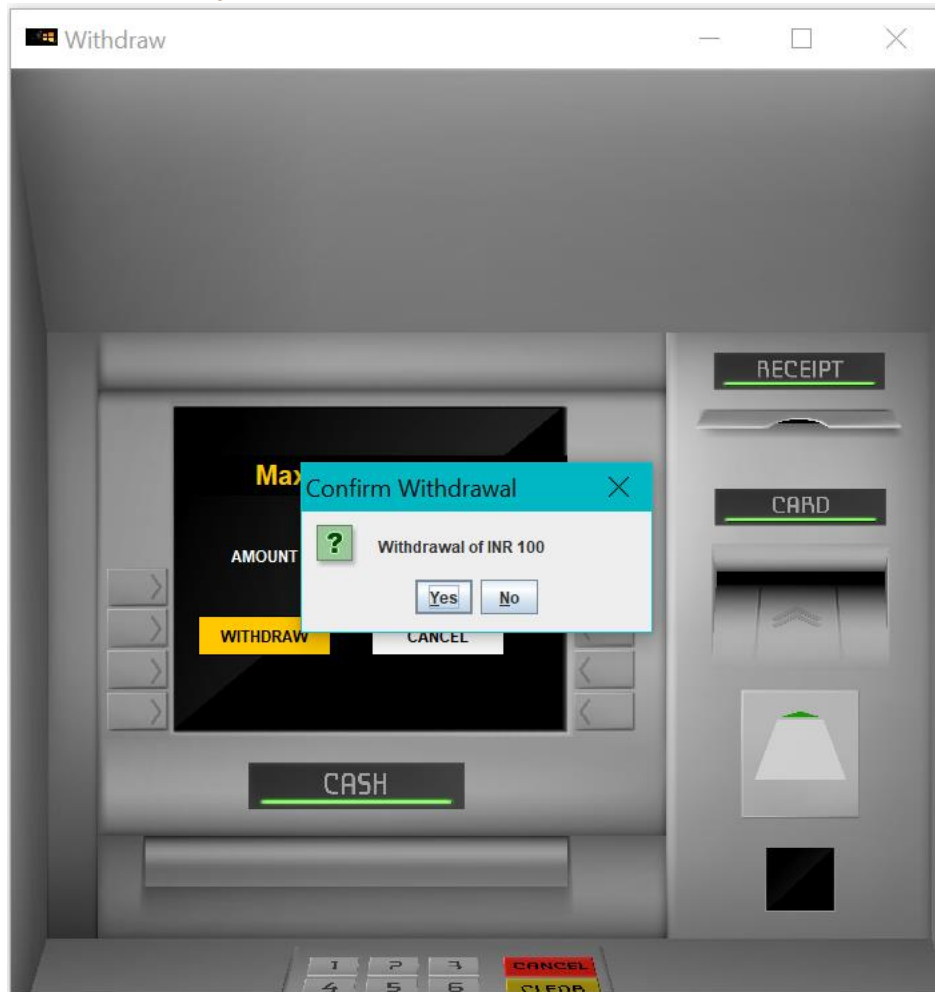
- WITHDRAW
- DEPOSIT
- TRANSFER HISTORY
- TRANSFER
- BALANCE INQUIRY
- LOG OUT

Withdraw Window

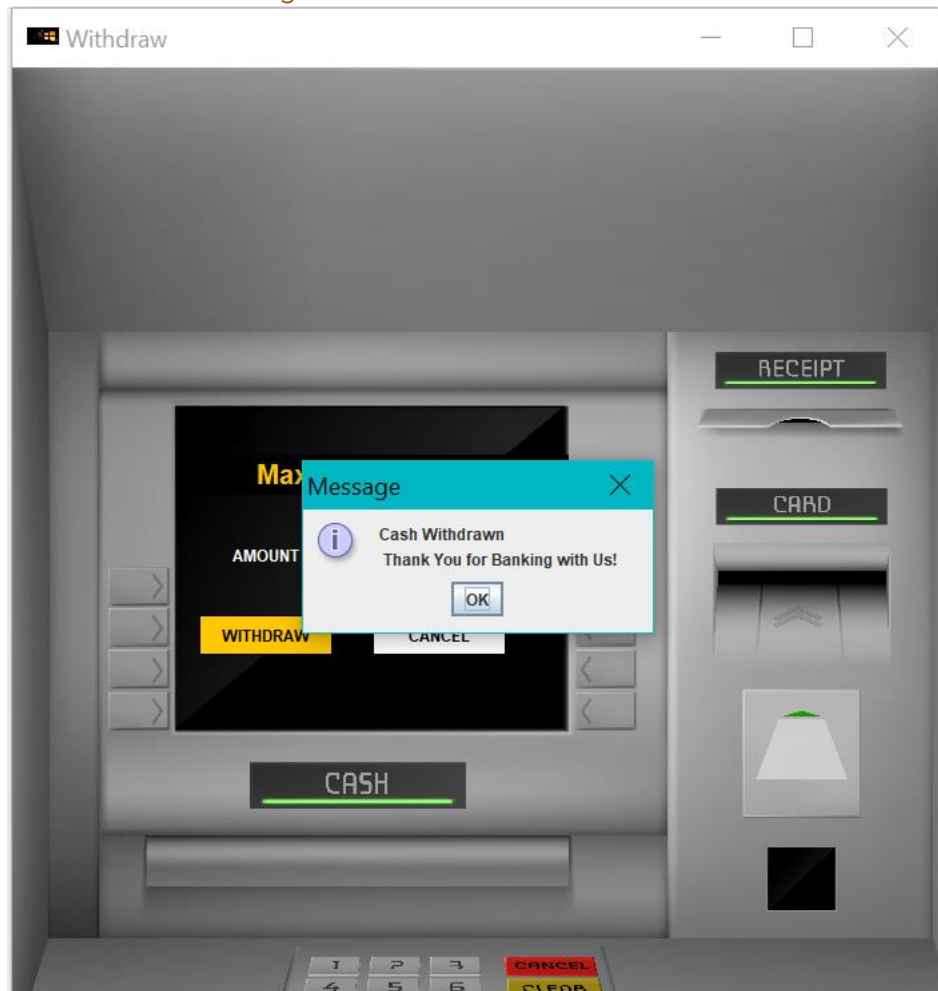


THIS WINDOW ALLOWS THE USER TO
WITHDRAW MONEY FROM HIS ACCOUNT.
THE WITHDRAWN AMOUNT WILL BE
SUBTRACTED FROM THE DATABASE

