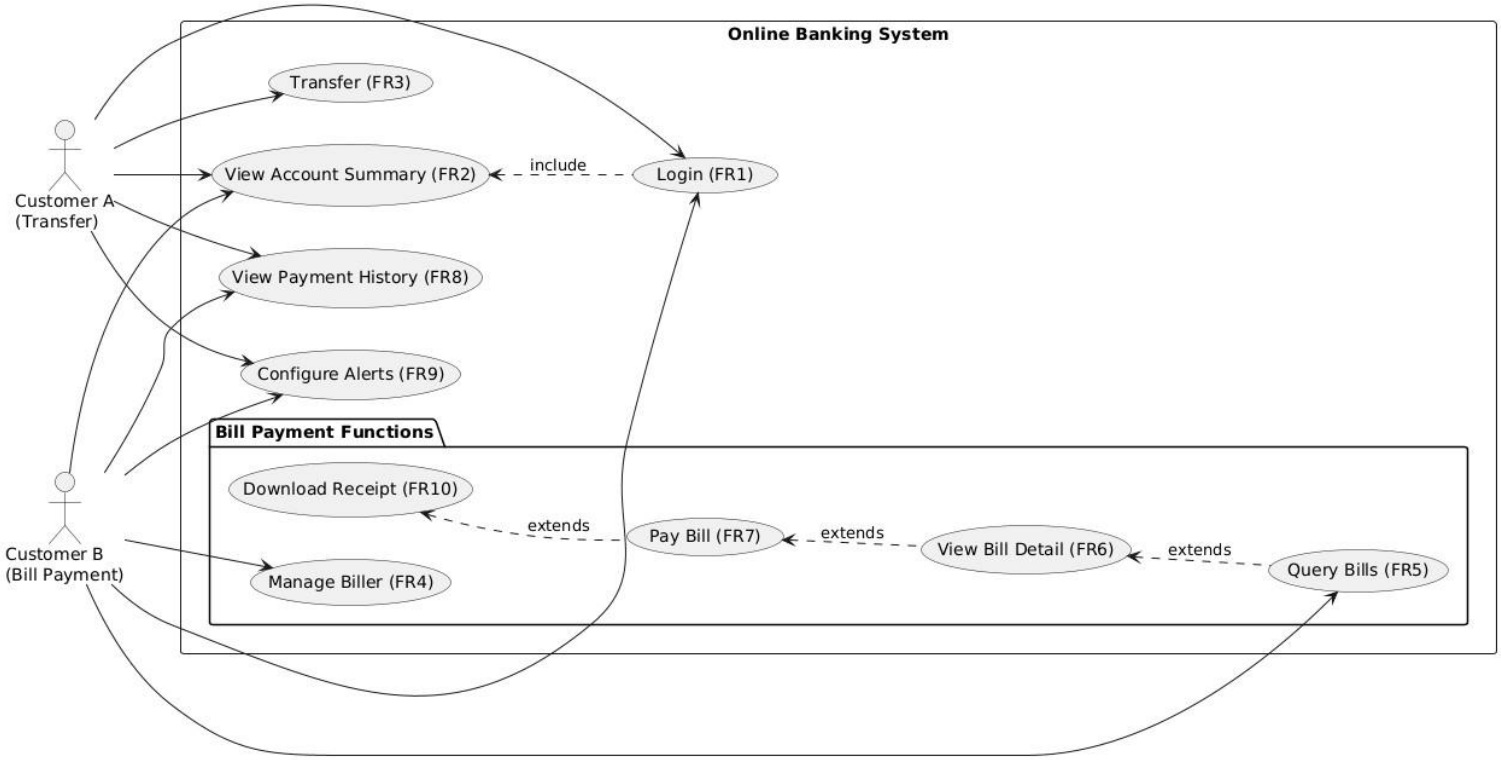
MIDTERM TEST

Họ và tên: Huỳnh Trần Thu Thảo

