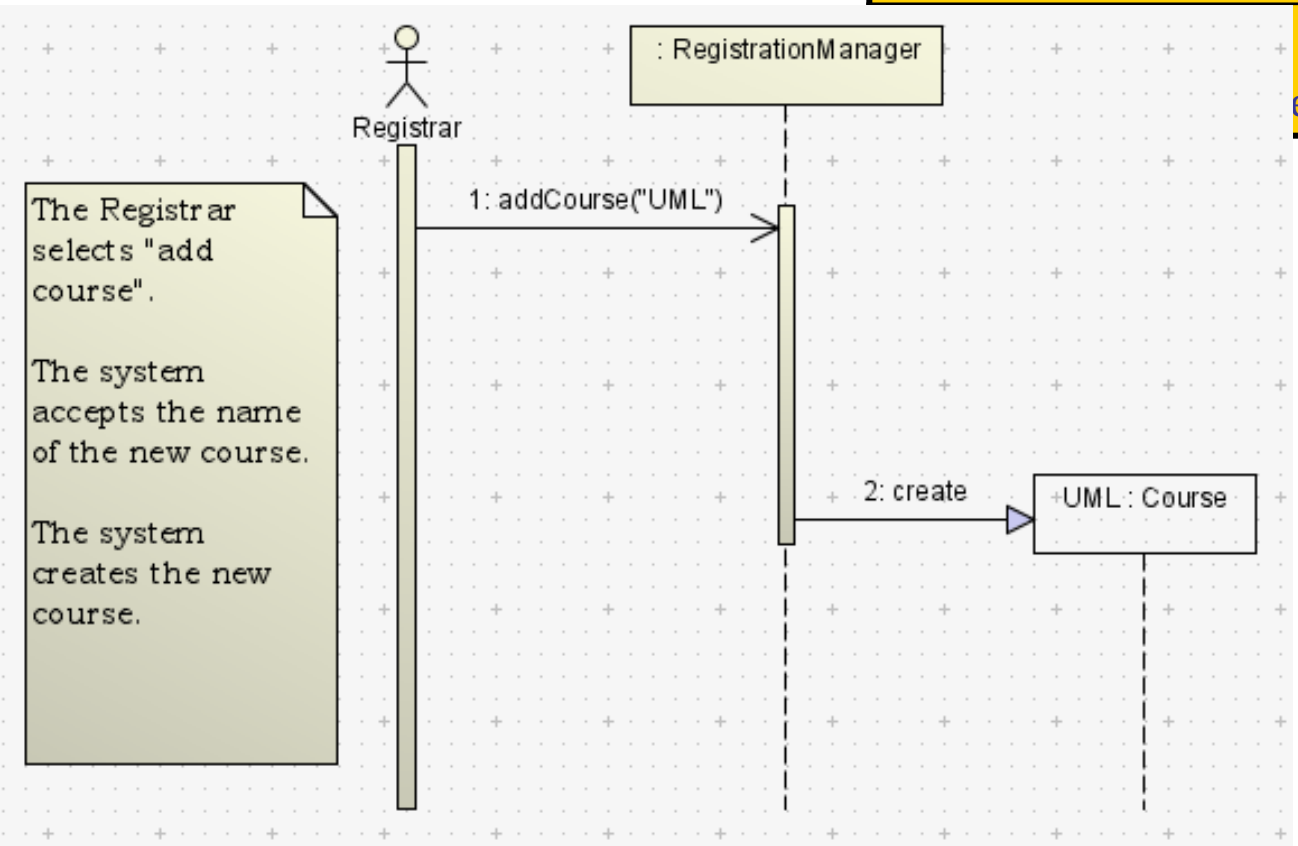
실습

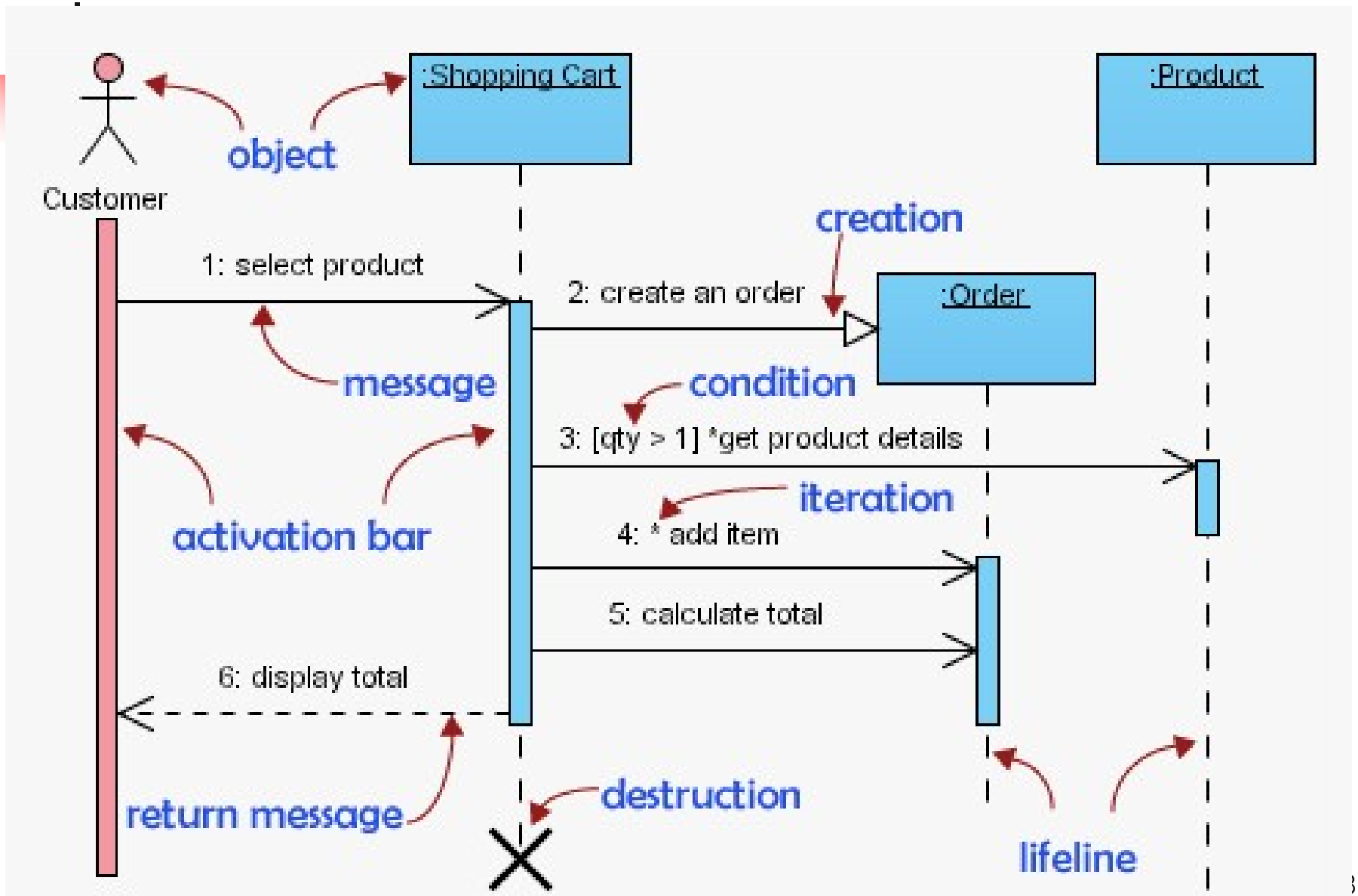
Sequence Diagram

UC & SD

Use case : AddCourse
ID: UC8
Actors: Registrar
Preconditions: The Registrar has logged on to the system.
Flow of events: 1. The Registrar selects “add course”. 2. The system accepts the name of the new course. 3. The system creates the new course.
en added to the system.