Withdraw Confirmation Window



Withdrawn Message



Database Before Withdrawal

```
SQL> select* from atm;
```

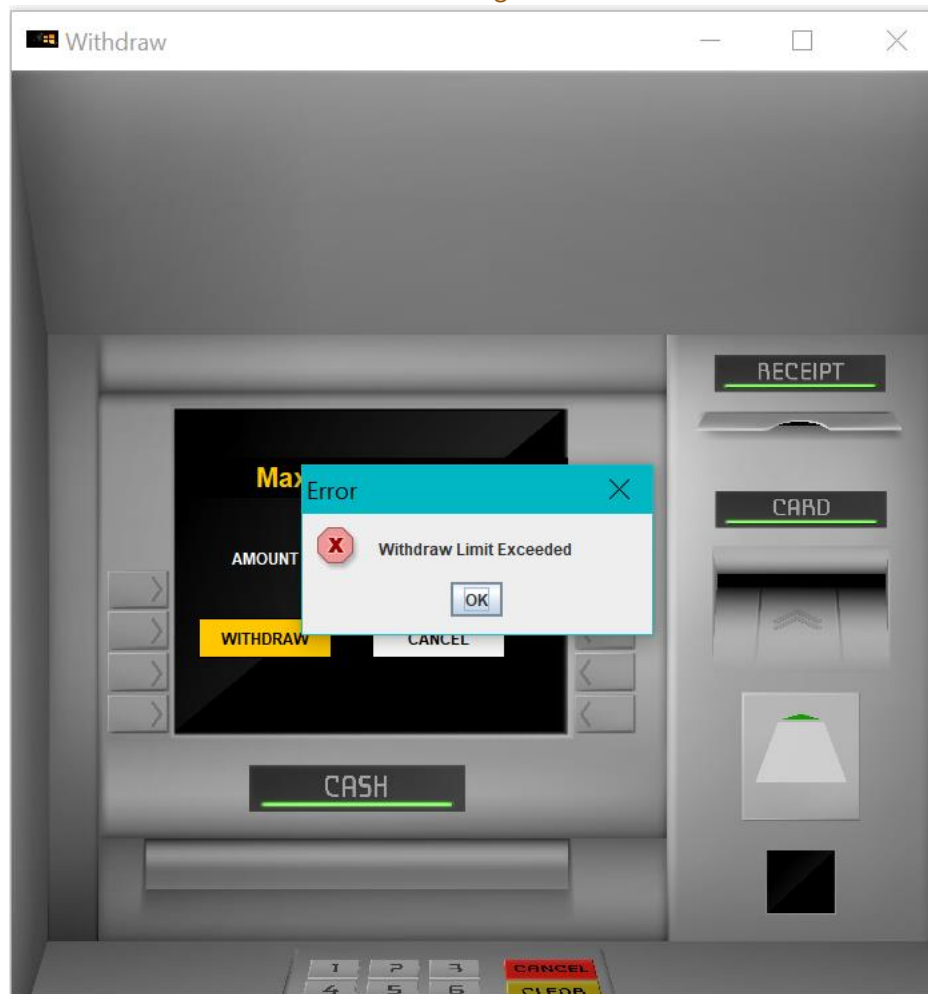
CARD_N	HOLDER_NAM	PIN	BALANCE
100000	Shankar	1000	56399
110000	Preeth	1234	2590
120000	Kumar	1111	20199
130000	Jacob	0000	10999
140000	Felix	2222	999

Database After Withdrawal

```
SQL> select* from atm;
```

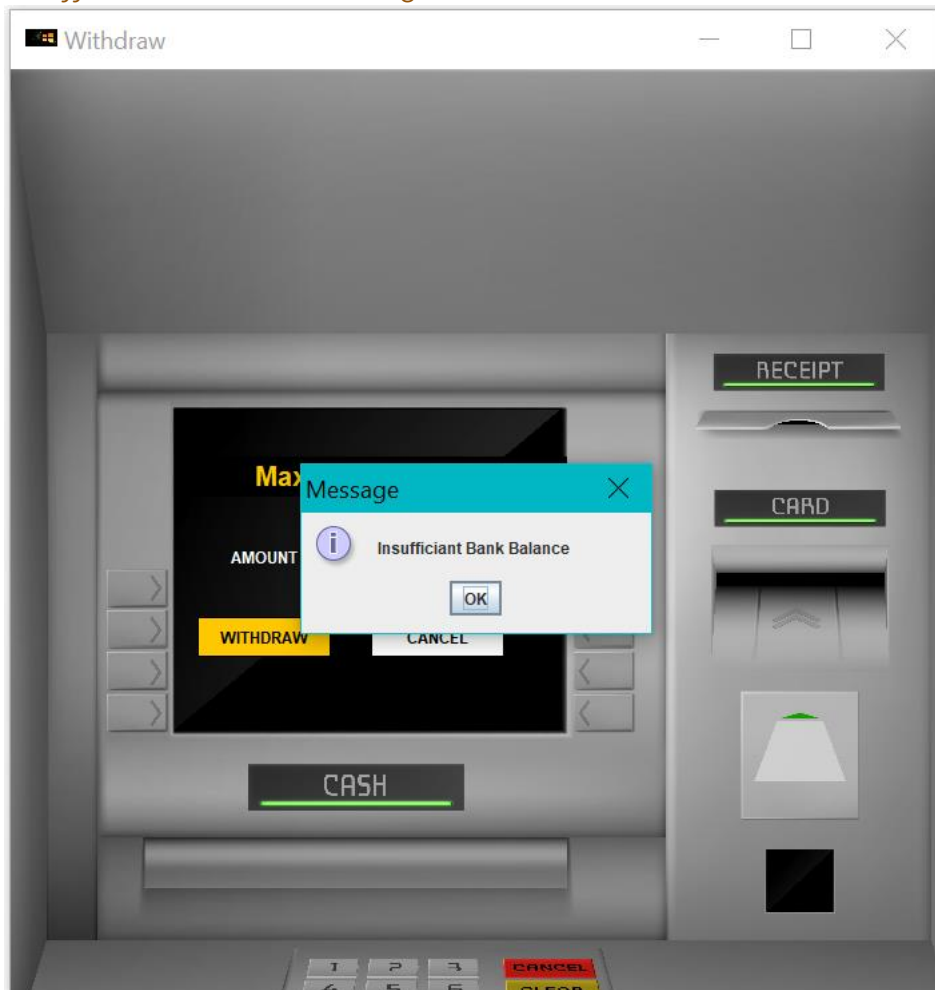
CARD_N	HOLDER_NAM	PIN	BALANCE
100000	Shankar	1000	56399
110000	Preeth	1234	2590
120000	Kumar	1111	20199
130000	Jacob	0000	10999
140000	Felix	2222	899

