|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **Test No.** | **Test Name** | **Purpose** | **Input** | **Input files** | **Output** | **Output files** |
| **Login Test Case** | | | | | | | |
| Accept valid login operation | T1.0 | successfully login ATM case | Valid login input should be accepted by program in ATM mode | login  atm  logout | valid account file with list of accounts | Successfully  Login.  Successfully entered ATM mode. | File with EOS |
| T1.1 | successfully login agent case | Valid login input should be accepted by program in agent mode | login  agent  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode. | File with EOS |
| After ATM login, only accepted unprivileged transactions | T1.2 | Unprivileged transaction deposit in atm mode | Test if and only if user input unprivileged transaction is accepted in ATM mode | login  atm  deposit  logout | valid account file with list of accounts | Successfully  Login.  Successfully atm mode.  Please input an account number. | File with EOS |
| T1.3 | unprivileged transaction transfer is accepted in ATM mode | Test if and only if user input unprivileged transaction is accepted in ATM mode | login  atm  transfer  logout | valid account file with list of accounts | Successfully  Login.  Successfully entered ATM mode.  Please input an account number. | File with EOS |
| T1.4 | unprivileged transaction withdraw is accepted in ATM mode | Test if and only if user input unprivileged transaction is accepted in ATM mode | Login  Atm  Withdraw  logout | valid account file with list of accounts | Successfully  Login.  Successfully entered ATM mode.  Please input an account number. | File with EOS |
| T1.5 | privileged transaction is denied in ATM mode | Test if and only if user input unprivileged transaction is accepted in ATM mode | login  atm  createacct  logout | valid account file with list of accounts | Successfully  Login.  Successfully entered ATM mode. | File with EOS |
| T1.6 | privileged transaction is denied in ATM mode | Test if and only if user input unprivileged transaction is accepted in ATM mode | Login  Atm  Deleteacct  logout | valid account file with list of accounts | Successfully  Login.  Successfully entered ATM mode. | File with EOS |
| After agent login,  all transactions are accepted | T1.7 | deposit accepted in agent mode | all transactions should be accepted after successfully login agent mode | Login  agent  deposit  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Please enter the deposit account number. | File with EOS |
| T1.8 | withdraw accepted in agent mode | all transactions should be accepted after successfully login agent mode | Login  agent  withdraw  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Please enter the withdraw account number. | File with EOS |
| T1.9 | transfer accepted in agent mode | all transactions should be accepted after successfully login ATM mode | Login  agent  transfer  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Please enter the transfer account number. | File with EOS |
| T2.0 | deleteacct accepted in agent mode | all transactions should be accepted after successfully login ATM mode | Login  agent  deleteacct  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Please enter the account number you want to delete. | File with EOS |
| T2.1 | createacct accepted in agent mode | all transactions should be accepted after successfully login ATM mode | Login  agent  createacct  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Please enter the new account number. | File with EOS |
| No subsequent login should be accepted after a login | T2.2 | Invalid command - Duplicated login input | Assure  duplicated  login command is not accepted (login command is not accepted after user login) | login  atm  login  logout | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Error: You have already login! | File with EOS |
| T2.3 | Invalid command - Duplicated login input | Assure  duplicated  login command is not accepted (login commandis not accepted after user login) | login  login  atm  logout | valid account file with list of accounts | Successfully login.  Error: You have already login!  Successfully entered ATM mode. | File with EOS |
| No other command is accepted before login | T2.4 | Request transactions before login (ATM) | Assure no commands is accepted before login (ATM) | transfer  login  atm  logout | valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered ATM mode. | File with EOS |
| T2.5 | Request to deposit before login (ATM) | Assure no commands is accepted before login (ATM) | deposit  login  atm  logout | valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered ATM mode. | File with EOS |