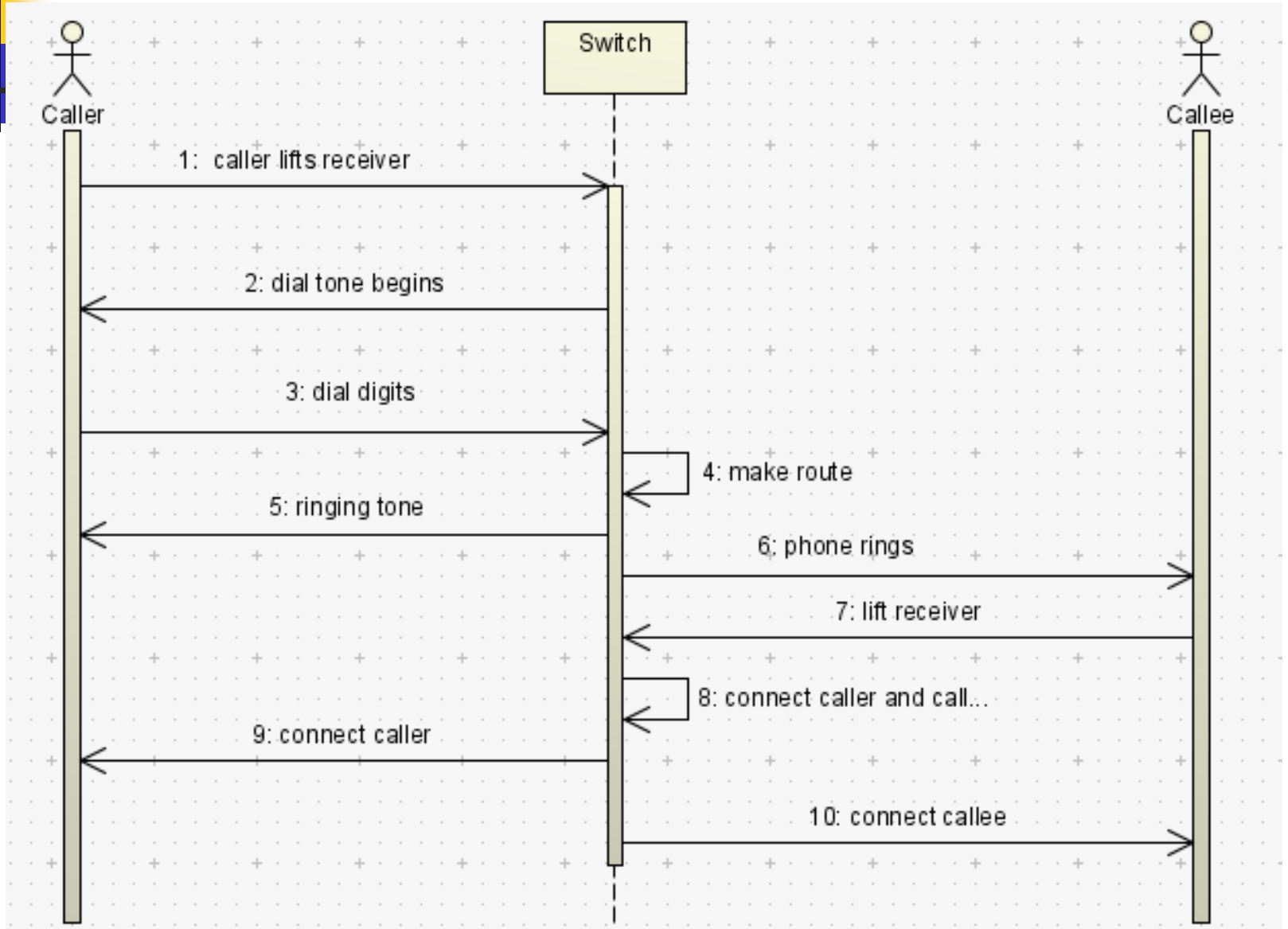
Sequence Diagram



Scenario for making a phone call

1. Caller lifts receiver
2. Dial tone begins
3. Caller dials digits one at a time
4. Switch makes routing
5. Ringing tone on caller's receiver begins
6. Phone rings on callee's receiver begins
7. Callee lifts receiver
8. Switch makes connection between caller and callee
    1. Switch connects callee
    2. Switch connects caller