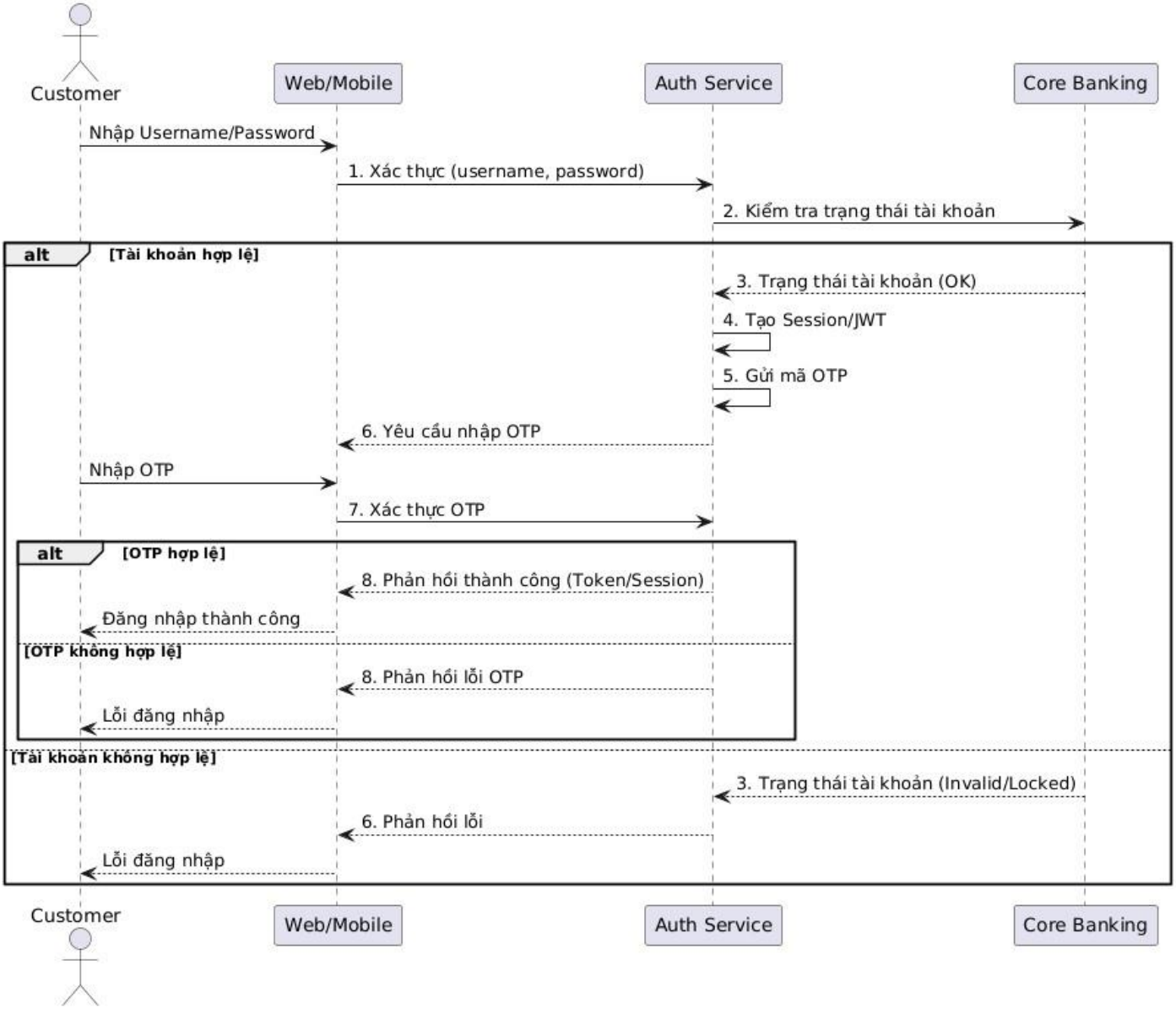
MSSV: N23DCPT105

1. Use Case Diagram