| T2.6 | Request to withdraw before login (ATM) | Assure no commands is accepted before login (ATM) | withdraw  login  atm  logout | valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered ATM mode. | File with EOS |
| T2.7 | Request to create account before login(agent) | Assure no commands is accepted before login (privileged) | createacct  login  agent  logout | valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered agent mode. | File with EOS |
| T2.8 | Request to delete account before login(agent) | Assure no commands is accepted before login (privileged) | deleteacct  login  agent  logout | valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered agent mode. | File with EOS |
| Deny mistyping command | T2.9 | Input an invalid command before login (mistyping) | Assure no invalid command is accepted before login (privileged) | deposssit  login  agent  logout | Valid account file with list of accounts | Error: Please login first!  Successfully login.  Successfully entered agent mode. | File with EOS |
| T3.0 | Mistyping login | Assure mistyping login command is not accepted and shows error message | loginn  atm  logout | Valid account file with list of accounts | Error: Please login first!  Error: Please login first! | File with EOS |
| T3.1 | Mistyping mode choice after login | Assure mistyping mode choice is not accepted and shows error message | login  atma  logout | Valid account file with list of accounts | Successfully login.  Error: Invalid mode choice! | File with EOS |
| **Logout Test Case** | | | | | | | |
| Accept valid logout operation | T1.0 | Valid logout ATM case | Valid logout input should be accepted by program in ATM mode | login  atm  logout | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Successfully logout. | File with EOS |
| T1.1 | Valid logout agent case | Valid logout input should be accepted by program in agent mode | login  agent  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Successfully logout. | File with EOS |
| Deny logout with invalid logout command | T1.2 | Invalid command – logout before login | Assure logout command is not accepted before login | logout  login  atm  logout | valid account file with list of accounts | Error: Invalid logout command! Successfully login.  Successfully entered ATM mode.  Successfully logout. | File with EOS |
| T1.3 | Invalid command – logout after logout | Assure logout command is not accepted after login | login  atm  logout  logout | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Successfully logout.  Error: Please login first! | File with EOS |
| No other command is accepted after logout except login | T1.4 | Invalid command – transaction request after logout (ATM) | Assure transaction command is accepted after ATM logout | login  atm  logout  transfer | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Successfully logout.  Error: Please login first! | File with EOS |
| T1.5 | Invalid command – deposit request after logout (ATM) | Assure deposit command is accepted after ATM logout | login  atm  logout  deposit | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Successfully logout.  Error: Please login first! | File with EOS |
| T1.6 | Invalid command – withdraw request after logout (ATM) | Assure deposit command is accepted after ATM logout | login  atm  logout  withdraw | valid account file with list of accounts | Successfully login.  Successfully entered ATM mode.  Successfully logout.  Error: Please login first! | File with EOS |
| T1.7 | Invalid command – create account request after logout(agent) | Assure createacct privileged command is accepted after agent logout | login  agent  logout  createacct | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Successfully logout.  Error: Please login first! | File with EOS |
| T1.8 | Invalid command – delete account request after logout(agent) | Assure deleteacct privileged command is accepted after agent logout | login  agent  logout  deleteacct | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Successfully logout.  Error: Please login first! | File with EOS |
| Deny mistyping command | T1.9 | Mistyping logout command | Assure  Mistyping logout command is not accepted | login  agent  loggout  logout | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Error: Invalid command!  Successfully logout. | File with EOS |
| T2.0 | Transaction commands are accepted after mistyping logout command | Assure request is accepted after failed logout | login  atm  logout  transfer | valid account file with list of accounts | Successfully login.  Successfully entered agent mode.  Error: Invalid command!  Please enter the transfer accounts. | File with EOS |
| **Createaccount Test Case** | | | | | | | |
