

UML Diagrams

Structural
(Static)

Behavioural
(Dynamic)

7

7

Class
Diagram

Sequence
Diagram

Class Diagram

Public → +, Private → -
Protected → #

① Class Structure

② Association / Connection

<<Abstract>>

Class Car {
 private:
 String brand;
 String model;
 int engineCC;
 }
 Public:

void StartEngine();
" StopEngine();
" accelerate();
" break;"

Car {
 brand: String;
 model: String;
 #engineCC: int
}

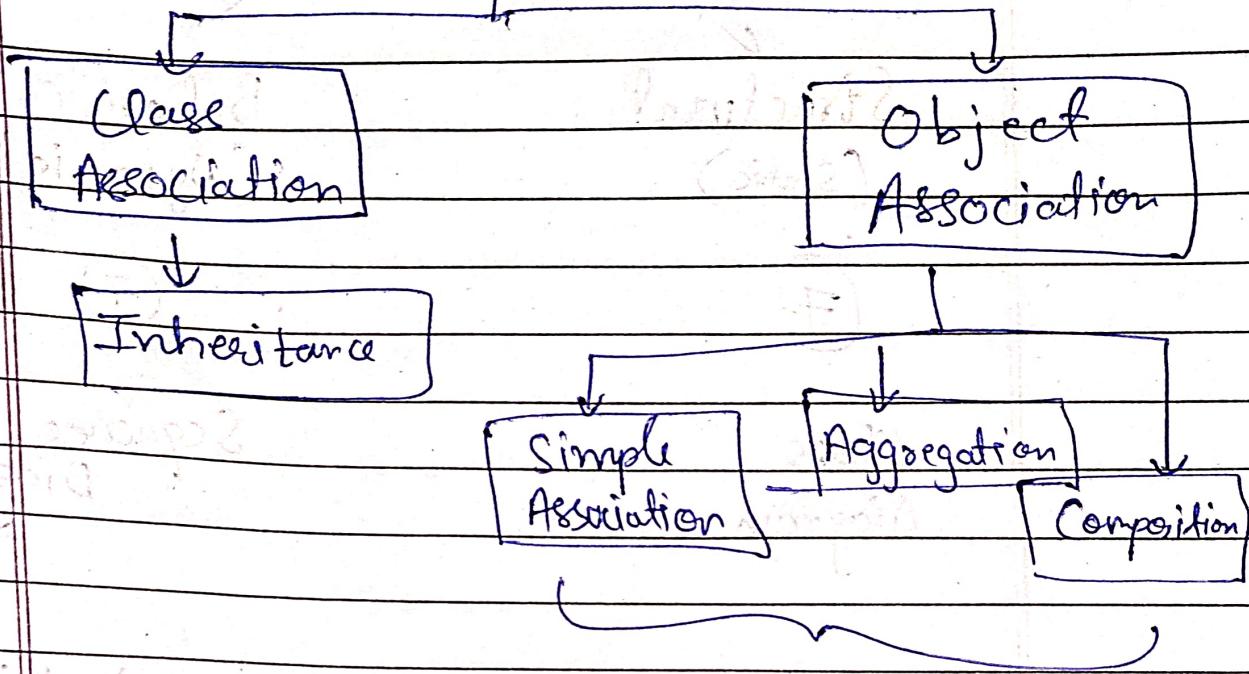
} Class Name

} Characters
Variables

+ StartEngine(): void
+ stopEngine(): void
+ accelerate(): void
+ break(): void

} Behaviours
Method

Associations



Inheritance

(is-a) relationship.

Class A {

method1();

}

Class B : Public A {

method2();

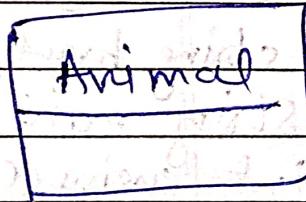
}

main() {

B * b = new B();

b → method1();