Sequence Diagram

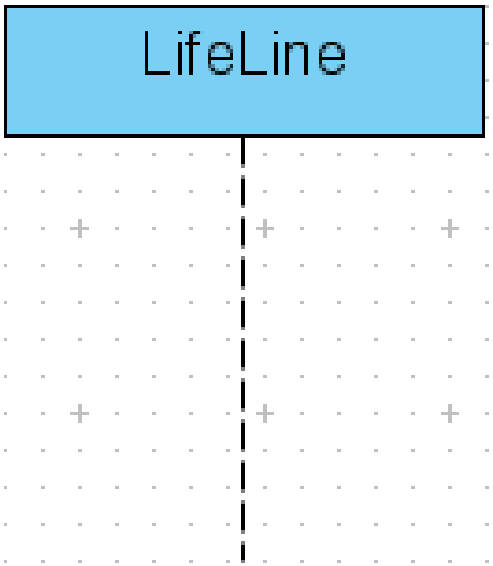


Sequence Diagram표기법

- Object
- 생명선
- 활성구간
- 메시지
  - 同期메시지
    - 메시지에 대한 수신측의 처리종료를 대기
    - 송신측에서는, 수신측의 처리가 종료될때까지 다른 메시지송신이 불가능
  - 非同期메시지
    - 메시지에 대한 수신측의 처리종료를 대기하지 않고, 다른 메시지송신이 가능
- Self message
- 생성과 삭제