| Accept valid createaccount operation with the correct new account number and name | T1.0 | createaccount command, successful case | check that createaccount is accepted when creating a new account with the different account number from all other current numbers | login  agent  createaccount  1000601  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account 1000601 000 TheCreatedAccount01 is created. | the transaction summary file with the transaction NEW 1000666 000 0000000 TheCreatedAccount01 and EOS |
| For createaccount operation, it is only accepted when logged in to agent mode | T1.1 | createaccount command, failed case in the atm mode | check that createaccount is not accepted when in the atm mode | login  atm  createaccount  logout | the valid accounts file with an account 1000600 in it | The createaccount operation can not work in the atm mode! | the transaction summary file with EOS |
| For createaccount operation, new account number must be different from all other current account numbers | T1.2 | createaccount command, failed case with the same account | check that createaccount is not accepted when creating a new account with the same account number from the current account number | login  agent  createaccount  1000600  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the account number “1000600” already exists in current account numbers! Please use other account numbers. | the transaction summary file with EOS |
| For createaccount operation, new account number is exactly seven decimal digits not beginning with 0 | T1.3 | createaccount command, failed case with the account number which is more than seven decimal digits | check that createaccount is not accepted when creating a new account with the account number which is more than seven decimal digits | login  agent  createaccount  100060100000  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account number must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.4 | createaccount command, failed case with the account number which is less than seven decimal digits | check that createaccount is not accepted when creating a new account with the account number which is less than seven decimal digits | login  agent  createaccount  1000  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account number must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.5 | createaccount command, failed case with the account number which beginning with 0 | check that createaccount is not accepted when creating a new account with the account number which beginning with 0 | login  agent  createaccount  0000601  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account number must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.6 | createaccount command, failed case with the account number which includes the alphanumeric characters | check that createaccount is not accepted when creating a new account with the account number which includes the letters | login  agent  createaccount  1aaaaa1  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account number must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| For createaccount operation, new account name is between 3 and 30 alphanumeric characters, possibly including spaces but not beginning or ending with a space | T1.7 | createaccount command, failed case with the account name which is more than 30 alphanumeric characters | check that createaccount is not accepted when creating a new account with the account name which is more than 30 alphanumeric characters | login  agent  createaccount  1000601  TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT  logout | the valid accounts file with an account 1000600 in it | the new account name should between 3 and 30 alphanumeric characters, and not beginning or ending with a space. | the transaction summary file with EOS |
| T1.8 | createaccount command, failed case with the account name which is less than 3 alphanumeric characters | check that createaccount is not accepted when creating a new account with the account name which is less than 30 alphanumeric characters | login  agent  createaccount  1000601  TT  logout | the valid accounts file with an account 1000600 in it | the new account name should between 3 and 30 alphanumeric characters, and not beginning or ending with a space. | the transaction summary file with EOS |
| T1.9 | createaccount command, failed case with the account name which beginning with a space | check that createaccount is not accepted when creating a new account with the account name which beginning with a space | login  agent  createaccount  1000601  CreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the new account name should between 3 and 30 alphanumeric characters, and not beginning or ending with a space. | the transaction summary file with EOS |