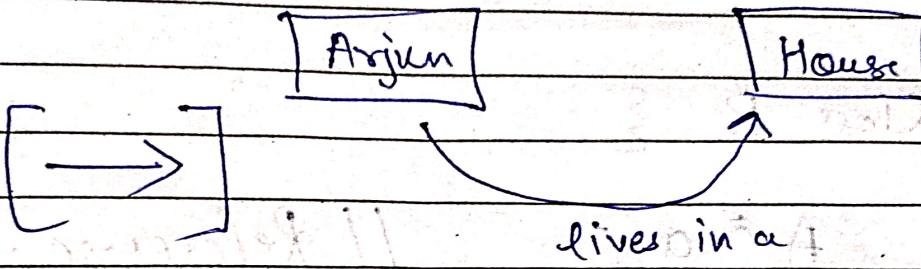
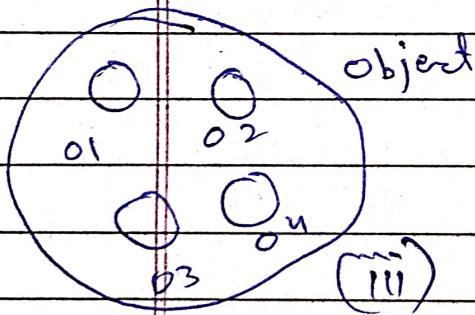
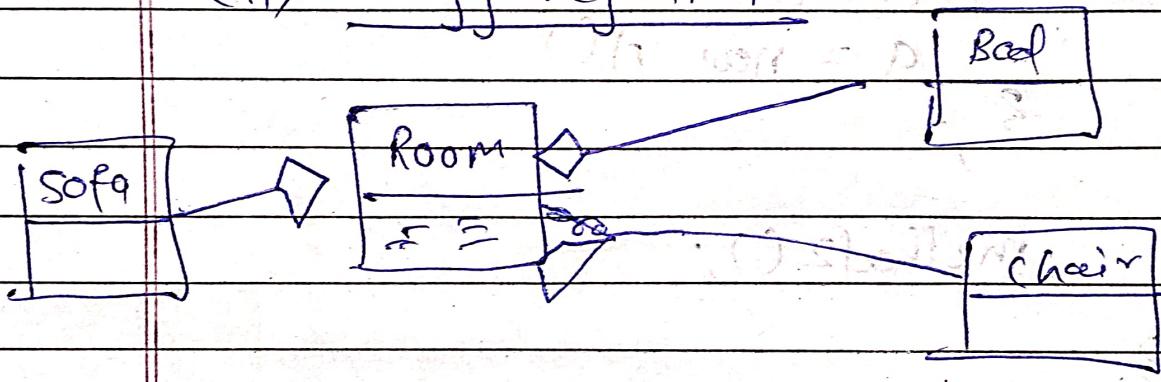
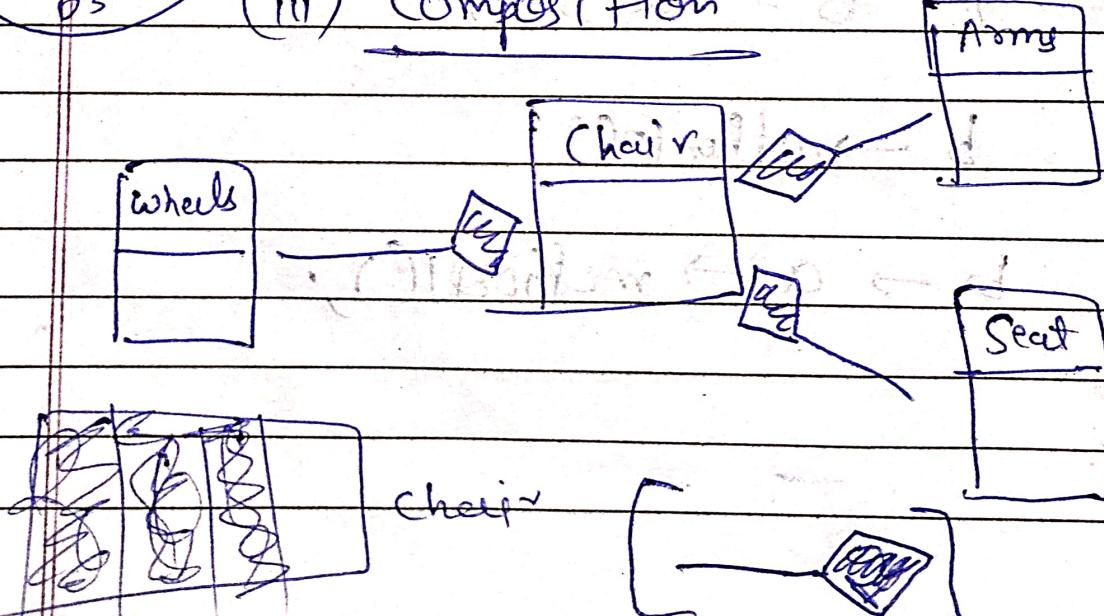
b → method2();