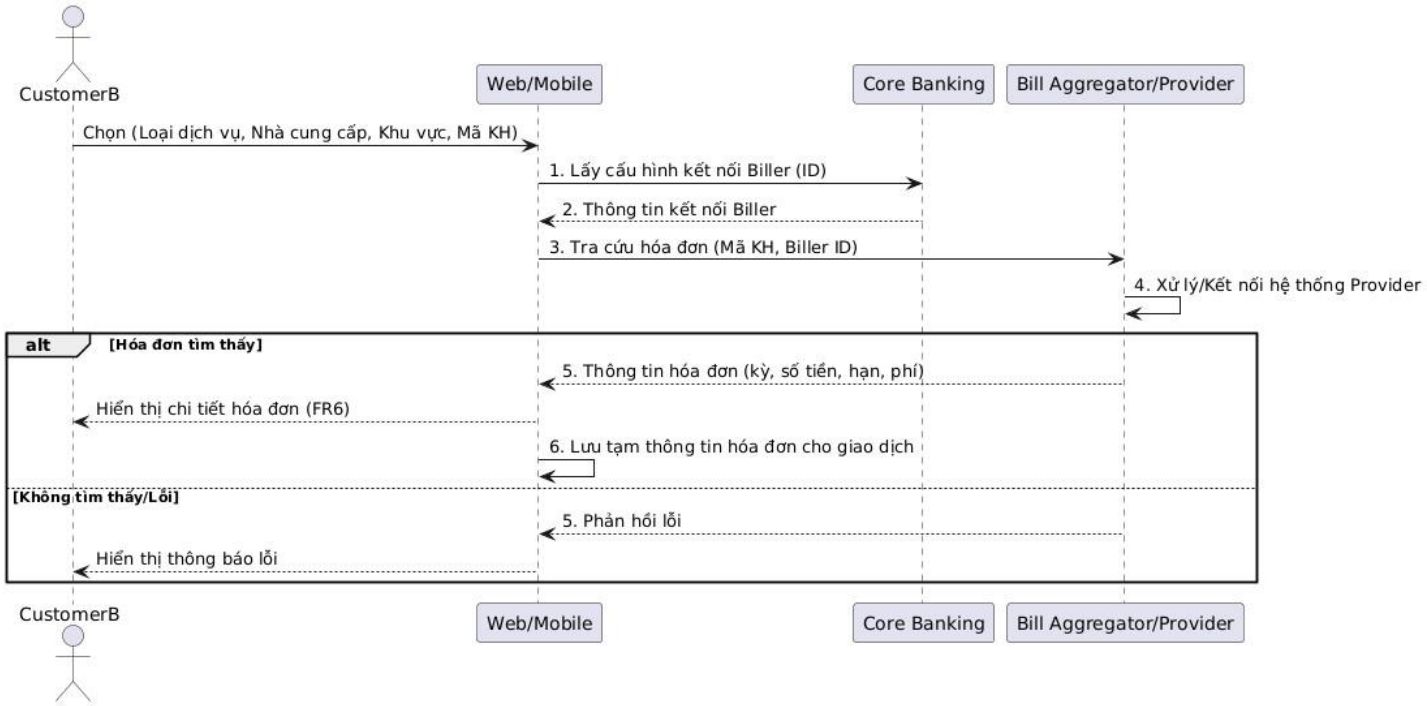


2. Sequence Diagram

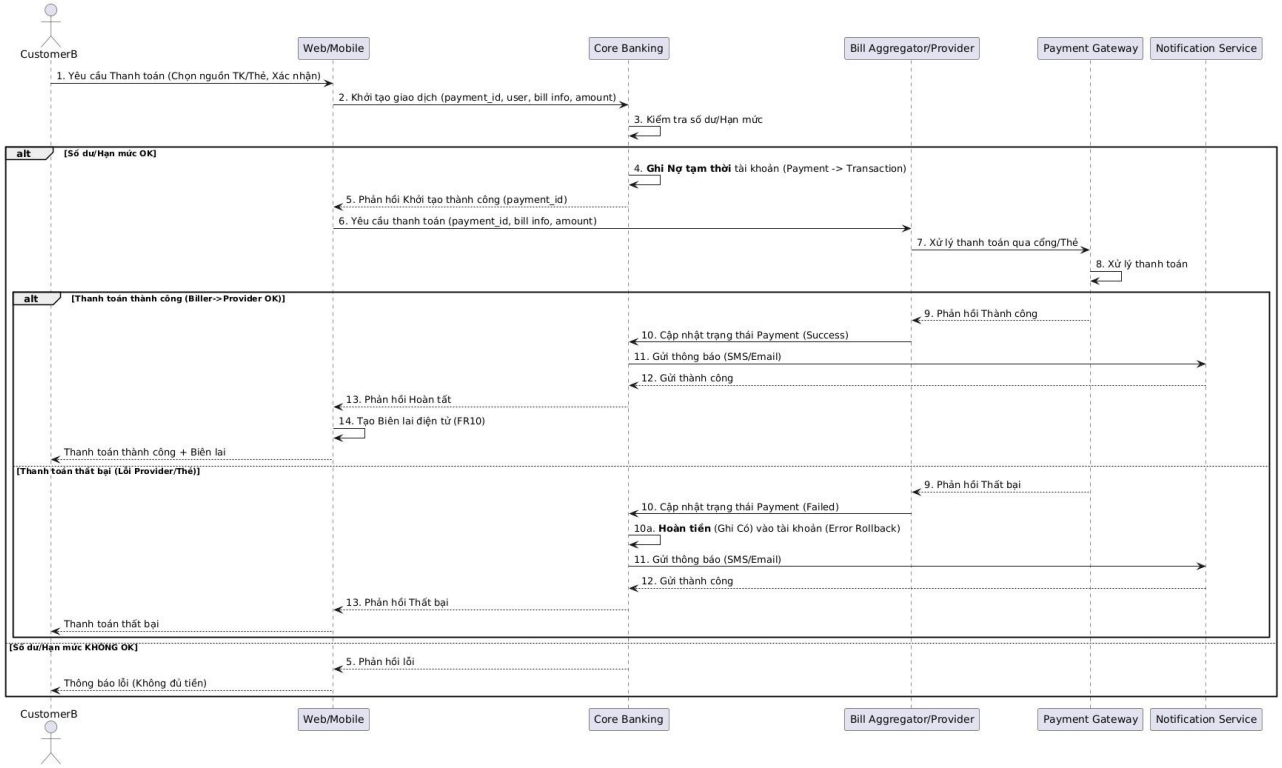