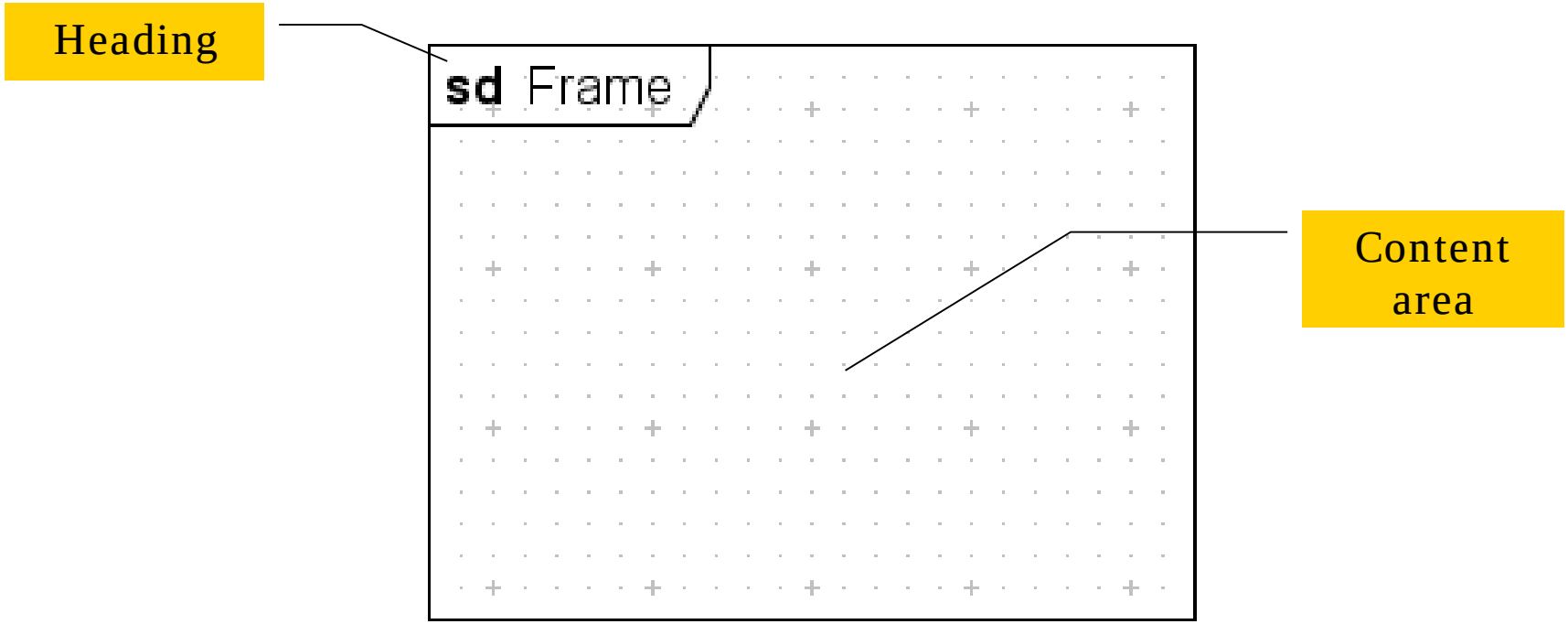
LifeLine

Examples of lifeline names

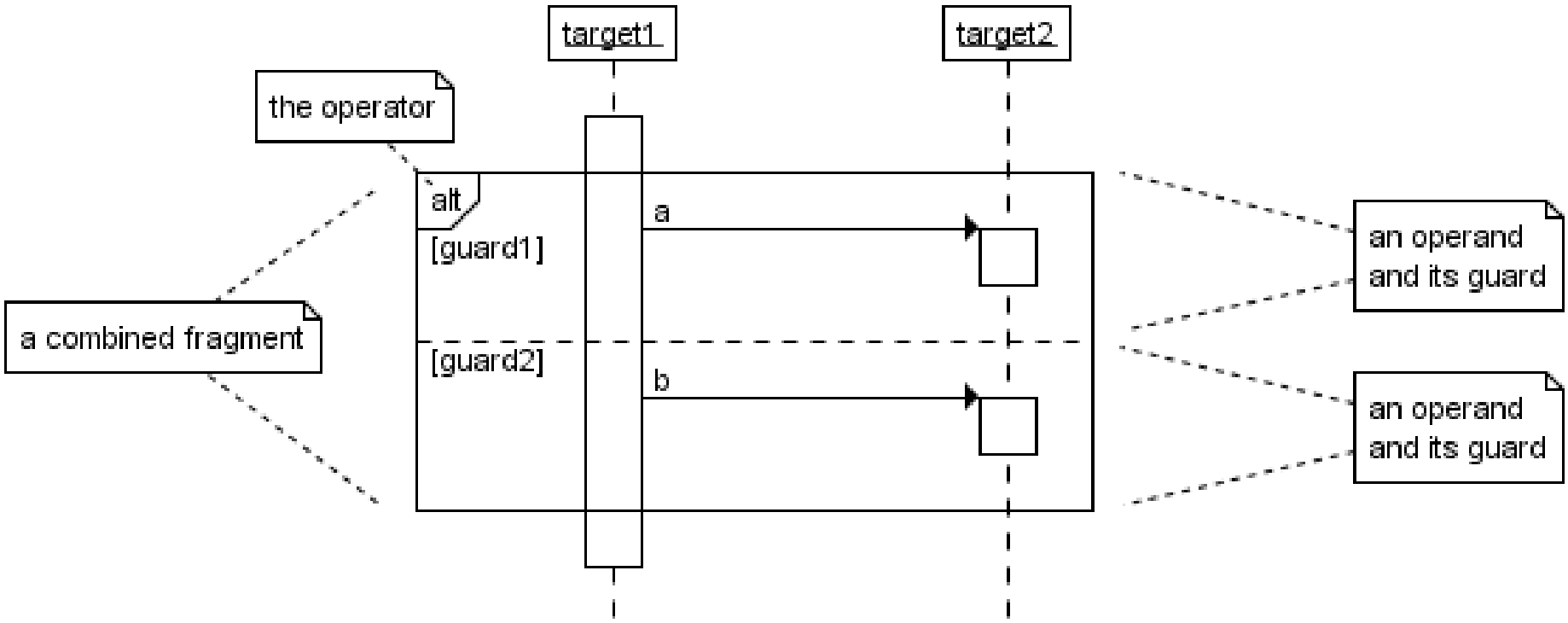


Syntax	Explanation
o	An object named o.
o:C	An object named o of class C.
:C	An anonymous object of class C.
o[i]	The object o that is selected by the index value i.
s ref sd3	A subsystem s whoes internal interaction is shown in sequence diagram sd3.

Frames



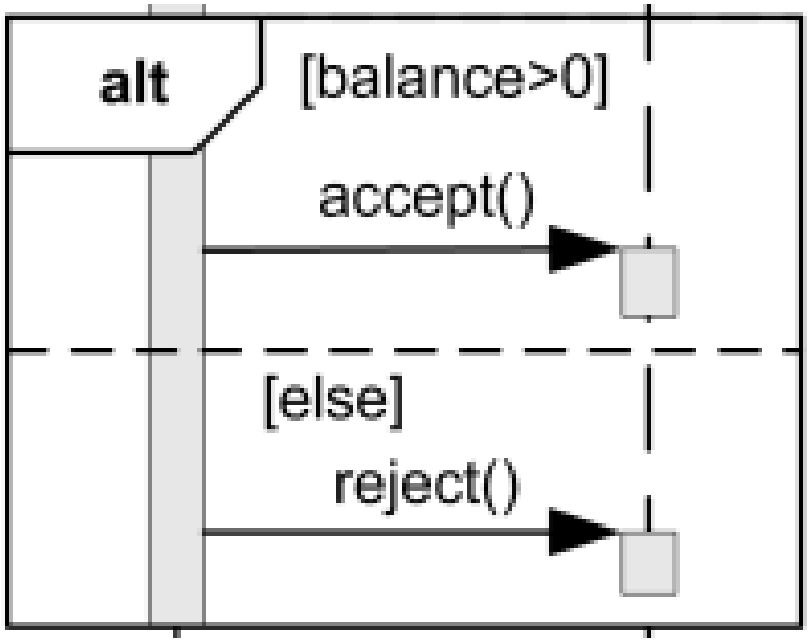
Combined Fragment



Interaction operators

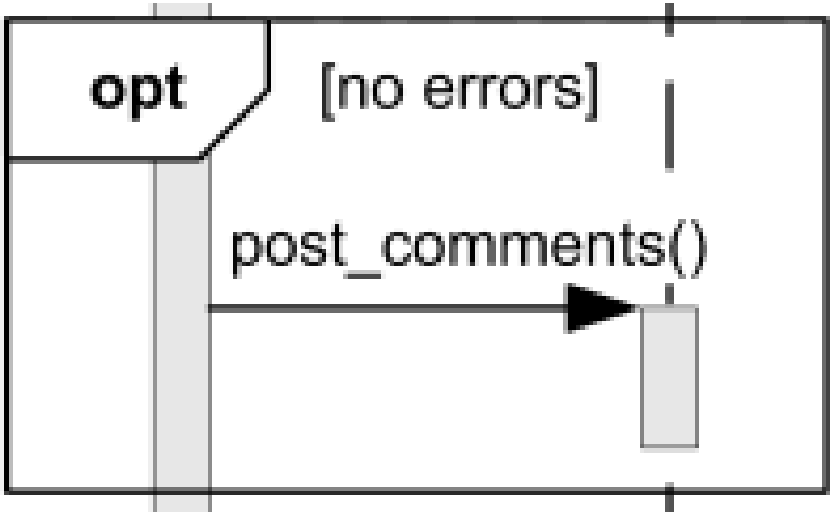
- alt – alternatives
- opt – option
- loop – iteration
- break – break
- par – parallel
- strict – strict sequencing
- seq – weak sequencing
- critical – critical region
- ignore – ignore
- consider – consider
- assert – assertion
- neg – negative

Alternatives(choice) 선택



Option

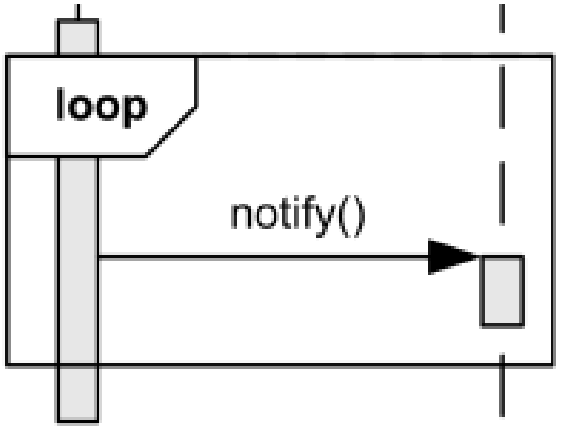
- either the (sole) operand happens or nothing happens.