Withdraw Limit Exceeded Message



WITHDRAWAL LIMIT IS SET TO 10000,
HENCE ANY AMOUNT BEYOND THIS LIMIT
WILL RESULT IN A "WITHDRAW LIMIT
EXCEEDED" ERROR

Insufficient Balance Message



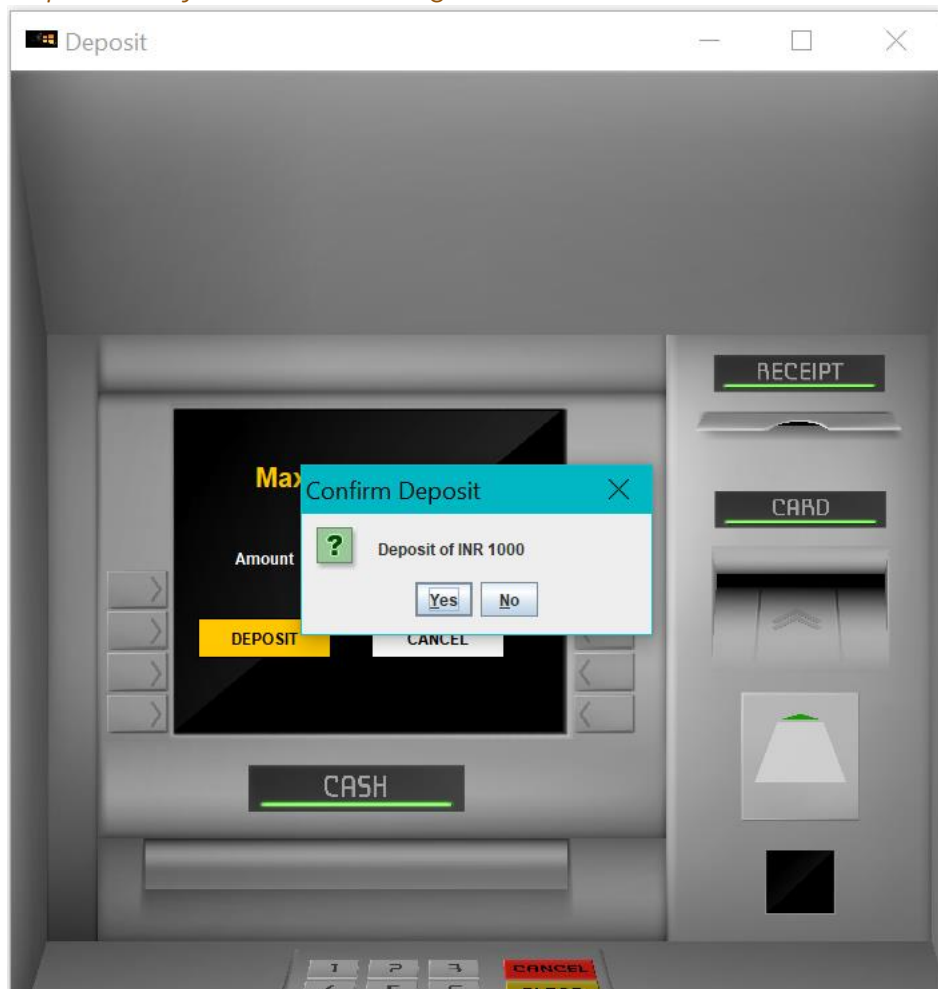
THIS MESSAGE IS DISPLAYED WHEN THE BANK ACCOUNT DOES NOT HAVE ENOUGH FUNDS TO COMPLETE THE WITHDRAWAL