a. Login Sequence Diagram



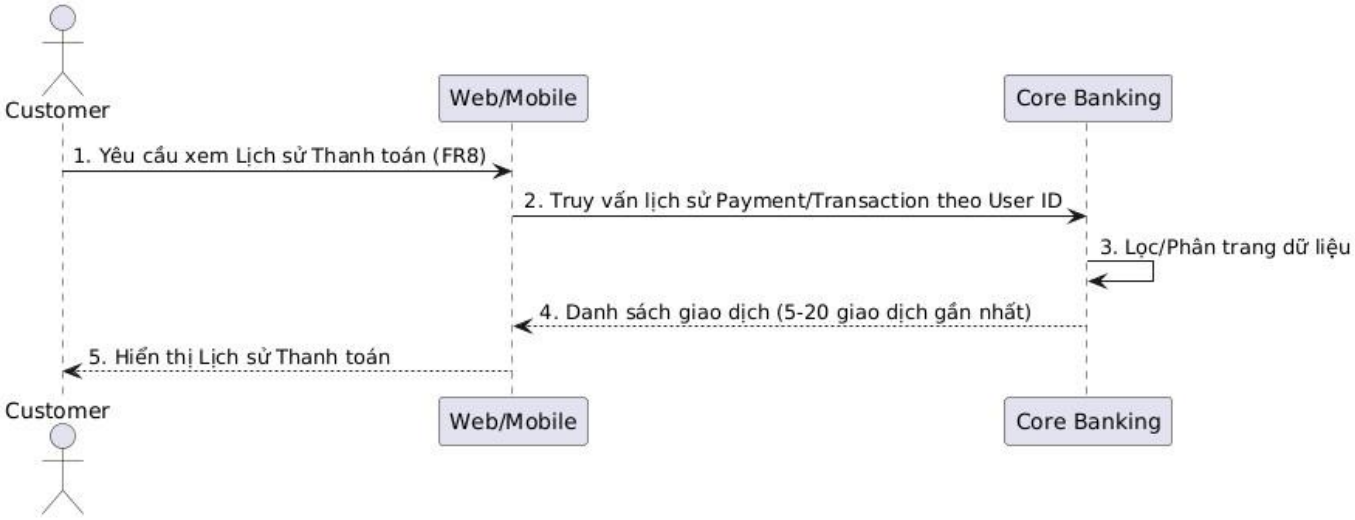
b. Query Bill