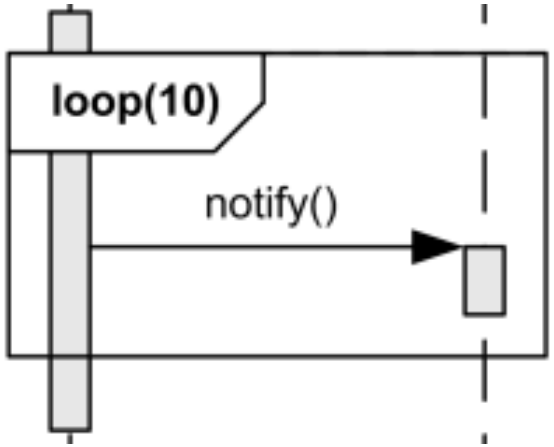
Post comments if there were no errors.

Loop

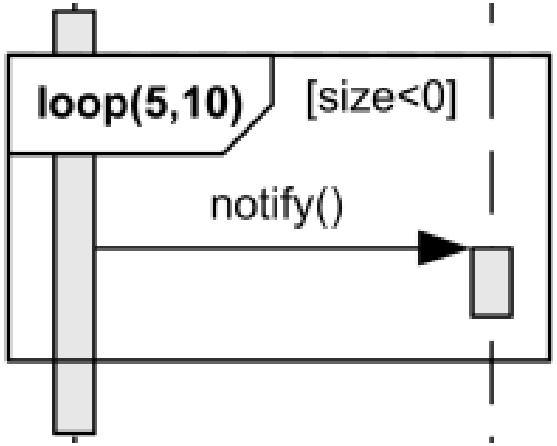
loop-operand ::= **loop** ['(' *min-int* [',' *max-int*] ')']
min-int ::= *non-negative-integer*
max-int ::= *positive-integer* | '*'



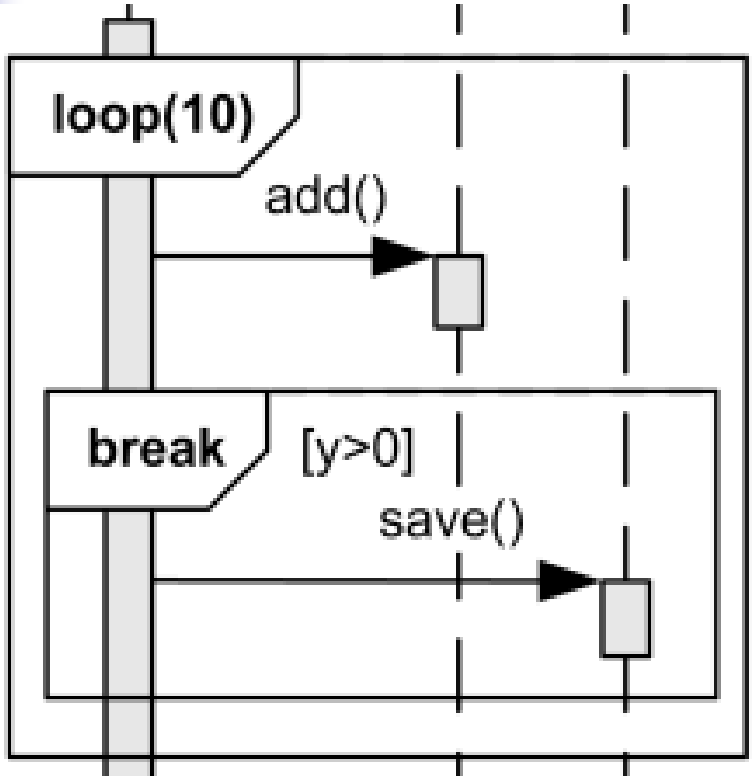
Infinite loop



Loop to execute exactly 10 times.