Deposit Window

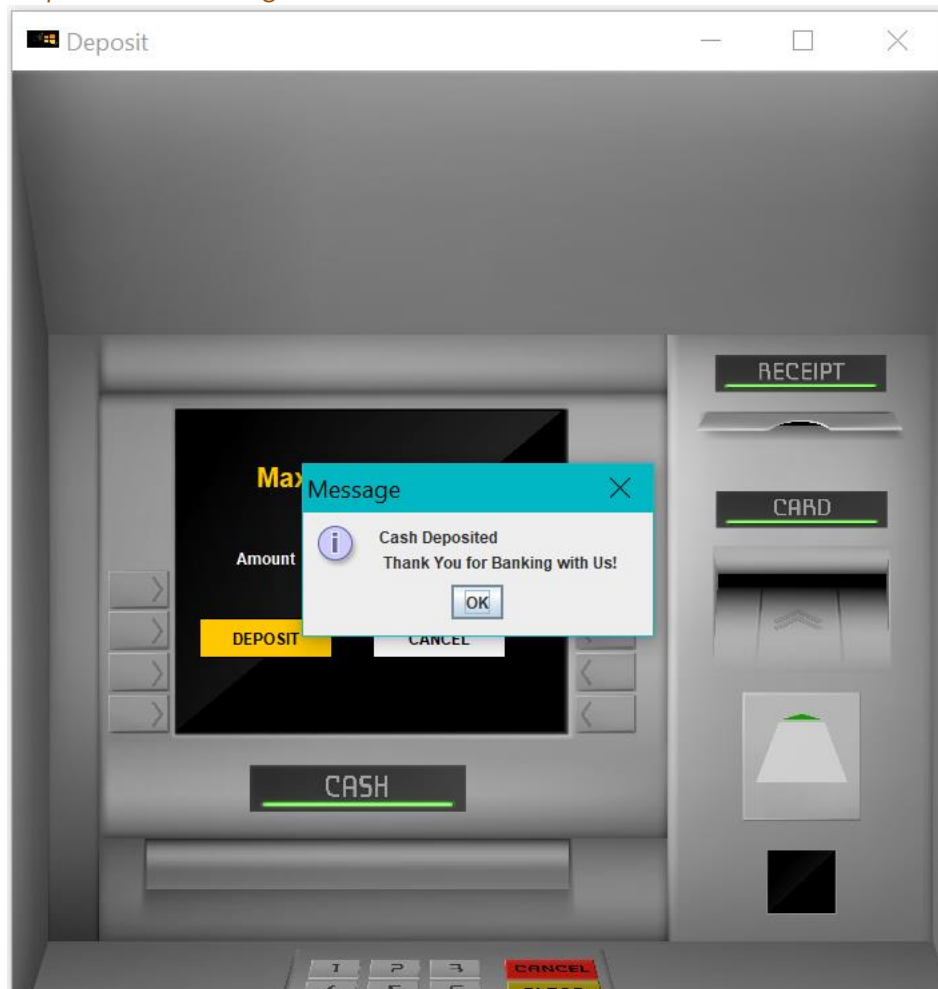


THIS WINDOW ALLOWS THE USER TO DEPOSIT MONEY TO HIS ACCOUNT. THE DEPOSITED AMOUNT WILL BE ADDED TO THE DATABASE

Deposit Confirmation Message



Deposited Message



Database before Deposit

```
SQL> select* from atm;
```

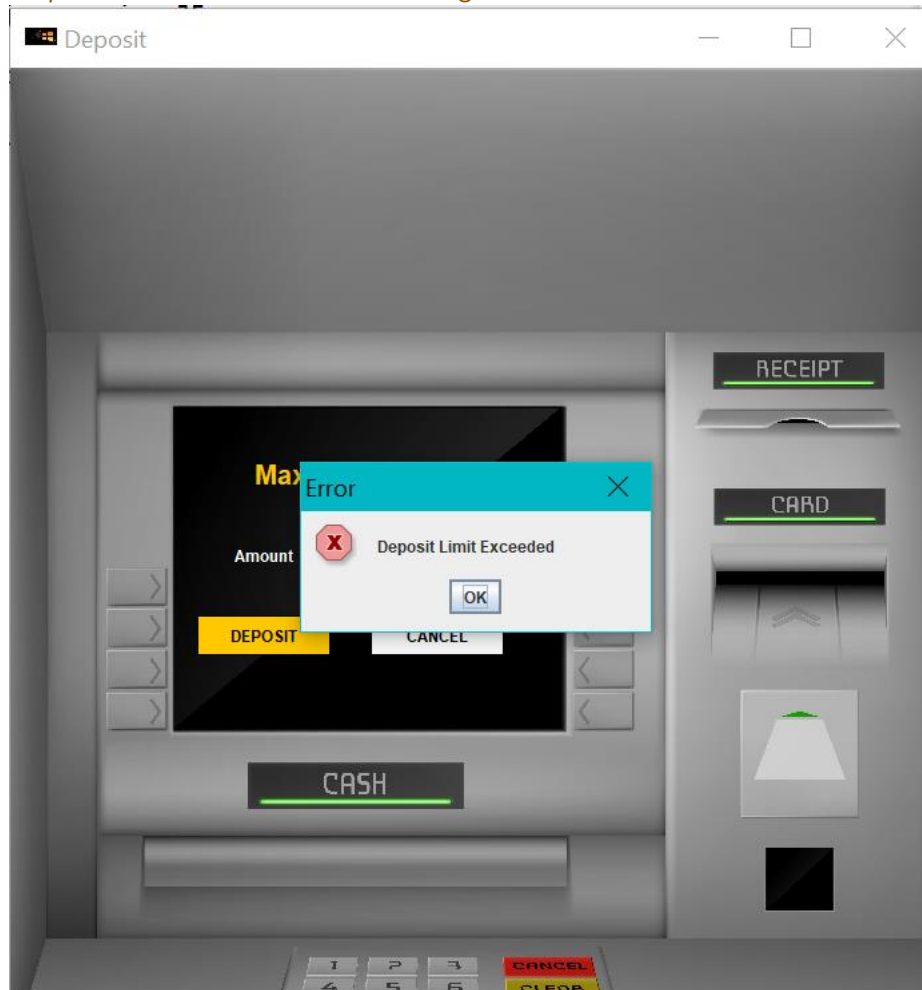
CARD_N	HOLDER_NAM	PIN	BALANCE
100000	Shankar	1000	56399
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120000	Kumar	1111	20199
130000	Jacob	0000	10999
140000	Felix	2222	899

Database after Deposit

```
SQL> select* from atm;
```

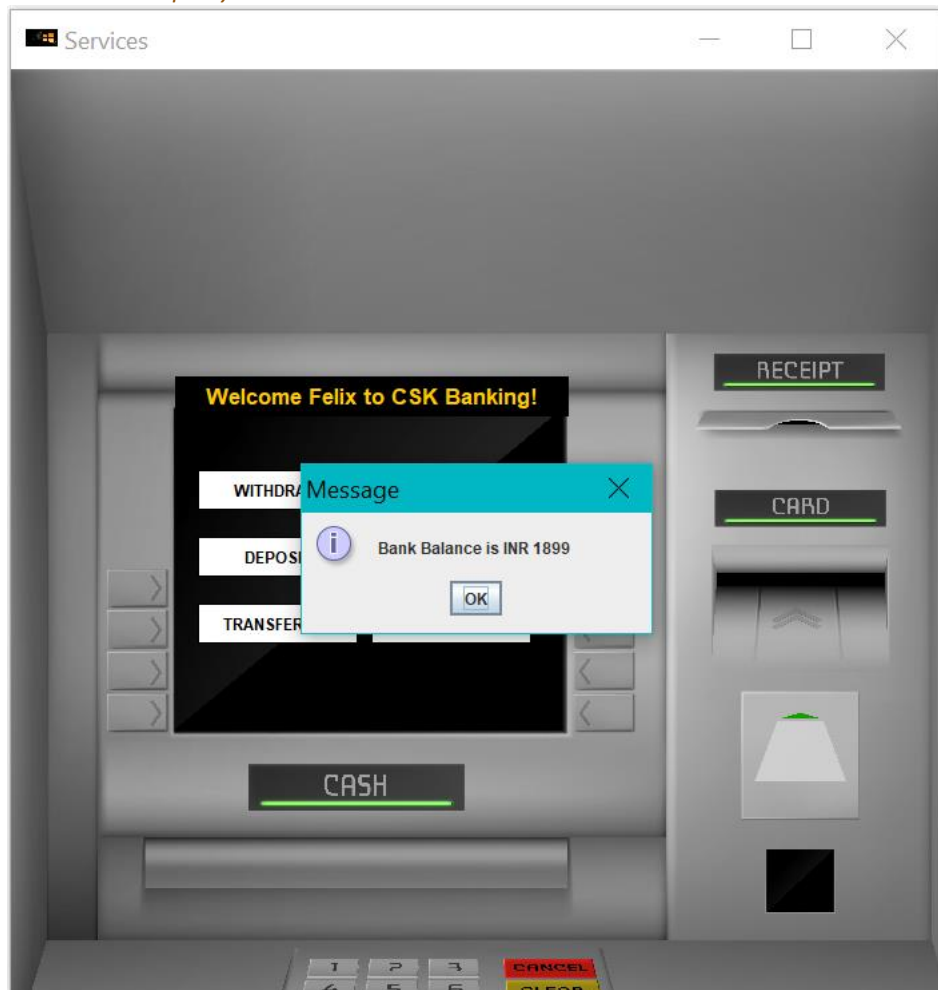
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120000	Kumar	1111	20199
130000	Jacob	0000	10999
140000	Felix	2222	1899