| T2.0 | createaccount command, failed case with the account name which ending with a space | check that createaccount is not accepted when creating a new account with the account name which ending with a space | login  agent  createaccount  1000601  TheCreatedAccount  logout | the valid accounts file with an account 1000600 in it | the new account name should between 3 and 30 alphanumeric characters, and not beginning or ending with a space. | the transaction summary file with EOS |
| **Deleteaccount Test Case** | | | | | | | |
| Accept valid deleteacct operation with the correct account number and account name | T1.0 | deleteacct command, successful case | check that deleteacct is accepted when deleting a valid account | login  agent  deleteacct  1000600  TestAccount01  logout | the valid accounts file with an account 1000600 in it | the account 1000600 000 TestAccount01 is deleted | the transaction summary file with the transaction DEL 1000600 000 0000000 TestAccount01 and EOS |
| For deleteacct operation, it is only accepted when logged in to agent mode | T1.1 | deleteacct command, failed case in the atm mode | check that deleteacct is not accepted when in the atm mode | login  atm  deleteacct  logout | the valid accounts file with an account 1000600 in it | The deleteacct operation can not work in the atm mode! | the transaction summary file with EOS |
| For deleteacct operation, should check that the account number and name is valid | T1.2 | deleteacct command, failed case with nonexistent account number | check that deleteacct is not accepted when deleting an account with nonexistent account number | login  agent  deleteacct  9000600  TestAccount01  logout | the valid accounts file with an account 1000600 in it | the account number “9000600” is not existent | the transaction summary file with EOS |
| T1.3 | deleteacct command, failed case with nonexistent account name | check that deleteacct is not accepted when deleting an account with nonexistent account number | login  agent  deleteacct  1000600  TestAccount99  logout | the valid accounts file with an account 1000600 in it | the account name “TestAccount99” is not existent | the transaction summary file with EOS |
| T1.4 | deleteacct command, failed case with the account number which is more than seven decimal digits | check that deleteacct is not accepted when the account number which is more than seven decimal digits | login  agent  deleteacct 100060100000  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the account number to delete must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.5 | deleteacct command, failed case with the account number which is less than seven decimal digits | check that deleteacct is not accepted when the account number which is less than seven decimal digits | login  agent  deleteacct  1000  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the account number to delete must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.6 | deleteacct command, failed case with the account number which beginning with 0 | check that deleteacct is not accepted when the account number which beginning with 0 | login  agent  deleteacct  0000601  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the account number to delete must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| T1.7 | deleteacct command, failed case with the account number which includes the alphanumeric characters | check that createaccount is not accepted when the account number which includes the letters | login  agent  deleteacct  1aaaaa1  TheCreatedAccount01  logout | the valid accounts file with an account 1000600 in it | the account number to delete must be exactly seven decimal digits beginning with 1-9 | the transaction summary file with EOS |
| No further transactions should be accepted on a deleted account | T1.8 | deleteacct command, failed case with other transactions to a deleted account | check that other transactions such as deposit is not accepted to an account when the account is deleted | login  agent  deleteacct  1000600  TestAccount01  Deposit  logout | the valid accounts file with an account 1000600 in it | the account 1000600 000 TestAccount01 is deleted; the account number “1000600” is not existent in current accounts! | the transaction summary file with the transaction DEL 1000600 000 0000000 TestAccount01 and EOS |
| **Deposit test case** | | | | | | | |
| Accept valid  deposit  operation | T1.0 | Successfully  deposit in  ATM mode | Valid input  should be  accepted in ATM mode | Login  Atm  Deposit  1000327  001  Logout | Valid  account  list with input account | Successfully  deposit | transaction file with transaction |