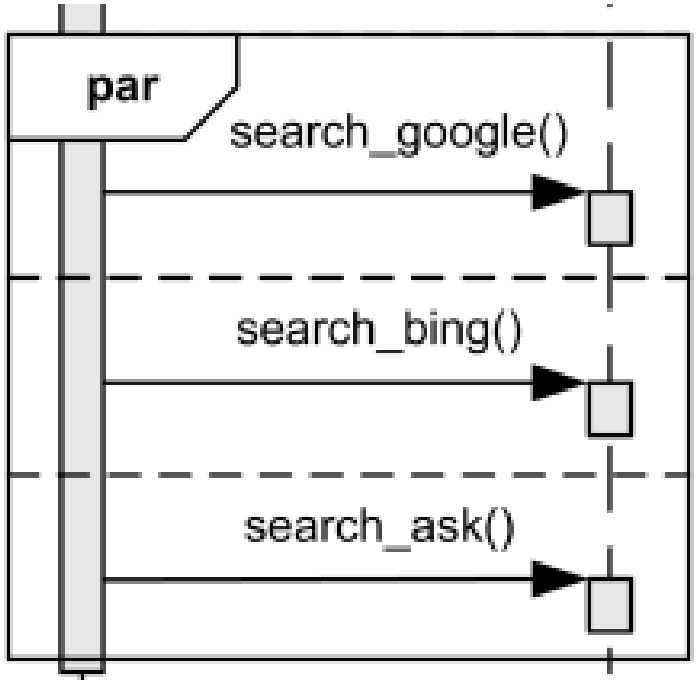


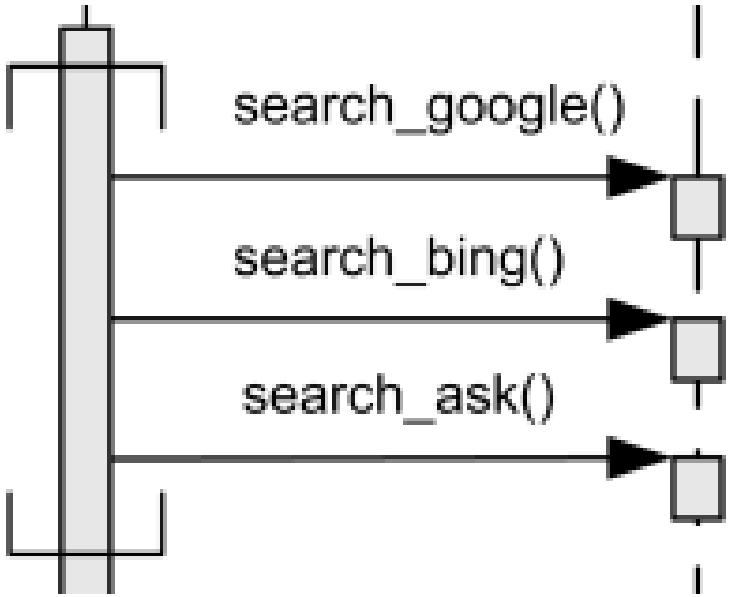
Break



Break enclosing loop if y>0.

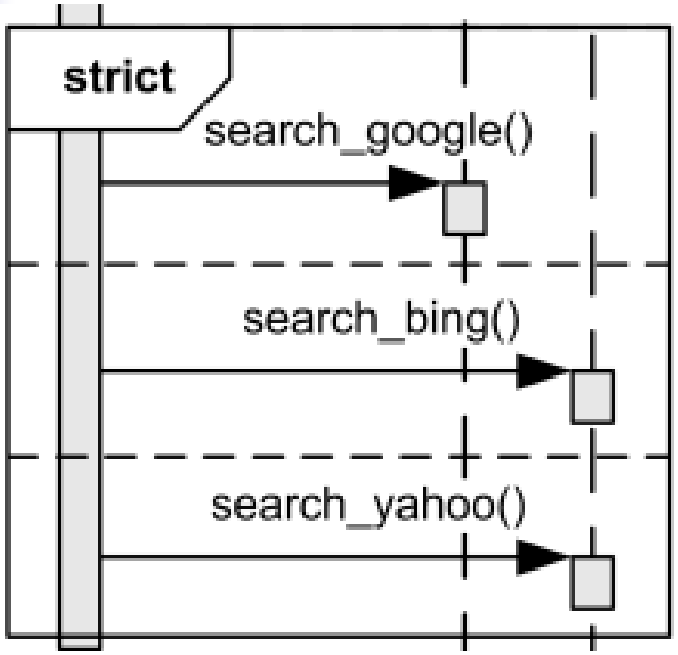
Parallel





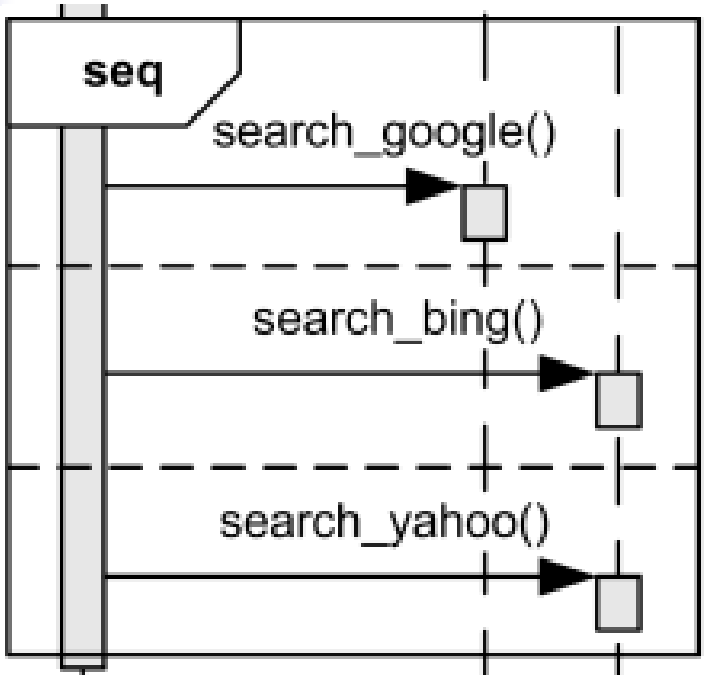
Search Google, Bing and Ask in any order, possibly parallel.

Strict Sequencing

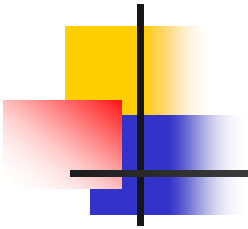


Search Google, Bing and Yahoo in the strict sequential order.