Cow

Composition

↳ (has -a) relationship

(i) Simple Association(ii) Aggregation(iii) Composition

Class A {

 methods();

}

 branch 1

Class B {

 A * a; // references

 B() {

 a = new A();

}

 method2();

}

Main () {

 B * b = new B();

 b → method2();

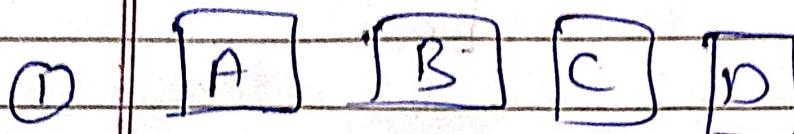
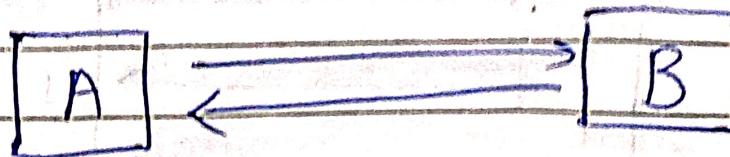
 b → a → method1();

}

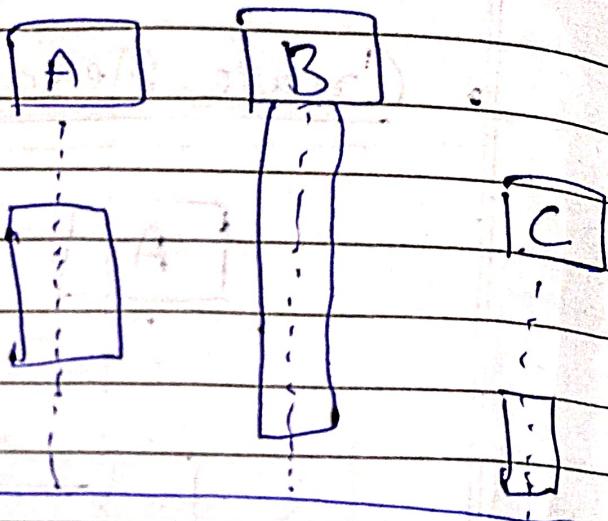
Sequence Diagram

communication

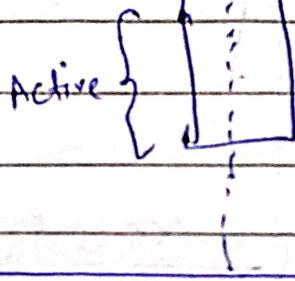
(Interaction)



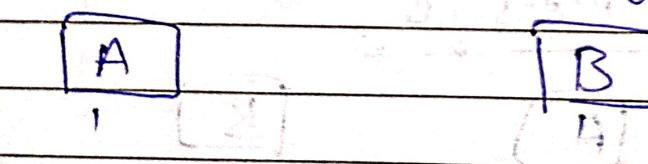
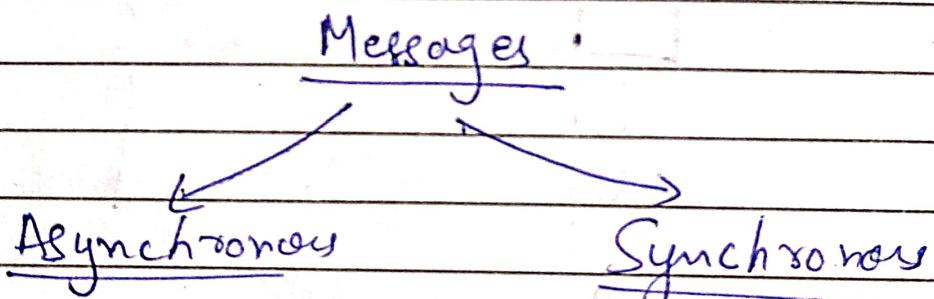
② Lifeline