| T1.1 | Successfully  deposit in  agent mode | Valid input  should be  accepted  in agent mode | Login  agent  Deposit  1000327  001  logout | Valid  account  list with input account | Successfully  deposit | transaction file with transaction |
| Deposit should check if the account is valid | T1.2 | deposit with invalid account (start with 0)  ATM mode | Assure invalid account is not accepted in ATM mode | Login  Atm  Deposit  0000327 | Valid account list | Error: invalid account | EOS |
| T1.3 | deposit with invalid account (lees than 7 digits)  ATM mode | Assure invalid account is not accepted in ATM mode | Login  Atm  Deposit  327  logout | Valid account list | Error: invalid account | EOS |
| T1.4 | deposit with invalid account (more than 7 digits)  ATM mode | Assure invalid account is not accepted in ATM mode | Login  Atm  Deposit  10003278  Logout | Valid account list | Error: invalid account | EOS |
| T1.5 | deposit with invalid account (mix with characters)  ATM mode | Assure invalid account is not accepted in ATM mode | Login  Atm  Deposit  327@abc | Valid account list | Error: invalid account | EOS |
| T1.6 | deposit with invalid account (start with 0)  agent mode | Assure invalid account is not accepted in agent mode | Login  agent  Deposit  0000327  Logout | Valid account list | Error: invalid account | EOS |
| T1.7 | deposit with invalid account (lees than 7 digits)  agent mode | Login  agent  Deposit  327  Logout | Valid account list | Error: invalid account | EOS |
| T1.8 | deposit with invalid account (more than 7 digits)  agent mode | Login  Agent  Deposit  10003278  Logout | Valid  Account list | Error: invalid account | EOS |
| T1.9 | deposit with invalid account (mix with characters)  agent mode | Login  Agent  Deposit  327@abc  Logout | Valid account list | Error: invalid account | EOS |
| Deny deposit with non-exists account | T2.0 | Non-exists account in ATM mode | Assure non-exists account is not accepted in ATM mode | Login  Atm  Deposit  1000327  Logout | Valid account list without input account | Error:  Non-exists account | EOS |
| T2.1 | Non-exists account in agent mode | Assure non-exists account is not accepted in agent mode | Login  agent  Deposit  1000327  Logout | Valid account list without input account | Error: Non-exists account | EOS |
| Deny deposit with invalid amount | T2.2 | Invalid amount  (underflow)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  Deposit  1000327  0  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.3 | Invalid amount  (overflow)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  Deposit  1000327  100000000  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.4 | Invalid amount  (mix-up)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  Deposit  1000327  Jk520@  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.5 | Invalid amount  (underflow)  Agent mode | Assure invalid amount is accepted in agent mode | Login  Agent  Deposit  1000327  0  Logout | Valid account with input account | Error: invalid amount | EOS |
| T2.6 | Invalid amount  (overflow)  Agent mode | Assure invalid amount is accepted in agent mode | Login  Agent  Deposit  1000327  100000000  Logout | Valid account with input account | Error: invalid amount | EOS |
| T2.7 | Invalid amount  (mix-up) | Assure invalid amount is accepted in agent mode | Login  Atm  Deposit  1000327  Jk520@  Logout | Valid account with input account | Error: invalid amount | EOS |
| **Withdraw test case** | | | | | | | |
| Accept valid withdraw request | T1.0 | Successfully withdraw in ATM mode | Valid withdraw request should be accepted in ATM mode | Login  Atm  Withdraw  1000327  10000000  Logout | Valid account list with input account | Successfully withdraw 100,000.00  From your account | transaction file with transaction |
| T1.1 | Successfully withdraw in agent mode | Valid withdraw request should be accepted in agent mode | Login  agent  Withdraw  1000327  10000000  Logout | Valid account list with input account | Successfully withdraw 100,000.00  From your account | transaction file with transaction |
| withdraw should check if the account number is valid | T1.2 | Withdraw with invalid account (start with 0)  ATM mode | Invalid withdraw request should be denied in ATM mode | Login  Atm  Withdraw  0000327  Logout | Valid account list | Error: invalid account | EOS |
| T1.3 | Withdraw with invalid account (lees than 7 digits)  ATM mode | Invalid withdraw request should be denied in ATM mode | Login  atm  Withdraw  327  Logout | Valid account list | Error:  Invalid account | EOS |
| T1.4 | Withdraw with invalid account (more than 7 digits) | Invalid withdraw request should be denied in ATM mode | Login  Atm  Withdraw  10003278  Logout | Valid account list | Error:  Invalid account | EOS |
