

Tutorial 2: Use Cases

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An existing manual system is described below. This is to be replaced by a computerised system into which the sales representative will enter orders after checking and amending them if necessary. Orders requiring special materials are to be handled within the system and orders placed with suppliers via a business-to-business link. Customers are to be notified of projected delivery dates or estimated delays by e-mail if they provide an e-mail address otherwise they are notified by post. Order scheduling is to be automated and the workshop is to be notified of the next order to be manufactured on request.

A company manufactures a wide range of products to order. A sales representative checks each incoming order and if all the details are complete it is added to the production file and the customer is notified of the projected delivery date. If there are problems with the order then the sales representative contacts the customer and the necessary amendments are made before the order is added to the production file. If an order requires special materials that are not in stock then these are ordered from the relevant supplier before the order is added to the production file. Study of the existing system has shown that less than 10% of orders require amendment and only about 5% require special materials.

Orders are added to the production file in the order of receipt so that products are manufactured on a 'first-come first-served' basis as far as possible. When the workshop is ready to produce a new item, the first order is taken from the production file and manufacture proceeds unless materials are not available, in which case the order goes into a special holding file and the customer is notified of the estimated delay to the order. As soon as appropriate materials are received, orders from the holding file are given priority. Study of the existing system indicates that less than 5% of orders are held at this stage.

(a) Identify actors and use cases for the system and draw a use case diagram; give an informal description of each use case (narrative). Justify your choice of actors and use cases and explain which parts of this scenario are irrelevant to your initial analysis. Indicate any omissions or ambiguities in the description and state any assumptions you have made.

(b) Develop your use cases into more detail, stating pre- and post-conditions for each use case.