Deposit Limit Exceeded Message



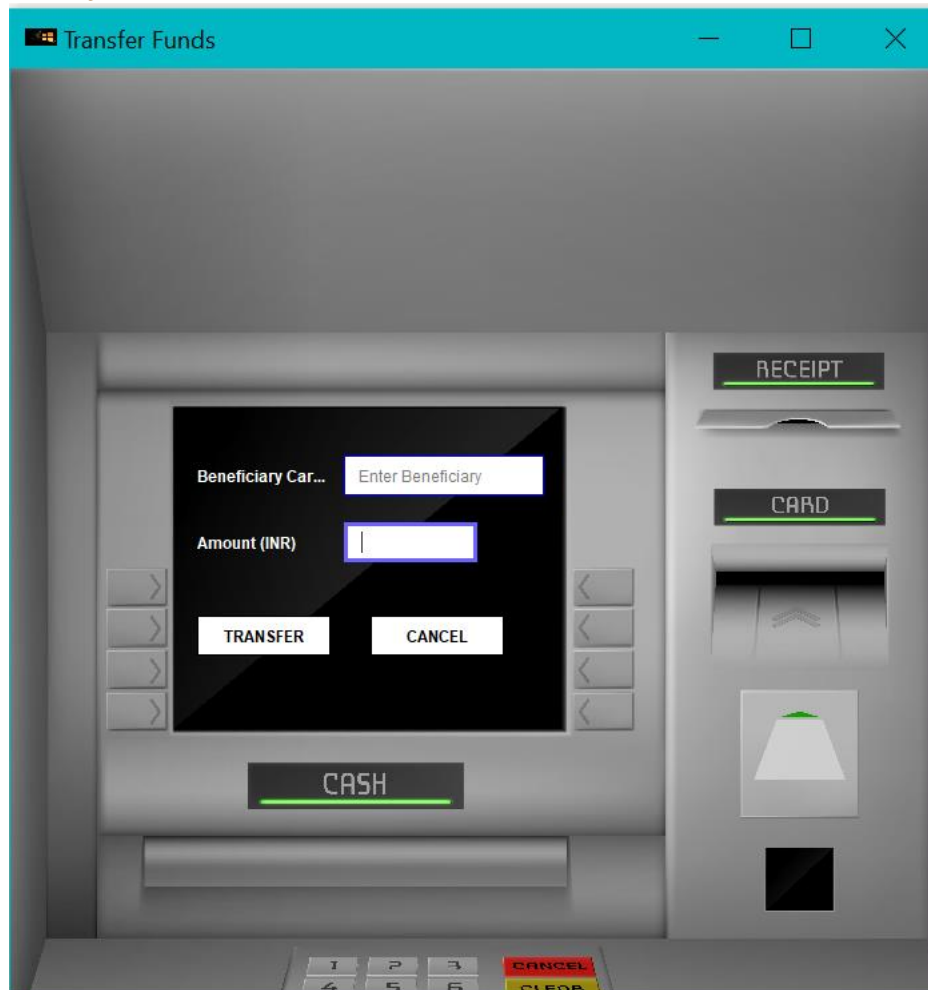
DEPOSIT LIMIT IS SET TO 10000, HENCE
ANY AMOUNT BEYOND THIS LIMIT WILL
RESULT IN A “DEPOSIT LIMIT EXCEEDED”
ERROR