Sequence Diagram



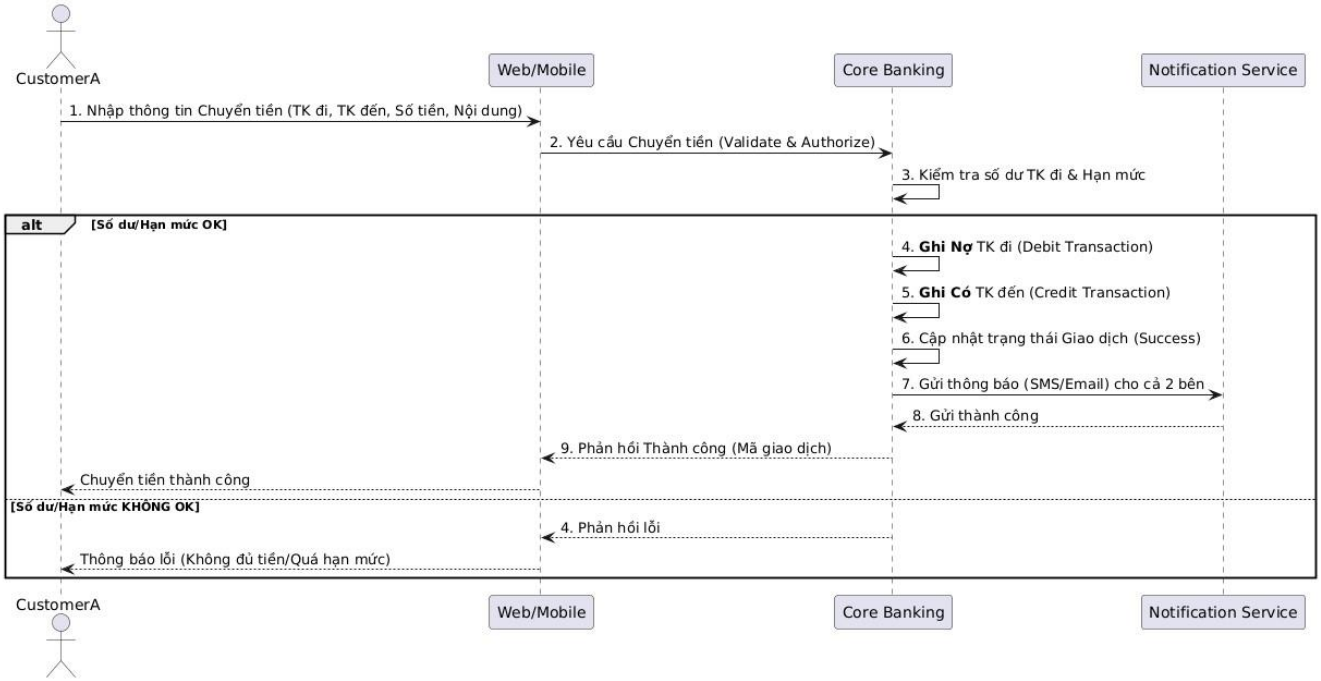
c. Pay Bill Sequence Diagram