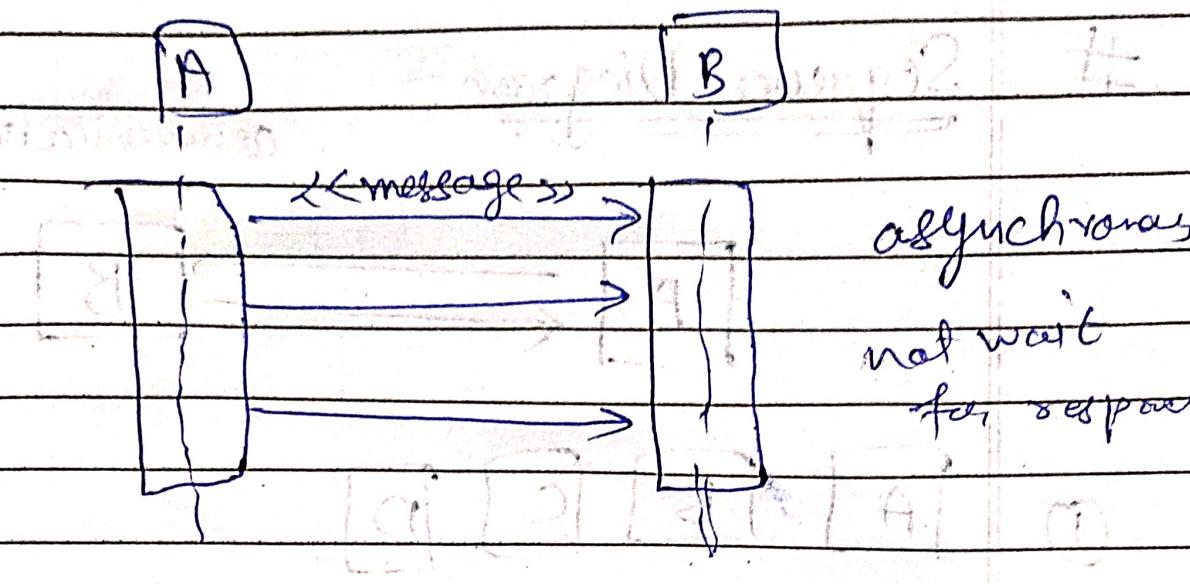
③ Activation Bar



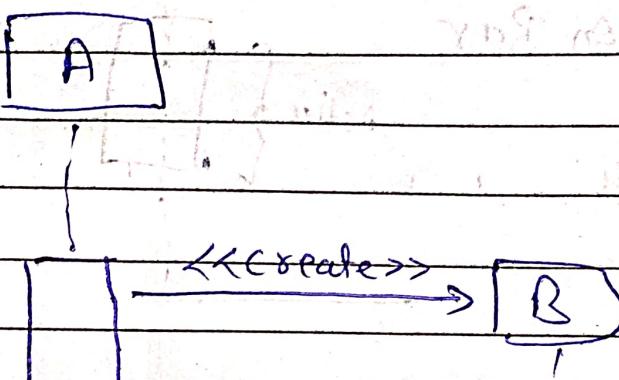
④ Message



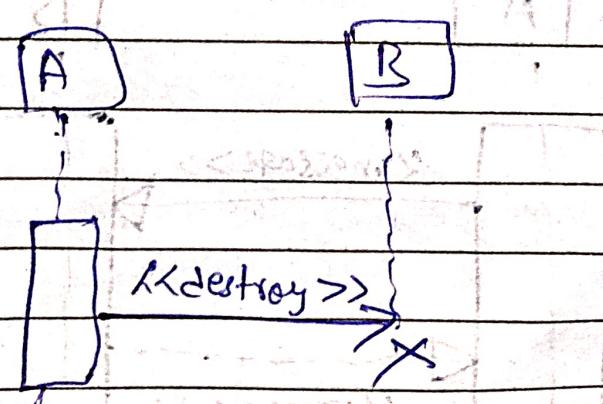
Synchronous
wait for
response



Create Message