Weak Sequencing

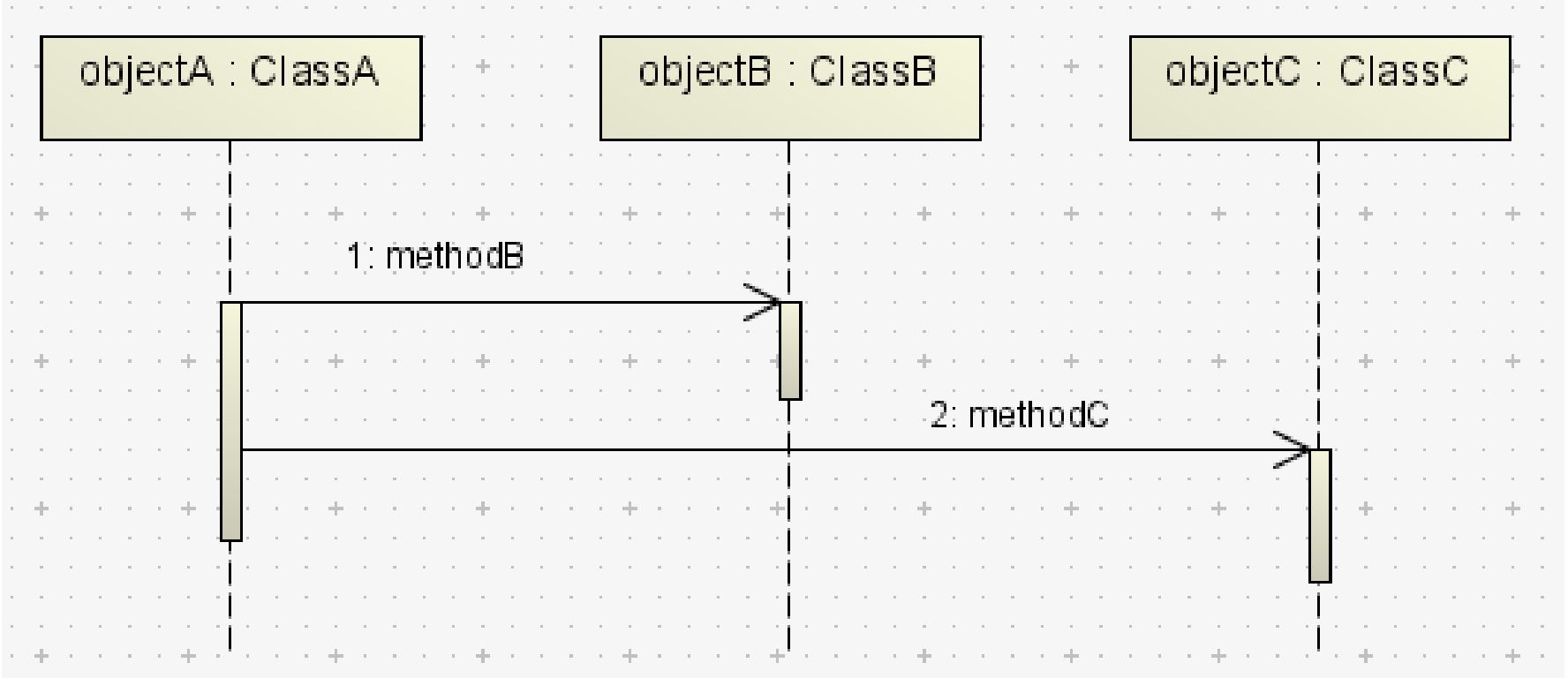


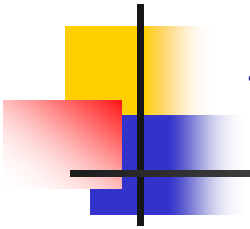
Search Google possibly parallel with Bing and Yahoo, but search Bing before Yahoo



문제(1)

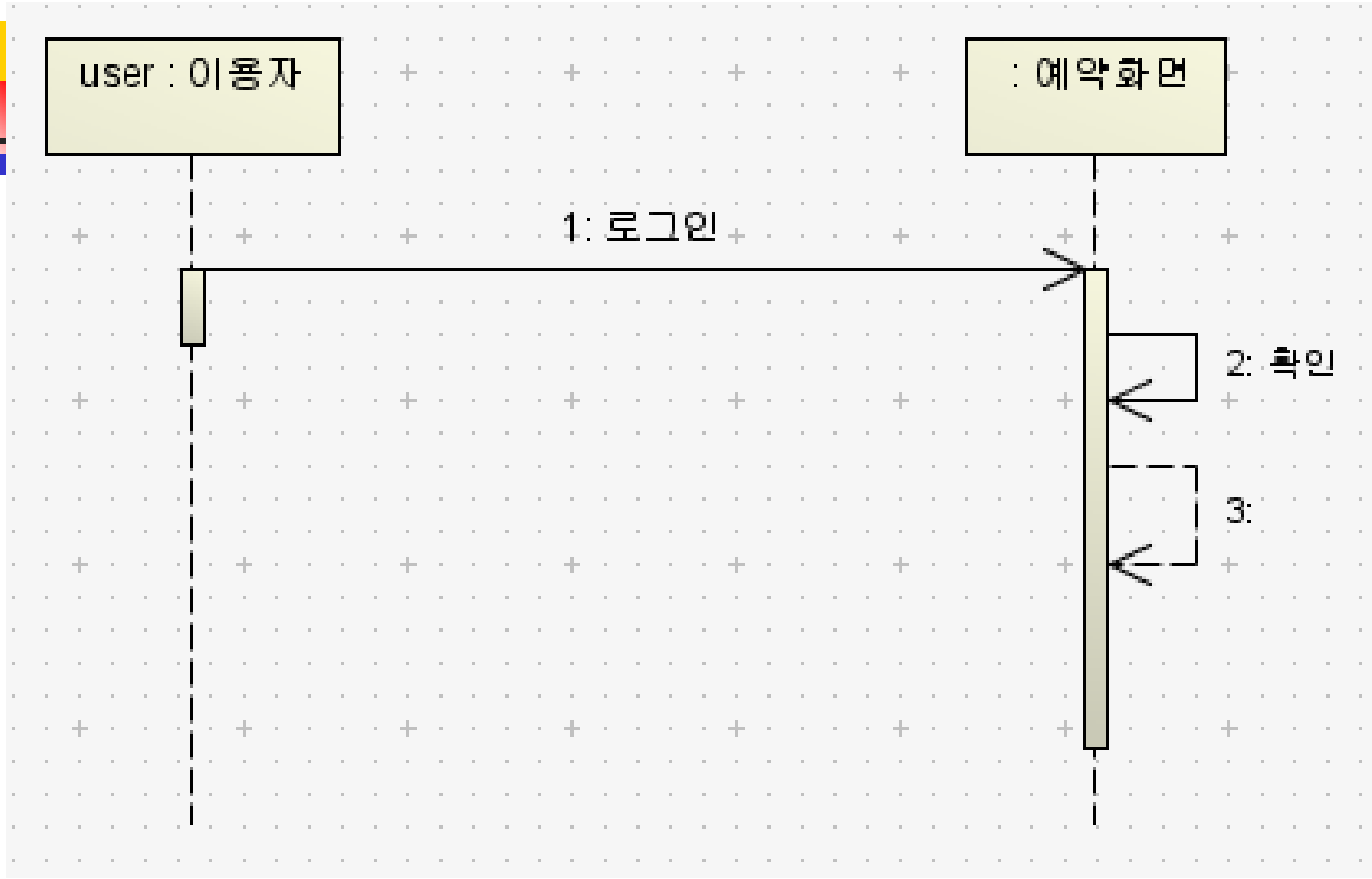
- 다음 조건을 만족하도록 SD를 작성하시오. (단, 각 메시지는 동기화 됨)
  1. ClassA의 객체objectA가, ClassB의 objectB의 methodB를 호출한다.
  2. objectA는 ClassC의 객체 objectC의 methodC를 호출한다.