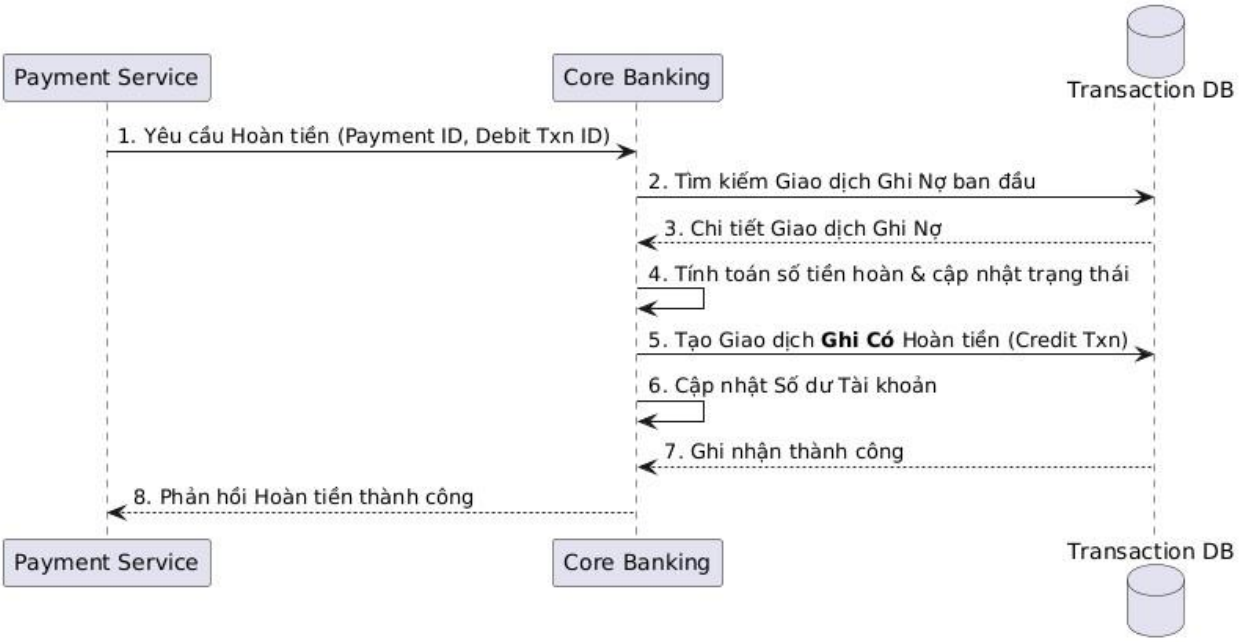
d. View Payment History Sequence Diagram