Balance Inquiry Window



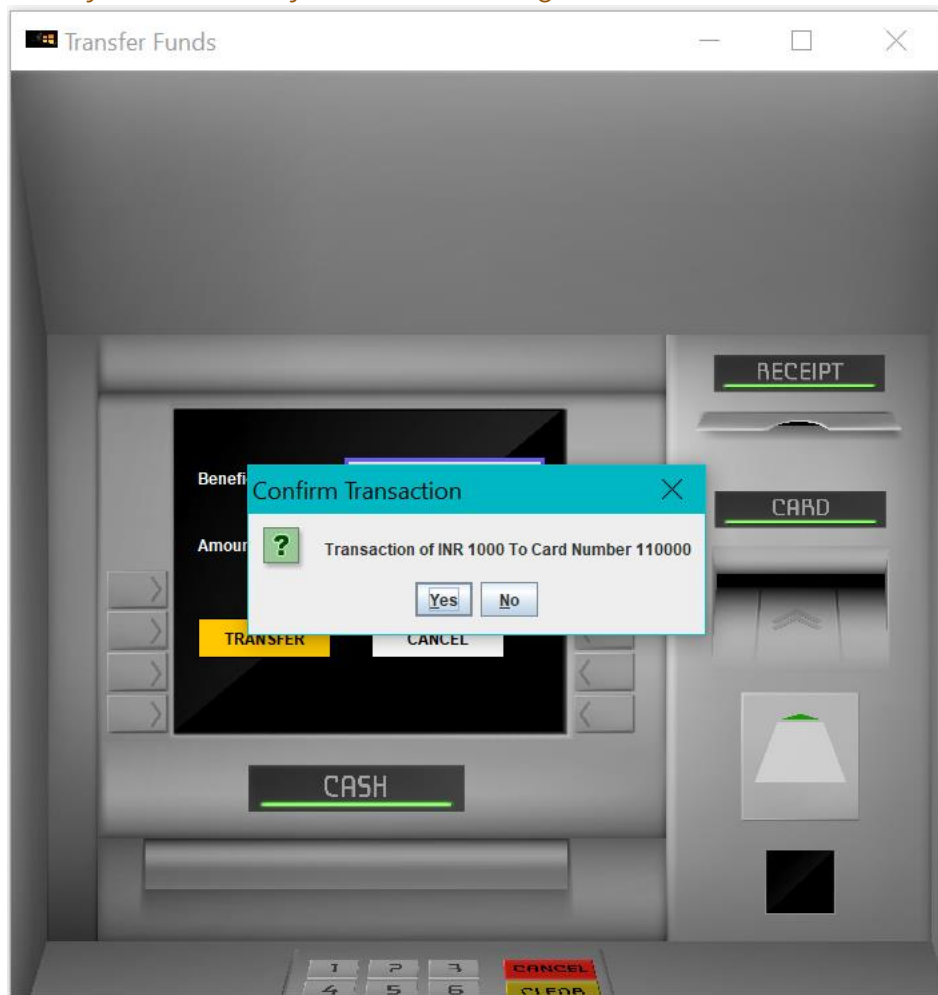
THIS FEATURE ALLOWS THE USER TO VIEW
HIS CURRENT BANK BALANCE

Transfer Funds Window

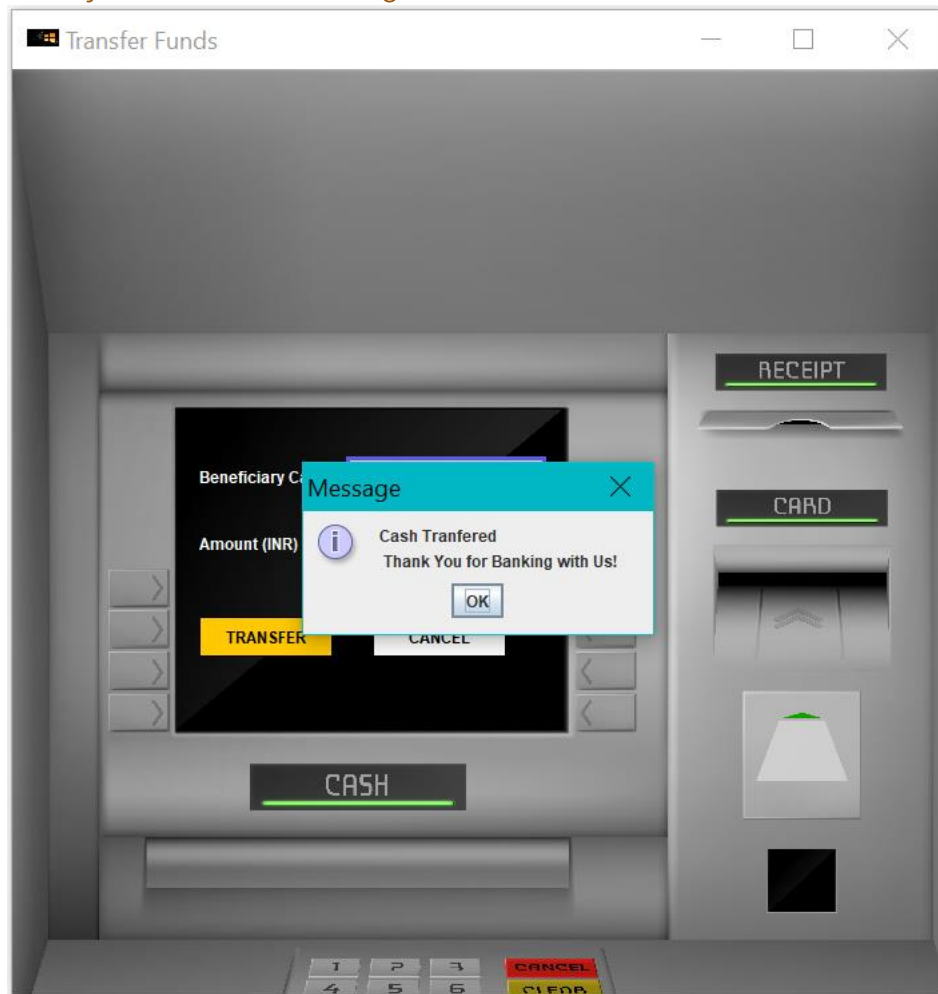


THIS WINDOW ENABLES THE USER TO
TRANSFER FUNDS TO OTHER ACCOUNTS
USING THE CARD NUMBER

Transfer Funds Confirmation Message



Transferred Funds Message



Database before Transferring Funds

Atm table

```
SQL> select* from atm;
```

CARD_N	HOLDER_NAM	PIN	BALANCE
100000	Shankar	1000	56399
110000	Preeth	1234	2590
120000	Kumar	1111	20199
130000	Jacob	0000	10999
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Transfer Table

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100000	120000	100	06-NOV-20	10:25:57	93399
100000	130000	5000	06-NOV-20	10:28:59	88399
100000	120000	10000	06-NOV-20	10:30:23	68399
100000	110000	1000	06-NOV-20	11:00:38	56499

