

# Semantic error

Assignment.

You will have to go through a large number of process models. For every model you will have to determine which semantic errors were made. This document describes the modeling language that was used and how to assess the semantic errors. The models are numbered and the errors are coded. You will get a form with the model numbers, which you will have to complete with the error codes.

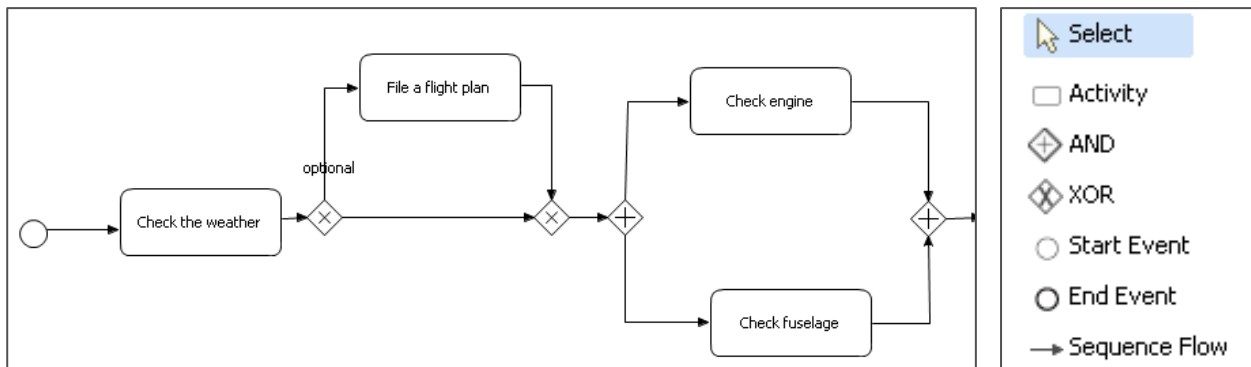
Thank you for your cooperation!

Jan Claes

## 1. Business Process Model Notation

The modeling sessions were performed using a simplified modeling language inspired by BPMN.

- The start of the process is represented by a **start event**
- The end event(s) is/are represented by (an) **end event(s)**
- Every step in the process is represented by an **activity**
- A decision is modeled by an **XOR split and XOR join** gateway
- Parallel paths are modeled by an **AND split and AND join** gateway
- Order of activities and gateways is represented by **sequence flow** edges



## 2. Semantic errors

Below is a list of semantic errors and a code. The last column displays a short explanation of the selected code.

- Note that one type of error can occur multiple times. In that case, please specify the number of times that error was observed (e.g., 40A means that four activities in the model are obsolete).
- Note that one model can suffer from multiple semantic errors. In that case, you have to mention all codes that apply on the model next to its number.
- However, it is not important in which order you put these codes on the form.

Semantic error	Code	Explanation
Obsolete activity	OA	Activity in model that should <u>clearly</u> not be there because it was not described as a separate step.
Obsolete gateway	OGW	Gateway in model that should <u>clearly</u> not be there because it was not explicitly described in the case description.
Obsolete edge	OE	Edge in model that should <u>clearly</u> not be there because the activities it connects should not follow each other (directly).
Obsolete end event	OEE	End event in model that should <u>clearly</u> not be there because the case was not described to end at that place.
Missing activity	MA	An activity is missing where the case description <u>clearly</u> describes something as a separate task.
Missing gateway	MGW	A gateway is missing where the case description <u>clearly</u> describes an optional or parallel split.
Missing edge	ME	An edge is missing where the case description <u>clearly</u> describes that two activities should follow each other directly.
Missing activity because of misplaced iterative edge	MAE	Some activities are not executed in an iteration because the iterative edge points to the wrong starting point of the iteration.
Missing end event	MEE	An end event is missing where the case description <u>clearly</u> describes that the process can end there.
Missing information	MI	Information is missing because a small part of the model is described by a single activity instead of a more extensive construction.
Wrong condition	WC	The wrong condition is used to indicate which path is executed at what condition after an XOR split.
Incorrect order	IO	A wrongly placed edge causes the flow to be executed in a incorrect order.

Tip: Use the approach below for a convenient way of assessing all the models.

1. Start from the case description.
2. Work paragraph per paragraph.
3. In each paragraph delineate the sentences that describe a separate step and number them consecutively.
4. For each paragraph then go through all the models and try to delineate the model parts that accord to the description sentences and give them the same number.
5. Write the error codes in the delineated areas and at the bottom of the paper where you can put ticks for every time this error occurs in the model.
6. Afterwards count the ticks for each error code and write the summary of codes on your answer form.