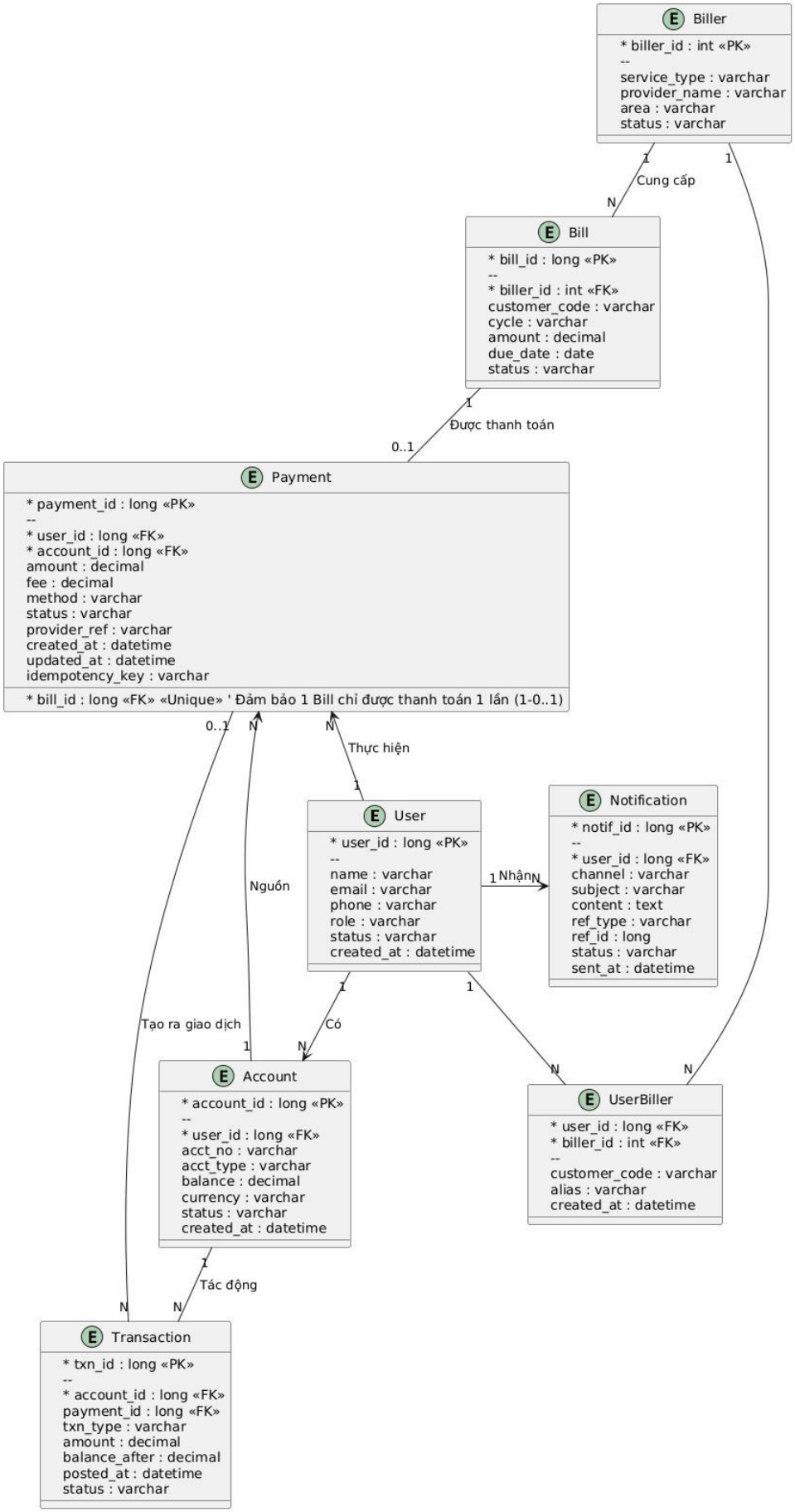
e. Transfer Money



f. Error Rollback Sequence Diagram



3. ERD


Biller
* biller_id : int «PK»
--
service_type : varchar
provider_name : varchar
area : varchar
status : varchar
1
Cung cấp
N
1
Bill
* bill_id : long «PK»
--
* biller_id : int «FK»
customer_code : varchar
cycle : varchar
amount : decimal
due_date : date
status : varchar
1
Được thanh toán
0..1
Payment
* payment_id : long «PK»
--
* user_id : long «FK»
* account_id : long «FK»
amount : decimal
fee : decimal
method : varchar
status : varchar
provider_ref : varchar
created_at : datetime
updated_at : datetime
idempotency_key : varchar
* bill_id : long «FK» «Unique» ' Đảm bảo 1 Bill chỉ được thanh toán 1 lần (1-0..1)
0..1
N
N
Thực hiện
1
User
* user_id : long «PK»
--
name : varchar
email : varchar
phone : varchar
role : varchar
status : varchar
created_at : datetime
1
Nhận
N
Notification
* notif_id : long «PK»
--
* user_id : long «FK»
channel : varchar
subject : varchar
content : text
ref_type : varchar
ref_id : long
status : varchar
sent_at : datetime
Nguồn
Tạo ra giao dịch
1
1
Có
N
1
1
N
N
Account
* account_id : long «PK»
--
* user_id : long «FK»
acct_no : varchar
acct_type : varchar
balance : decimal
currency : varchar
status : varchar
created_at : datetime
UserBiller
* user_id : long «FK»
* biller_id : int «FK»
--
customer_code : varchar
alias : varchar
created_at : datetime
1
Tác động
N
N
Transaction
* txn_id : long «PK»
--
* account_id : long «FK»
payment_id : long «FK»
txn_type : varchar
amount : decimal
balance_after : decimal
posted_at : datetime
status : varchar