|  |
| --- |
| -- Task 2.1 |
|  | CREATE ROLE accountant; |
|  | CREATE ROLE administrator; |
|  | CREATE ROLE support; |
|  | GRANT SELECT, INSERT ON accounts, transactions TO accountant; |
|  | GRANT ALL PRIVILEGES ON accounts, customers, transactions TO administrator; |
|  | GRANT INSERT, UPDATE, DELETE ON accounts, customers TO support; |
|  | -- Task 2.2 |
|  | CREATE USER user\_1; |
|  | CREATE USER user\_2; |
|  | CREATE USER user\_3; |
|  | GRANT administrator to user\_1; |
|  | GRANT accountant to user\_2; |
|  | GRANT support to user\_3; |
|  | -- Task 2.3 |
|  | CREATE USER God; |
|  | GRANT ALL PRIVILEGES on accounts, customers, transactions TO God WITH GRANT OPTION; |
|  | -- Task 2.4 |
|  | REVOKE ALL PRIVILEGES ON accounts, customers, transactions FROM GOD; |
|  | -- Task 3.2 |
|  | ALTER TABLE customers |
|  | ALTER COLUMN name SET NOT NULL; |
|  | ALTER TABLE customers |
|  | ALTER COLUMN birth\_date SET NOT NULL; |
|  | -- Task 5.1 |
|  | CREATE INDEX acc\_cur ON accounts (customer\_id, currency); |
|  | -- Task 5.2 |
|  | CREATE INDEX cur\_bal ON accounts (currency, balance); |
|  | -- Task 6 |
|  | DO |
|  | $$ |
|  | DECLARE |
|  | bal INT; |
|  | lim INT; |
|  | BEGIN |
|  | -- SAVEPOINT s1; |
|  | UPDATE accounts |
|  | SET balance = balance - 400 |
|  | WHERE account\_id = 'RS88012'; |
|  | UPDATE accounts |
|  | SET balance = balance + 400 |
|  | WHERE account\_id = 'NT10204'; |
|  | SELECT balance INTO bal FROM accounts WHERE account\_id = 'RS88012'; |
|  | SELECT accounts.limit INTO lim FROM accounts WHERE account\_id = 'RS88012'; |
|  | IF bal < lim THEN |
|  | -- ROLLBACK TO SAVEPOINT s1; |
|  | UPDATE transactions SET status = 'rollback' WHERE id = 3; |
|  | ELSE |
|  | COMMIT; |
|  | UPDATE transactions SET status = 'commited' WHERE id = 3; |
|  | END IF; |
|  | END; |
|  | $$ |