Database after Transferring Funds

Atm table

```
SQL> select* from atm;
```

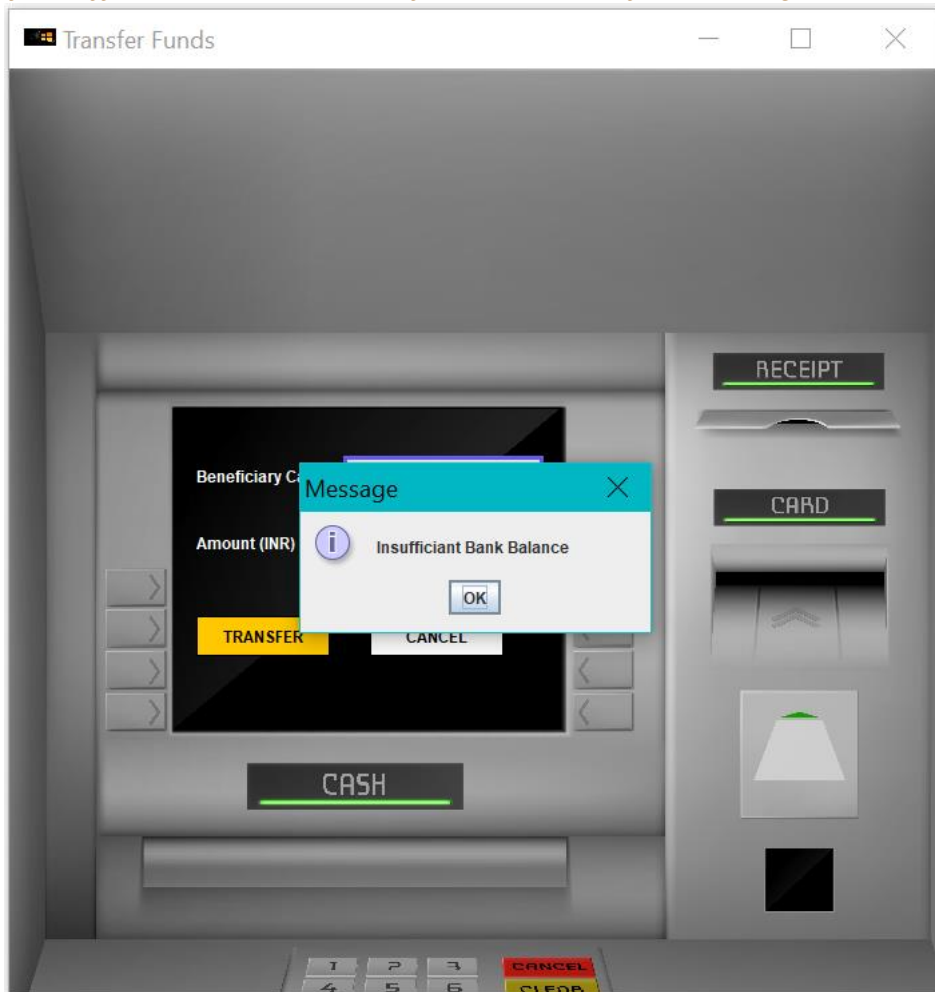
CARD_N	HOLDER_NAM	PIN	BALANCE
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Transfer Table

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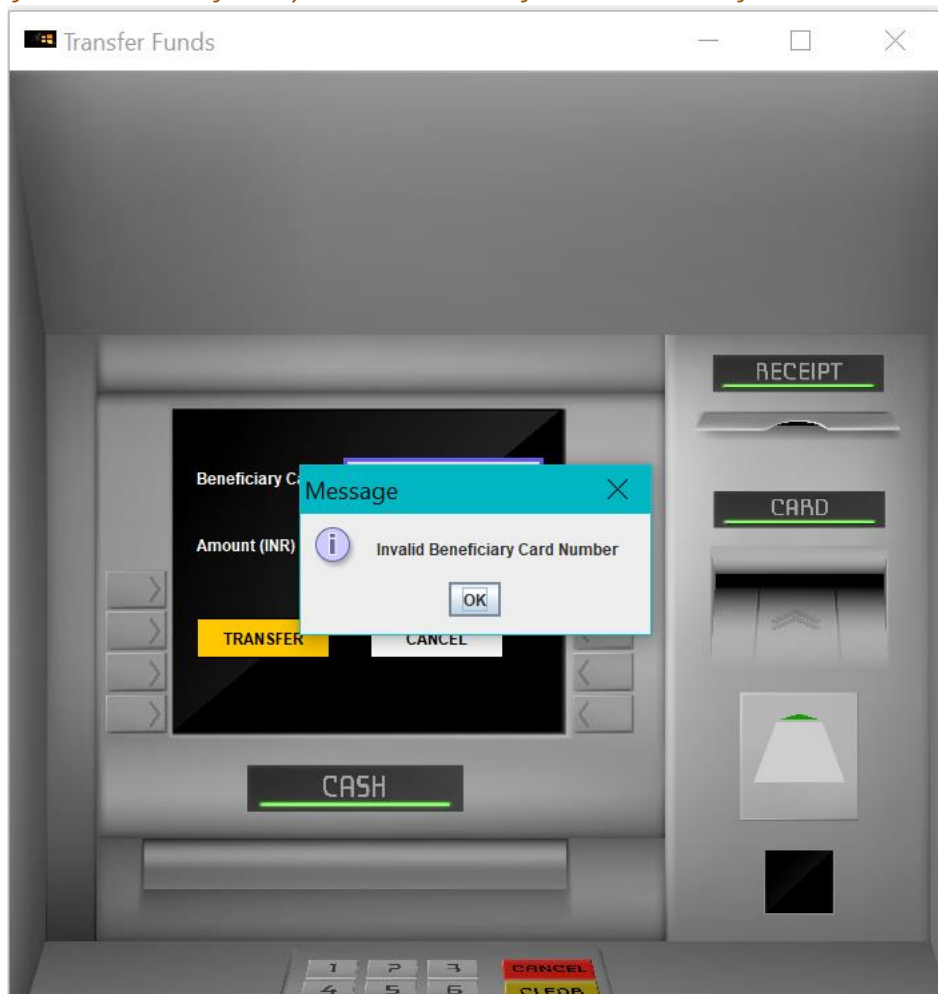
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100000	130000	5000	06-NOV-20	10:28:59	88399
100000	120000	10000	06-NOV-20	10:30:23	68399
100000	110000	1000	06-NOV-20	11:00:38	56499
140000	110000	1000	11-NOV-20	20:38:33	899