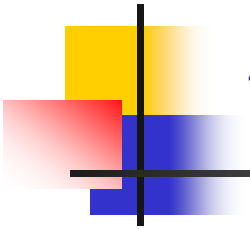

objectA : ClassA
objectB : ClassB
objectC : ClassC
1: methodB
2: methodC



문제(2)

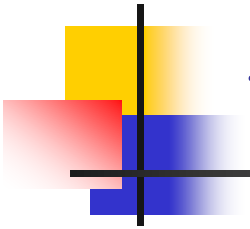
1. 이용자클래스의 객체user가 로그인한다(예약화면에 로그인메시지를 보낸다). 단, 로그인메시지는 비동기식이다.
2. 예약화면클래스의 객체는, 자기자신의 확인조작을 호출한다(동기식).


user : 이용자
: 예약화면
1: 로그인
2: 확인
3:



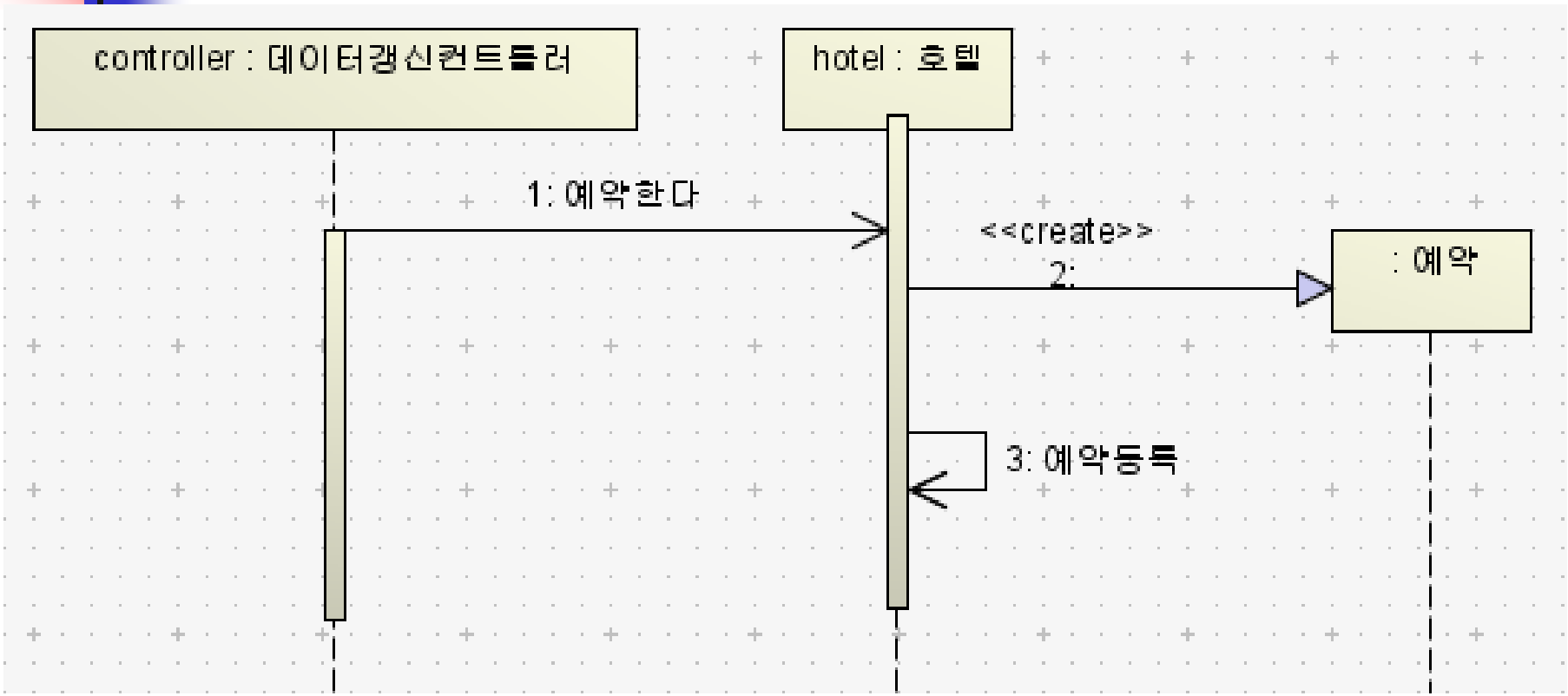
문제(3)

- 예약화면은, 이용자의 로그인메시지에 의해 전달받은 사용자ID와 비밀번호를 매개변수로 하여 인증작업을 수행한다. 인증작업의 반환값은 인증결과이다.
- 인증결과가 성공한 경우에만 예약화면에서 예약작업을 수행한다.



문제(4)

1. 데이터갱신컨트롤러의 객체controller는, 호텔클래스의 예약조작을 호출한다.
2. 호텔클래스의 객체hotel은, 예약객체를 생성한다.
3. 호텔클래스의 객체hotel은, 자신의 예약등록조작을 호출한다.


controller : 데이터갱신컨트롤러
hotel : 호텔
1: 예약한다
<<create>>
2:
: 예약
3: 예약등록

문제(5)

1. 데이터갱신컨트롤러는, 호텔클래스의 예약삭제조작을 호출한다.
2. 호텔클래스는, 자신의 삭제처리조작을 호출한다. 삭제조작을 처리하는 도중에 예약객체를 삭제한다.