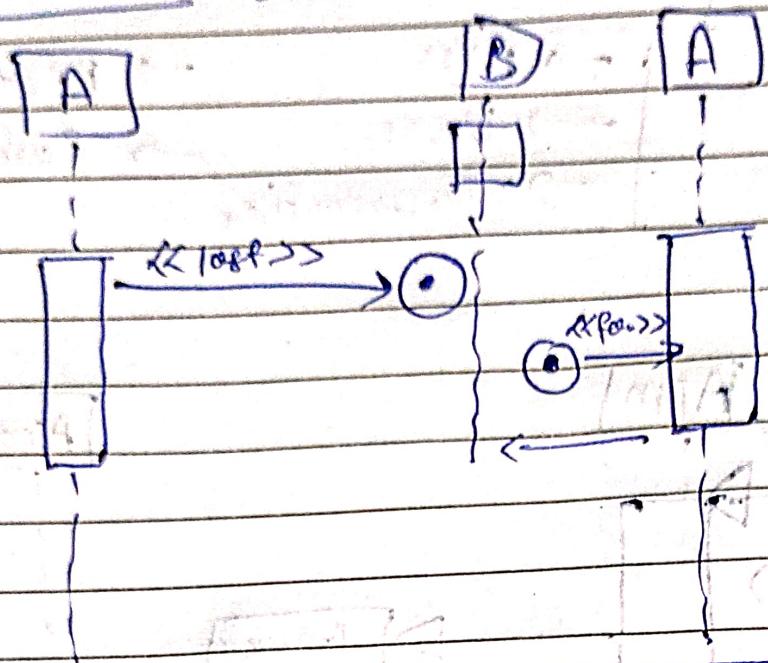
Destroy Message



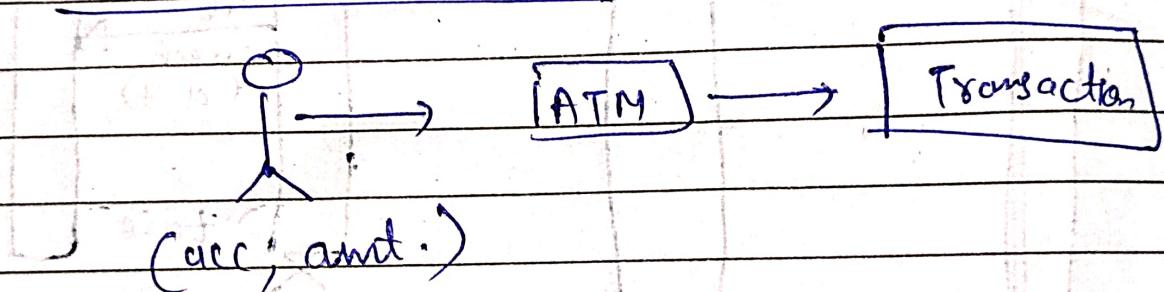
Date: / /

Lost Message

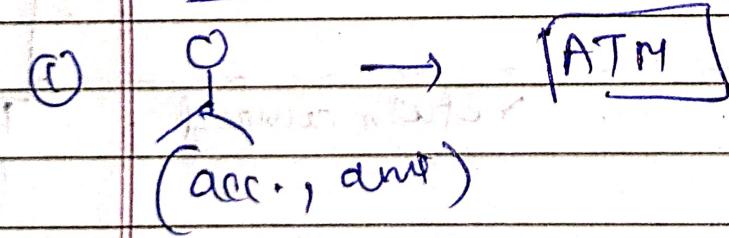
Found Message



ATM Transaction Flow



Use Case



① Verify ATM pin

② Verify acc

