

Algorithmic Thinking for Migrants Teachers Education

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Handout #6: Modelling

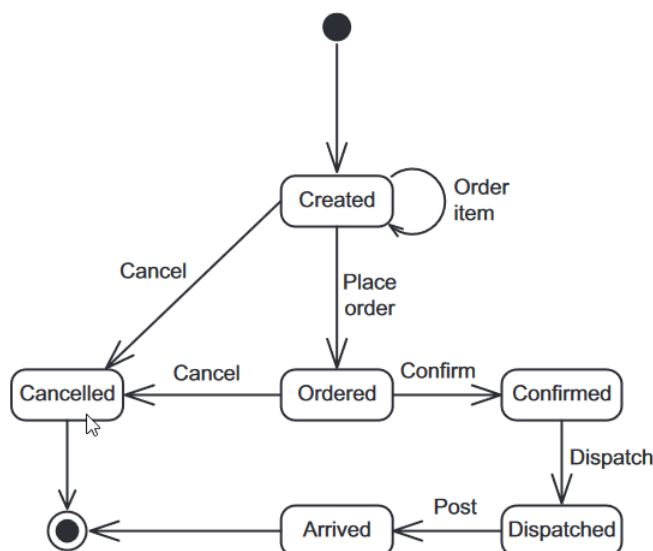
EXERCISE #1

A shopping website allows you make purchases online and have them delivered to you. Here are the facts:

- A. You can create an order and use it to compile a list of items.
- B. When you're happy with an order, you place it with the system.
- C. Eventually, the people running the site look at your order to confirm it can be fulfilled. If it can, it is confirmed and the user is informed by email.
- D. When the goods are packaged and sent, the order is dispatched.
- E. The order can be cancelled at any time prior to confirmation.

Model all the possible stages of an order using a state machine diagram.

Solution:



EXERCISE #2

Look again at the final diagram in the section ‘Modelling data’ (Slide 9). Extend the diagram so that the data structure records the student’s grades. A student is enrolled on up to eight courses maximum and each course has a predicted and actual grade.

Solution:

