

CSCI 3060U – Course Project (Winter 2025)

Phase #1: Front End Requirements

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Folder Structure

CSCI3060U_Phase1/

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| └── Phase1_FrontEnd_Requirements_Documentation.docx

|

| └── **scripts/**

| | └── run_all.sh

| | └── check_all.sh

|

| └── **tests/**

|

| └── currentaccounts.txt

|

| └── **test_cases/**

| | └── *.txt

| | (each file is one complete front-end session)

|

| └── **expected_outputs/**

| | └── *.txt

(expected transaction file output for each test case)

Test Run Plan

Planned execution will run the Front End once per input file, saving both: (a) the terminal log output (.out) and (b) the daily transaction output file (.atf). The provided scripts in scripts/ illustrate the intended automation and how output comparisons will be performed (run_all.sh executes the suite, check_all.sh compares produced .atf files against expected .txt files).

Test Case List and Intentions

Test ID	Intention (English description)
01_login_and_logout	Standard login followed by logout produces an end-of-session record.
02_transaction_before_login_rejected	Any transaction issued before login is rejected.
03_second_login_in_same_session_rejected	A second login command during an active session is rejected.
04_standard_withdrawal_at_500_limit	Standard withdrawal of exactly \$500 is accepted.
05_standard_withdrawal_above_500_rejected	Standard withdrawal above \$500 is rejected.
06_withdrawal_causing_negative_balance_rejected	Withdrawal that would cause a negative balance is rejected.
07_standard_deposit_recorded	Standard deposit is accepted and recorded.
08_deposit_not_available_within_same_session	Deposited funds are not available for use in the same session.
09_standard_transfer_up_to_1000_allowed	Standard transfer of up to \$1000 is accepted.
10_standard_transfer_above_1000_rejected	Standard transfer above \$1000 is rejected.
11_paybill_valid_company_within_limit	Paybill with a valid company code and amount within limit is accepted.
12_paybill_invalid_company_rejected	Paybill with an invalid company code is rejected.
13_paybill_above_2000_rejected	Paybill amount above \$2000 is rejected in standard mode.

14_transaction_on_disabled_account_rejected	Any transaction on a disabled account is rejected.
15_admin_withdrawal_from_other_user_account	Admin withdrawal can access another user's account.
16_standard_user_cannot_create_account	Standard user cannot perform create account operation.
17_admin_can_create_account	Admin create account is accepted and recorded.
18_admin_can_disable_account	Admin disable account operation is accepted.
19_admin_can_delete_account	Admin delete account operation is accepted.
20_admin_can_change_account_plan	Admin changeplan operation is accepted.

Expected Output Convention

Each expected output file in `expected_outputs/` contains the expected Bank Account Transaction File (ATF) lines for that session, ending with an EOF record. Files are saved as .txt for Phase #1 submission readability.

Requirements Problems / Ambiguities Found

1. Create: Requirements describe unique account numbers, but do not clearly state whether the Front End prompts for an account number during create, or how that number is chosen.
2. Transfer: ATF format includes only a 2-character misc field, but a transfer requires a full destination account number. This suite records the last two digits of the destination account in misc as a placeholder convention.
3. ATF fixed-width: Requirements mention fixed-length output, spacing and total-character counts are ambiguous when field separators are included. This suite uses a consistent 40-character line format.
4. Changeplan: Requirements mention switching plan types (SP/NP), but plan is not present in the Current Accounts file format, so it is unclear what is being changed or validated at the Front End.
5. Terminal output: Prompt text and exact error messages are not fully standardized, making it difficult to define expected terminal logs as requirement tests in Phase #1.