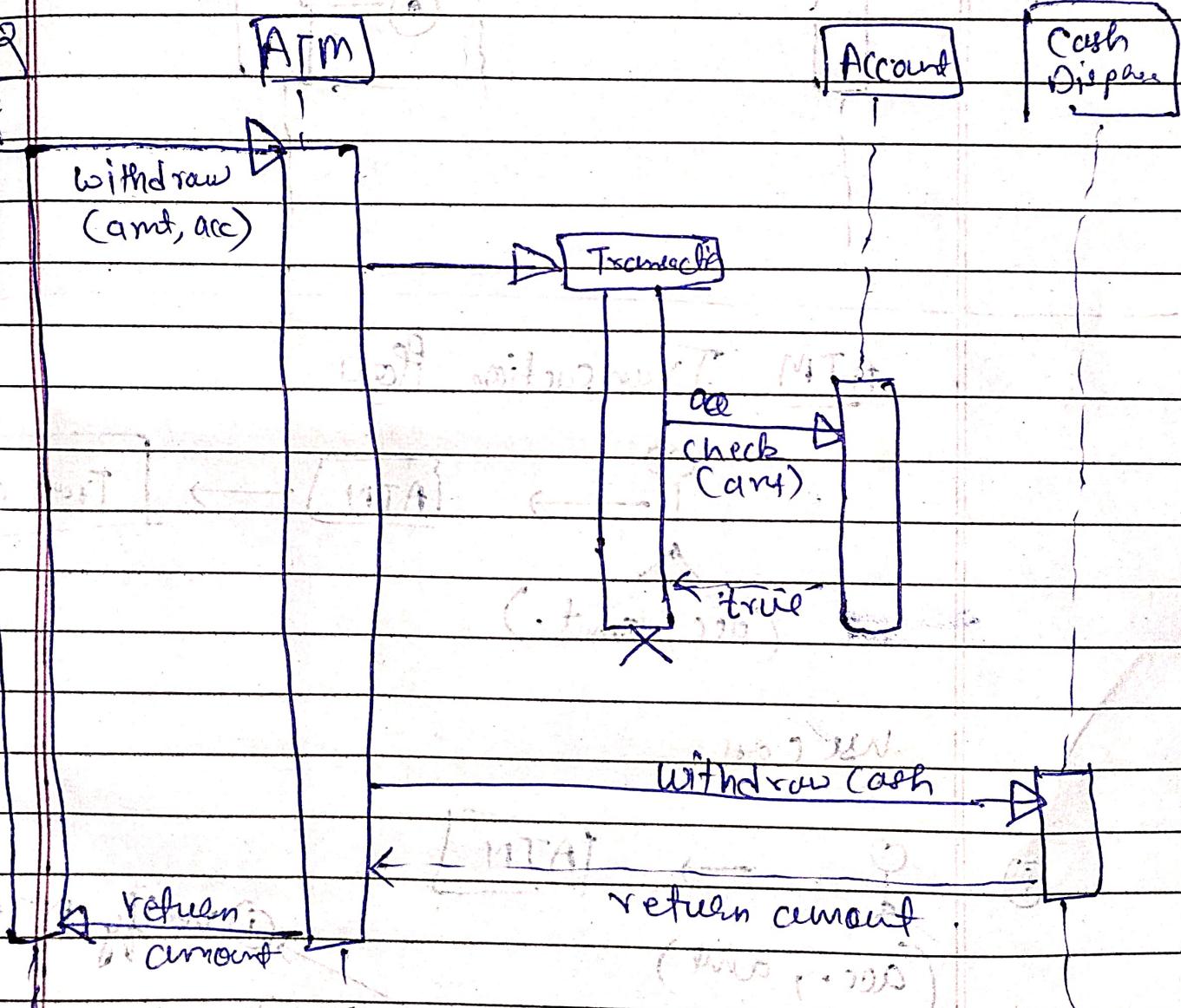
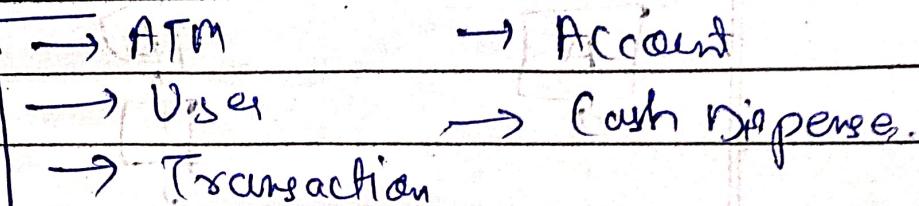
③ Tell Cash Dispense
for Money



Sequence Diagram

① Use case

② Objects



alt/else (if-else) ~~initial~~

option: (if)

loop: for/while.