| T1.5 | Withdraw with invalid account (mix up with characters)  ATM mode | Invalid withdraw request should be denied in ATM mode | Login  Atm  Withdraw  321@abc  Logout | Valid account list | Error: invalid account | EOS |
| T1.6 | Withdraw with invalid account (start with 0)  agent mode | Invalid withdraw request should be denied in agent mode | Login  agent  Withdraw  0000327  Logout | Valid account list | Error: invalid account | EOS |
| T1.7 | Withdraw with invalid account (lees than 7 digits)  agent mode | Invalid withdraw request should be denied in agent mode | Login  agent  Withdraw  327  Logout | Valid account list | Error:  Invalid account | EOS |
| T1.8 | Withdraw with invalid account (more than 7 digits) agent mode | Invalid withdraw request should be denied in agent mode | Login  Agent  Withdraw  10003278  Logout | Valid account list | Error:  Invalid account | EOS |
| T1.9 | Withdraw with invalid account (mix up with characters)  agent mode | Invalid withdraw request should be denied in agent mode | Login  agent  Withdraw  321@abc  Logout | Valid account list | Error: invalid account | EOS |
| Deny withdraw with non-exists account | T2.0 | Withdraw with non-exists account | Non-exists account  Should be denied in ATM mode | Login  Atm  Withdraw  1000327  Logout | Valid account list without input account | Error: non-exists account | EOS |
| T2.1 | Withdraw with non-exists account | Non-exists account  Should be denied in agent mode | Login  Agent  Withdraw  1000327  Logout | Valid account list without input account | Error: non-exists account | EOS |
| Deny withdraw with invalid amount | T2.2 | Invalid amount  (underflow)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  withdraw  1000327  0  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.3 | Invalid amount  (overflow)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  Withdraw  1000327  100000000  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.4 | Invalid amount  (mix-up)  ATM mode | Assure invalid amount is not accepted  In ATM mode | Login  Atm  withdraw  1000327  Jk520@  Logout | Valid account list with input account | Error: invalid amount | EOS |
| T2.5 | Invalid amount  (underflow)  Agent mode | Assure invalid amount is accepted in agent mode | Login  Agent  Withdraw  1000327  0  Logout | Valid account with input account | Error: invalid amount | EOS |
| T2.6 | Invalid amount  (overflow)  Agent mode | Assure invalid amount is accepted in agent mode | Login  Agent  Withdraw  1000327  100000000  Logout | Valid account with input account | Error: invalid amount | EOS |
| T2.7 | Invalid amount  (mix-up)  Agent mode | Assure invalid amount is accepted in agent mode | Login  Agent  Withdraw  1000327  Jk520@  Logout | Valid account with  input account | Error: invalid amount | EOS |
| **Transfer test case** | | | | | | | |
| Valid transfer request is accepted | T1.0 | Successfully transfer in atm mode | Assure correct transfer request is accepted | Login  Atm  Transfer  1000327  1000328  001  Logout | Valid account list with input accounts | Successfully transferred | transaction file with transaction |
| T1.1 | Successfully transfer in atm mode | Assure correct transfer request is accepted | Login  Agent  Transfer  1000327  1000328  001  Logout | Valid account list with input accounts | Successfully  Transferred | transaction file with transaction |
| Deny Transfer with incorrect sender’s  number | T1.2 | Wrong account (start with 0) transfer in ATM mode | Wrong sender’s number is not accepted in atm mode | Login  Atm  Transfer  0000327  Logout | Valid account list | Error: incorrect account | EOS |
| T1.3 | Wrong account (lees than 7 digits) in ATM mode | Wrong sender’s number is not accepted in atm mode | Login  Atm  Transfer  100327  Logout | Valid account list | Error: incorrect account | EOS |
| T1.4 | Wrong account (greater than 7 digits) in ATM mode | Wrong sender’s number is not accepted in atm mode | Login  Atm  Transfer  10003278  Logout | Valid account list | Error: incorrect account | EOS |
| T1.5 | Wrong account (mix with characters) in ATM mode | Wrong sender’s number is not accepted in atm mode | Login  Atm  Transfer  237@abc  Logout | Valid account list | Error: incorrect account | EOS |
| T1.6 | Wrong account (start with 0) transfer in agent mode | Wrong sender’s number is not accepted in agent mode | Login  agent  Transfer  0000327  Logout | Valid account list | Error: incorrect account | EOS |
| T1.7 | Wrong account (lees than 7 digits) in agent mode | Wrong sender’s number is not accepted in agent mode | Login  agent  Transfer  100327  Logout | Valid account list | Error: incorrect account | EOS |
| T1.8 | Wrong account (greater than 7 digits) in agent mode | Wrong sender’s number is not accepted in agent mode | Login  agent  Transfer  10003278  Logout | Valid account list | Error: incorrect account | EOS |
| T1.9 | Wrong account (mix with characters) in agent mode | Wrong sender’s number is not accepted in agent mode | Login  Agent  Transfer  237@abc  Logout | Valid account list | Error: incorrect account | EOS |
| Deny Transfer with incorrect receiver’s  number | T2.0 | Wrong receiver’s account (start with 0) transfer in ATM mode | Wrong receiver’s account is not accepted in atm mode | Login  Atm  Transfer  1000327  0008298  Logout | Valid account list | Error: incorrect account | EOS |
| T2.1 | Wrong  receiver’s account (lees than 7 digits) in ATM mode | Wrong receiver’s account is not accepted in atm mode | Login  Atm  Transfer  1000327  8298  Logout | Valid account list | Error: incorrect account | EOS |
| T2.2 | Wrong  receiver’s account (greater than 7 digits) in ATM mode | Wrong receiver’s account is not accepted in atm mode | Login  Atm  Transfer  1000327  10000327  Logout | Valid account list | Error: incorrect account | EOS |
| T2.3 | Wrong  receiver’s account (mix with characters) in ATM mode | Wrong receiver’s account is not accepted in atm mode | Login  Atm  Transfer  1000327  237@abc  Logout | Valid account list | Error: incorrect account | EOS |
| Deny Transfer with incorrect receiver’s  number | T2.4 | Wrong  receiver’s account (start with 0) transfer in agent mode | Wrong receiver’s account is not accepted in agent mode | Login  Agent  Transfer  1000327  0008298  Logout | Valid account list | Error: incorrect account | EOS |
| T2.5 | Wrong  receiver’s account (lees than 7 digits) in agent mode | Wrong receiver’s account is not accepted in agent mode | Login  agent  Transfer  1000327  8298  Logout | Valid account list | Error: incorrect account | EOS |
| T2.6 | Wrong  receiver’s account (greater than 7 digits) in agent mode | Wrong receiver’s account is not accepted in agent mode | Login  agent  Transfer  1000327  10000327  Logout | Valid account list | Error: incorrect account | EOS |
| T2.7 | Wrong  receiver’s account (mix with characters) in agent mode | Wrong receiver’s account is not accepted in agent mode | Login  agent  Transfer  1000327  237@abc  Logout | Valid account list | Error: incorrect account | EOS |
| Transfer cannot be done when account is nonexistent | T2.8 | Non-exists sender’s account in atm mode | Non-exists sender’s request is not accepted  In atm mode | Login  atm  Transfer  1000327  Logout | Valid account without 1000327 | Error: non-exists account | EOS |
| T2.9 | Non-exists receiver’s account in atm mode | Non-exists receiver’s request is not accepted  In atm mode | Login  Atm  Transfer  1000327  1000328  Logout | Valid account with 1000327 but without 1000328 | Error: non-exists account | EOS |
| T3.0 | Non-exists sender’s account in agent mode | Non-exists sender’s request is not accepted in agent mode | Login  Agent  Transfer  1000327  Logout | Valid account without 1000327 | Error: non-exists account | EOS |
| T3.1 | Non-exists receiver’s account in agent mode | Non-exists receiver’s request is not accepted in agent mode | Login  Agent  Transfer  1000327  1000328  Logout | Valid account with 1000327 but without 1000328 | Error: non-exists account | EOS |
| Transfer cannot be accepted with incorrect amount | T3.2 | Transfer with Invalid amount  (underflow)  atm mode | Invalid transfer amount is not accepted in atm mode | Login  atm  Transfer  1000327  1000328  1  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |
| T3.3 | Transfer with Invalid amount  (overflow)  atm mode | Invalid transfer amount is not accepted in atm mode | Login  atm  Transfer  1000327  1000328  100000000  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |
| T3.4 | Transfer with Invalid amount  (mix-up)  atm mode | Invalid transfer amount is not accepted in atm mode | Login  atm  Transfer  1000327  1000328  100@abc  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |
| T3.5 | Transfer with Invalid amount  (underflow)  agent mode | Invalid transfer amount is not accepted in atm mode | Login  agent  Transfer  1000327  1000328  1  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |
| T3.6 | Transfer with Invalid amount  (overflow)  agent mode | Invalid transfer amount is not accepted in atm mode | Login  agent  Transfer  1000327  1000328  100000000  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |
| T3.7 | Transfer with Invalid amount  (mix-up)  agent mode | Invalid transfer amount is not accepted in atm mode | Login  agent  Transfer  1000327  1000328  100@abc  Logout | Valid account with 1000327 and 1000328 | Error: invalid amount | EOS |