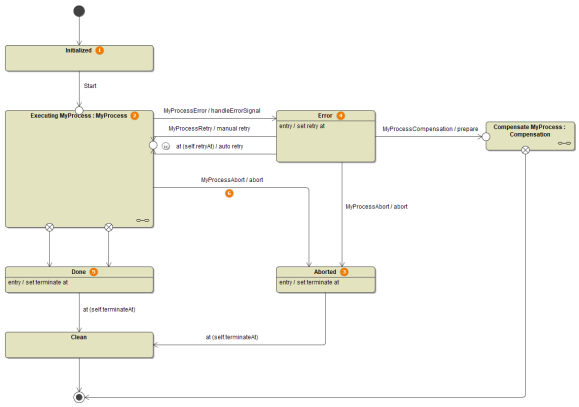
xUML Service State Machines

Most business processes involve asynchronous processing and require to hold states persistent while communicating via asynchronous messages. In UML, this behavior is supported by state machines. A state machine diagram defines all states a process instance can be in - including the initial and the final state. While in a state, the process instance can receive asynchronous messages via signals, e.g. an abortion signal (**MyProcessAbort** (6) in the picture below). Changes of state are called transitions.

For each BPMN process that has been modeled with the Designer, the compiled xUML service contains one standard root state machine diagram that supports error handling and compensation as well as history states.
The actual process is integrated to this state machine as a sub state machine (see **Executing MyProcess** (2)).



The root state machine features the following states:

State		Description	Signal Examples	Setting
1	**Initialized**	State **Initialized** is a temporary state. The process instance passes this state once triggered.		
2	**Executing**	State **Executing** contains the sub state machine that executes the actual business process. Processes in this state can be aborted by sending the **MyProcessAbort** signal.	• MyProcessAbort (6)	
3	**Aborted**	When a process has been aborted, it will be transitioned to this state. After having waited the **holdTime**, the process transitions to state **Clean**.		• holdTime
4	**Error**	If the process triggers an error, it goes to the **Error** state.	• MyProcessRetry • MyProcessCompensation • MyProcessAbort	• autoRetry • autoRetryTime
5	**Done**	After the end event of the process has been executed, it is in state **Done**. After having waited the **holdTime**, the process transitions to state **Clean**.		• holdTime
	Compensate	In future versions of the Designer it will be possible to define process compensation and clean-up tasks. The **Compensate** and **Clean** states are designated for that.		
	Clean			• holdTime

For more details, refer to

- State Transitions of the Root State Machine
- Error Handling of Root State Machine
- Generated Executions in Process State Machine

Related Pages:

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