If Insufficient Bank Balance for Fund Transfer Message



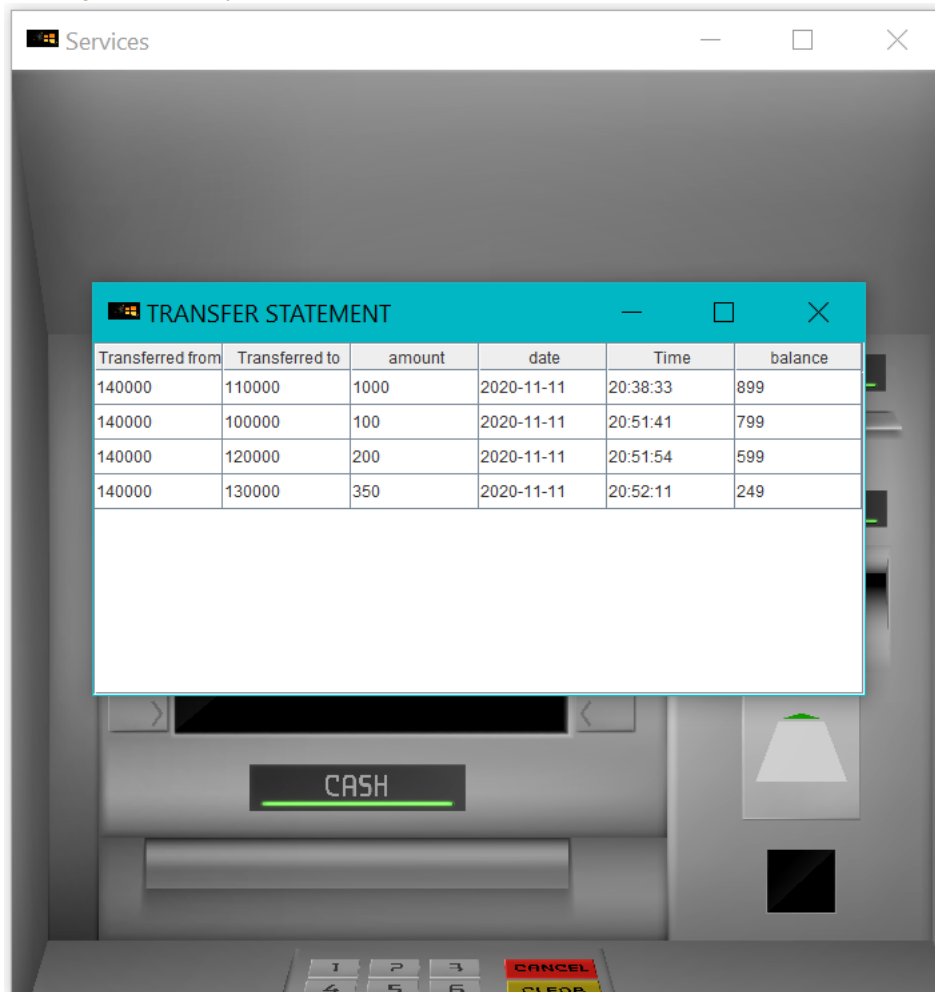
THIS MESSAGE IS DISPLAYED WHEN THE
BANK ACCOUNT DOES NOT HAVE ENOUGH
FUNDS TO COMPLETE THE TRANSFER

If Invalid Beneficiary Card Number for Fund Transfer



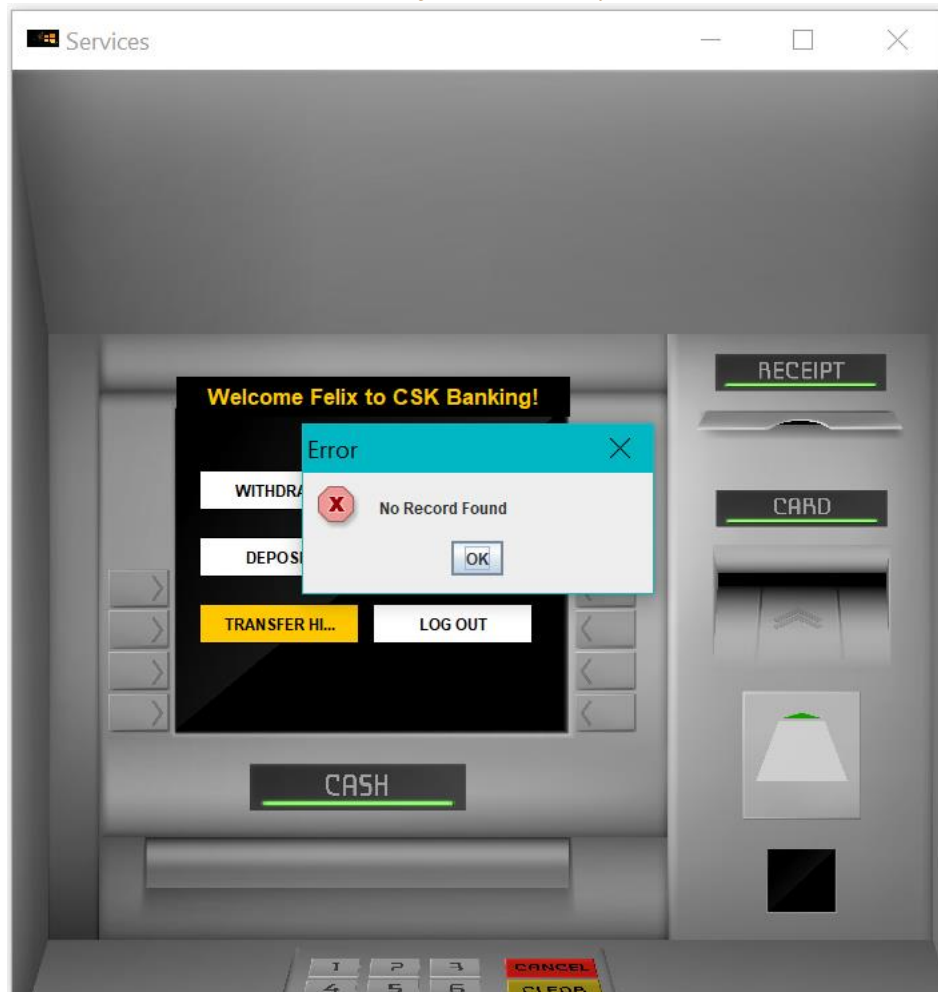
THIS MESSAGE IS DISPLAYED WHEN THE
ENTERED BENEFICIARY CARD NUMBER DOES
NOT EXIST

Transfer History



THE ACCOUNT HOLDER CAN VIEW THE FULL
DETAILS OF ALL THE TRANSFERS HE HAS
MADE

In case there were No Transfers made by that account



THIS MESSAGE IS DISPLAYED IF THE
ACCOUNT HOLDER HAS NOT MADE ANY
TRANSFERS

Logout

