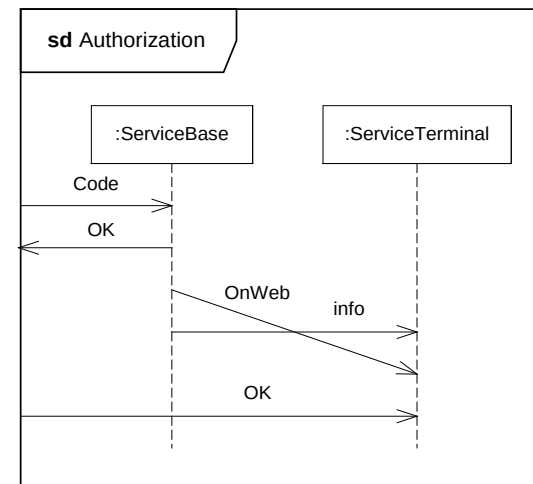
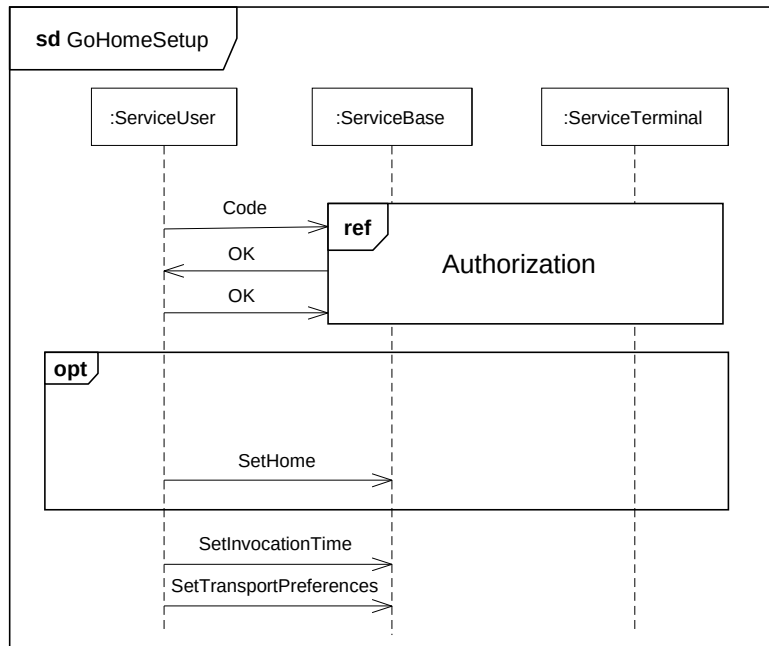


- a) Describe the traces of the opt-fragment;
- b) Describe the traces of Authorization;
- c) Describe the traces of GoHomeSetup (assuming that :ServiceBase and ServiceTerminal are merged into one lifeline)



a) Describe the traces of the opt-fragment;

The **opt** operator means that we either do nothing (e.g. we **skip**) or we execute the body of the **opt**.

The result of skipping is the empty trace, which is written as follows: $\langle \rangle$

The result of executing the body is: $\langle !sh, ?sh \rangle$, where "sh" is short for SetHome

Hence, we get two traces.

b) Describe the traces of Authorization;

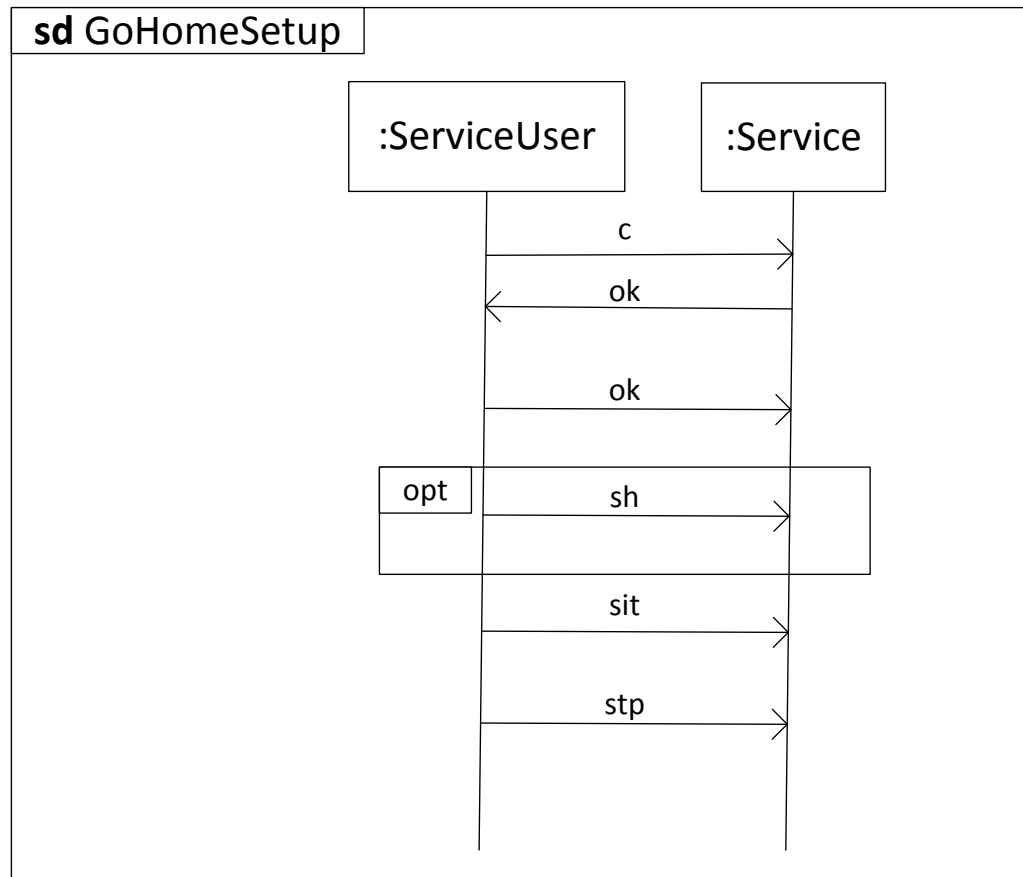
Remember that a trace consists of events only.

Events takes place only at lifelines.

This means that Authorization has only one trace:

<?Code,!Ok,!OnWeb,!Info,?Info,?OnWeb,?ok>

c) Result of merging lifelines and simplifying message names



c) Describe the traces of GoHomeSetup (assuming that :ServiceBase and :ServiceTerminal are merged into one lifeline)

Alle the traces start with following 5 events

<!c,?c,!ok,?ok,!ok, ...

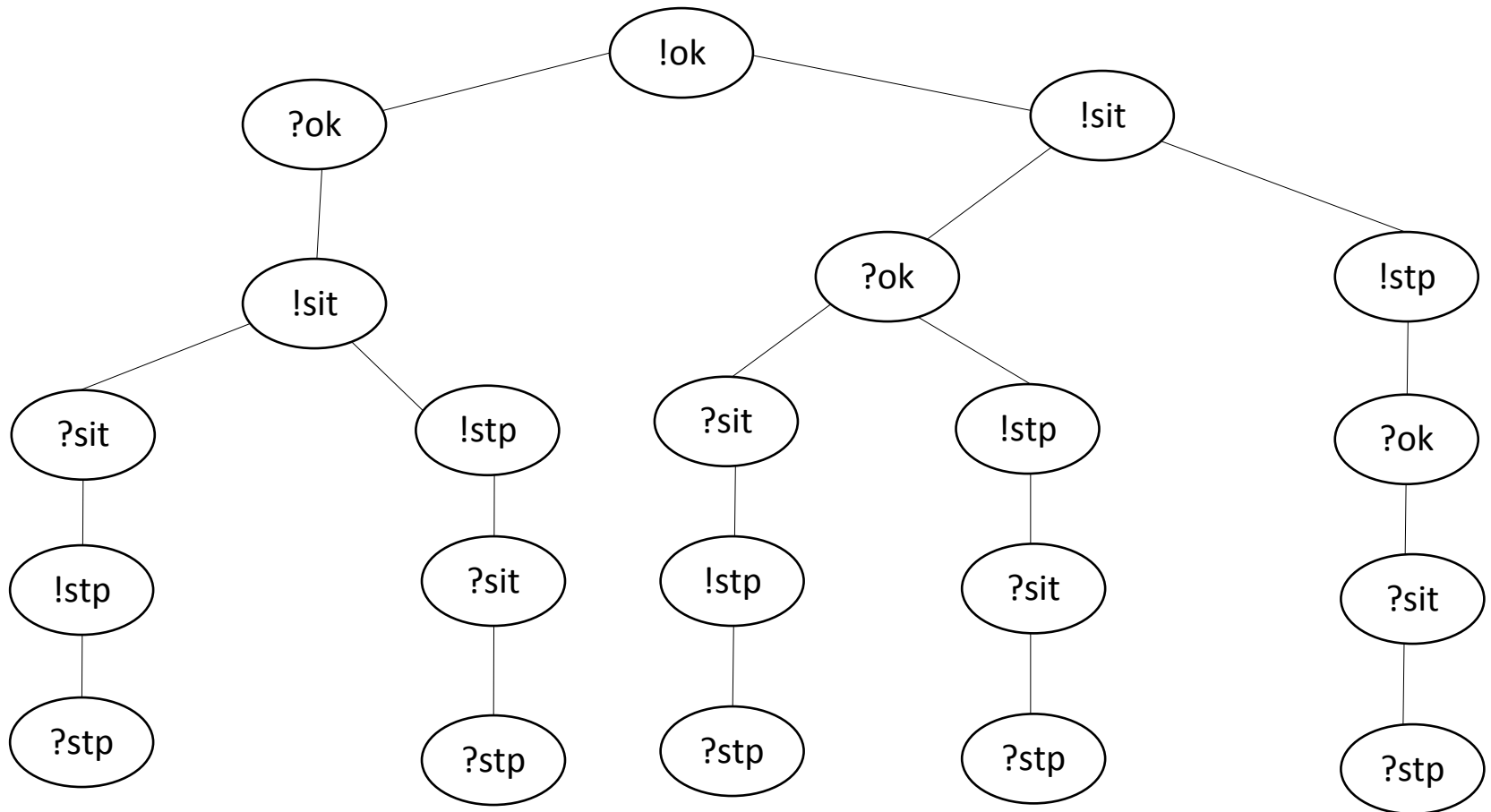
The trace trees on the next two pages therefore start from the last of these five events.

We distinguish between two cases:

Case A: the body of **opt** is skipped

Case B: the body of **opt** is executed

Case A



Case B

