Enterprise Architect

Current Release
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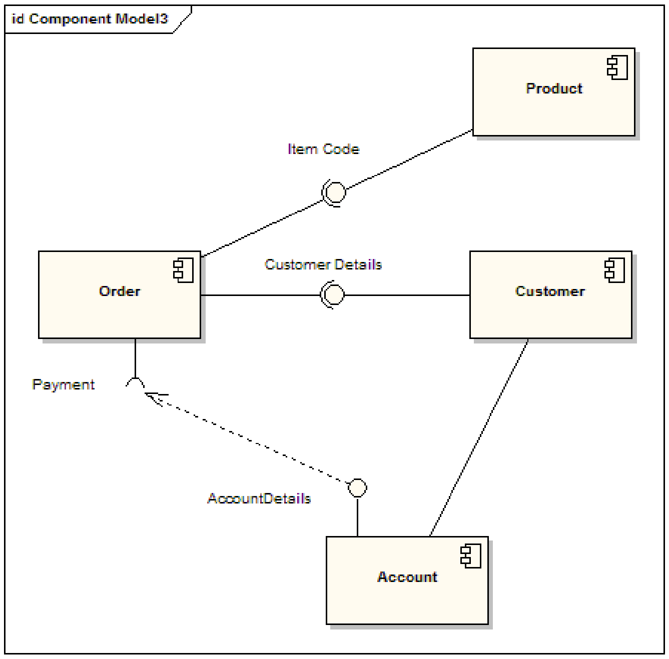
UML 2 Component Diagram

Component Diagrams

Component diagrams illustrate the pieces of software, embedded controllers, etc., that will make up a system. A component diagram has a higher level of abstraction than a Class Diagram - usually a component is implemented by one or more classes (or objects) at runtime. They are building blocks so a component can eventually encompass a large portion of a system.

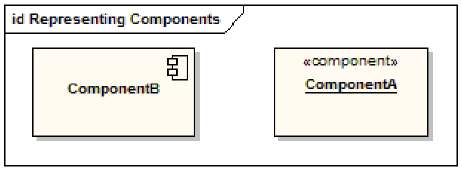


The diagram above demonstrates some components and their inter-relationships. Assembly connectors "link" the provided interfaces supplied by "Product" and "Customer" to the required interfaces specified by "Order". A dependency relationship maps a customer's associated account details to the required interface; "Payment", indicated by "Order".

Components are similar in practice to package diagrams, as they define boundaries and are used to group elements into logical structures. The difference between package diagrams and component diagrams is that Component Diagrams offer a more semantically rich grouping mechanism. With component diagrams all of the model elements are private, whereas package diagrams only display public items.

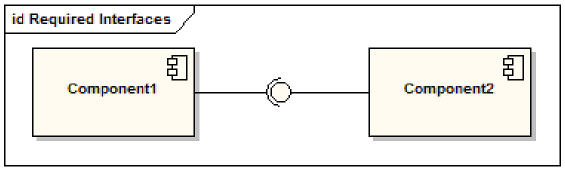
Representing Components

Components are represented as a rectangular classifier with the keyword «component»; optionally the component may be displayed as a rectangle with a component icon in the right-hand upper corner.



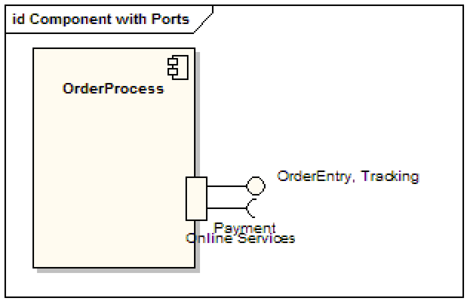
Assembly Connector

The assembly connector bridges a component’s required interface (Component1) with the provided interface of another component (Component2); this allows one component to provide the services that another component requires.



Components with Ports

Using Ports with component diagrams allows for a service or behavior to be specified to its environment as well as a service or behavior that a component requires. Ports may specify inputs and outputs as they can operate bi-directionally. The following diagram details a component with a port for online services along with two provided interfaces order entry and tracking as well as a required interface payment.



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