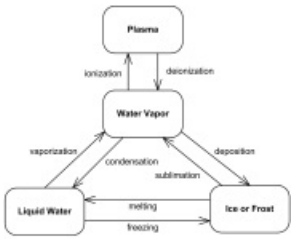
UML State Machine Diagram Examples

Here we provide several examples of **state machine diagrams**:

Water Phase Diagram as State Machine

***Purpose**: An example of water phase diagram represented as UML state machine diagram.*

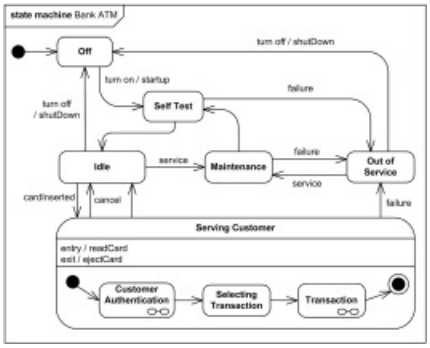
***Summary**: Water can exist in several states - liquid, vapor, solid, and plasma. Several transitions are possible from one state to another.*



Bank ATM behavioral state machine UML diagram example

***Purpose**: An example of UML **behavioral state machine** diagram describing Bank Automated Teller Machine (ATM) top level state machine.*

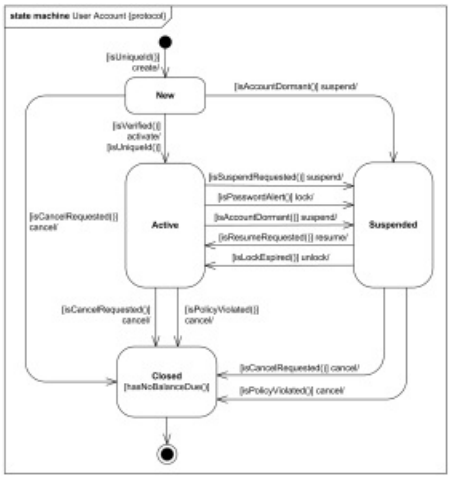
***Summary**: ATM is initially turned off. After the power is turned on, ATM performs startup action and enters **Self Test** state. If the test fails, ATM goes into **Out of Service** state, otherwise there is **triggerless transition** to the **Idle** state. In this state ATM waits for customer interaction.*



Online shopping user account UML state machine diagram example

***Purpose**: An example of user account life cycle in the context of **online shopping**, and shown as UML **protocol state machine** diagram.*

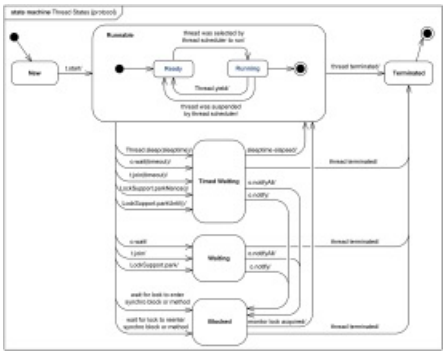
***Summary**: Every company having customers maintains customer accounts and supports a complete life cycle of the account from its creation until it is closed. There are differences in what are the stages (states) in the account's life cycle, and what are conditions or events causing account to change its state.*



S Java Thread states and life cycle UML protocol state machine example

***Purpose**: An example of UML **protocol state machine** diagram showing **thread states** and **thread life cycle** for the Thread class in **Java™**.*

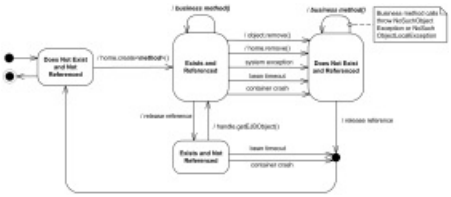
***Summary**: Thread is a lightweight process, the smallest unit of scheduled execution. Instance of the Thread class in **Java** could be in one of the following states: **new**, **runnable**, **timed waiting**, **waiting**, **blocked**, **terminated**.*



S Java EJB life cycle of a session object UML state machine example

***Purpose**: Life cycle of an EJB session object is shown from the point of view of a local or remote client using the EJB 2.1 and earlier client view API.*

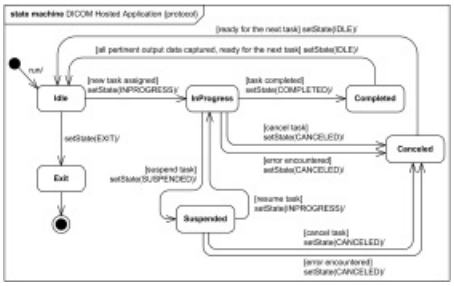
***Summary**: A session object does not exist until it is created. When a client creates a session object, the client has a reference to the newly created session object's component interface.*



S Digital Imaging and Communications in Medicine (DICOM) Hosted Application life cycle UML protocol state machine example

***Purpose**: An example of UML **protocol state machine diagram** for **DICOM Application Hosting API**. The Application Hosting API describes interfaces between two software applications - **Hosting System** and **Hosted Application**, exchanging medical data while located on the same system.*

***Summary**: Hosting system initializes hosted application by issuing a run or exec command or its equivalent. Once the hosted application is initialized, for the normal workflow its state transitions through **Idle**, **InProgress**, and **Completed** states. In some cases application could be **Suspended** or even **Canceled**.*



Noticed a spelling error? Select the text using the mouse and press Ctrl + Enter.

by Kirill Fakhroutdinov

This document describes UML versions up to ***UML 2.5*** and is based on the corresponding **OMG™ Unified Modeling Language™ (OMG UML®)** specifications. UML diagrams were created in **Microsoft® Visio®** 2007-2016 using ***UML 2.x Visio Stencils***. ***Lucidchart*** is a nice, free UML tool that I recommend for students.
You can send your comments and suggestions to webmaster at **webmaster@uml-diagrams.org**.