CO457 Business Modelling

Module Week 7

Flow and Connecting Objects

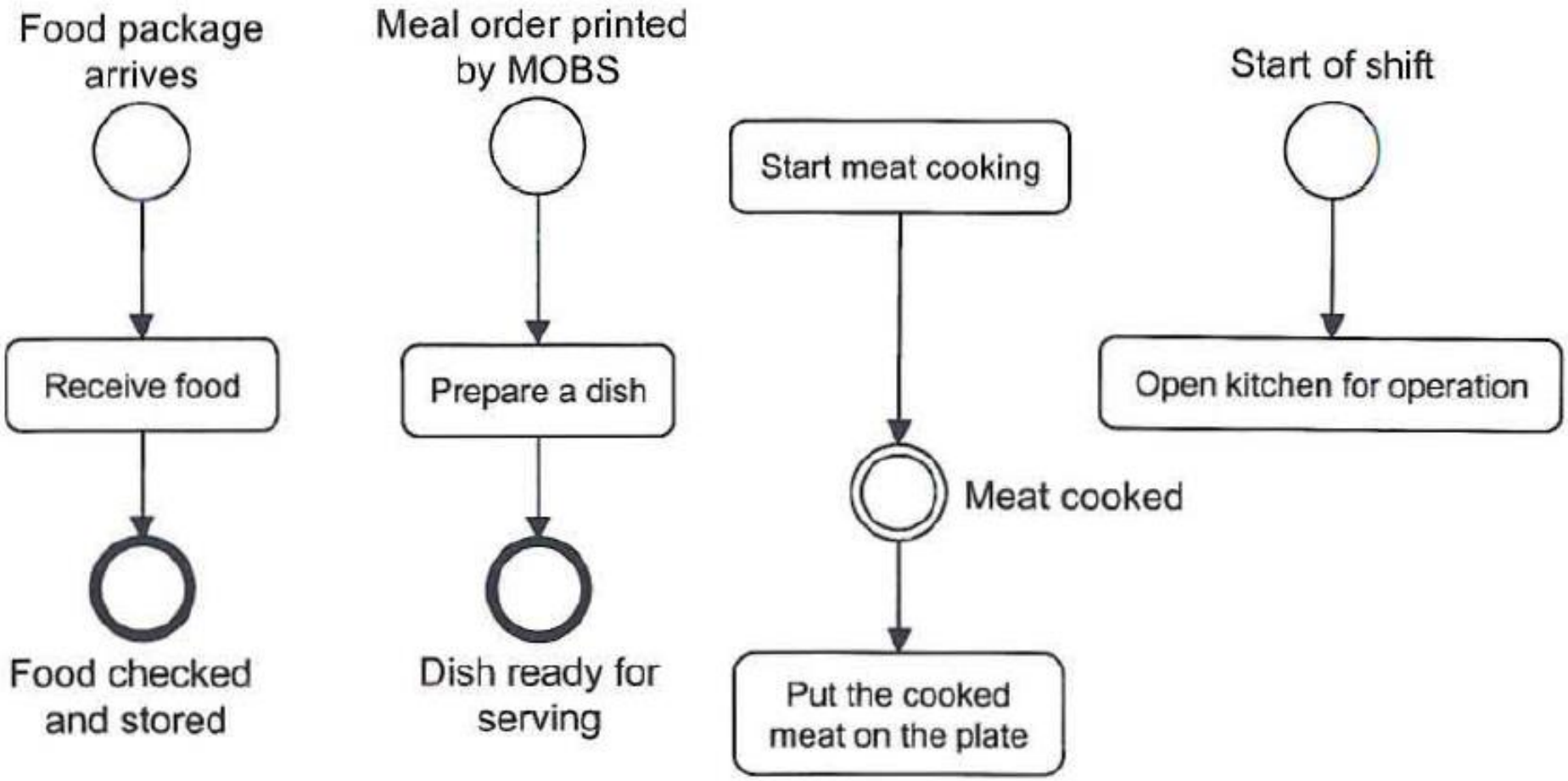
Events

- **Events happen instantaneously**
- Start event
  - **Has a trigger**
    - Comes from **outside the process**
  - The **process catches the event**
- End event
  - **Has a result**
    - **Caused by an activity in the process**
  - The **process throws the event**

Events

- Intermediate event
  - The **process is suspended and waits for a trigger**
    - **Catches the event and proceeds**
      - Or the process causes a result
    - **Throws an event and continues without stopping**

Events: Examples

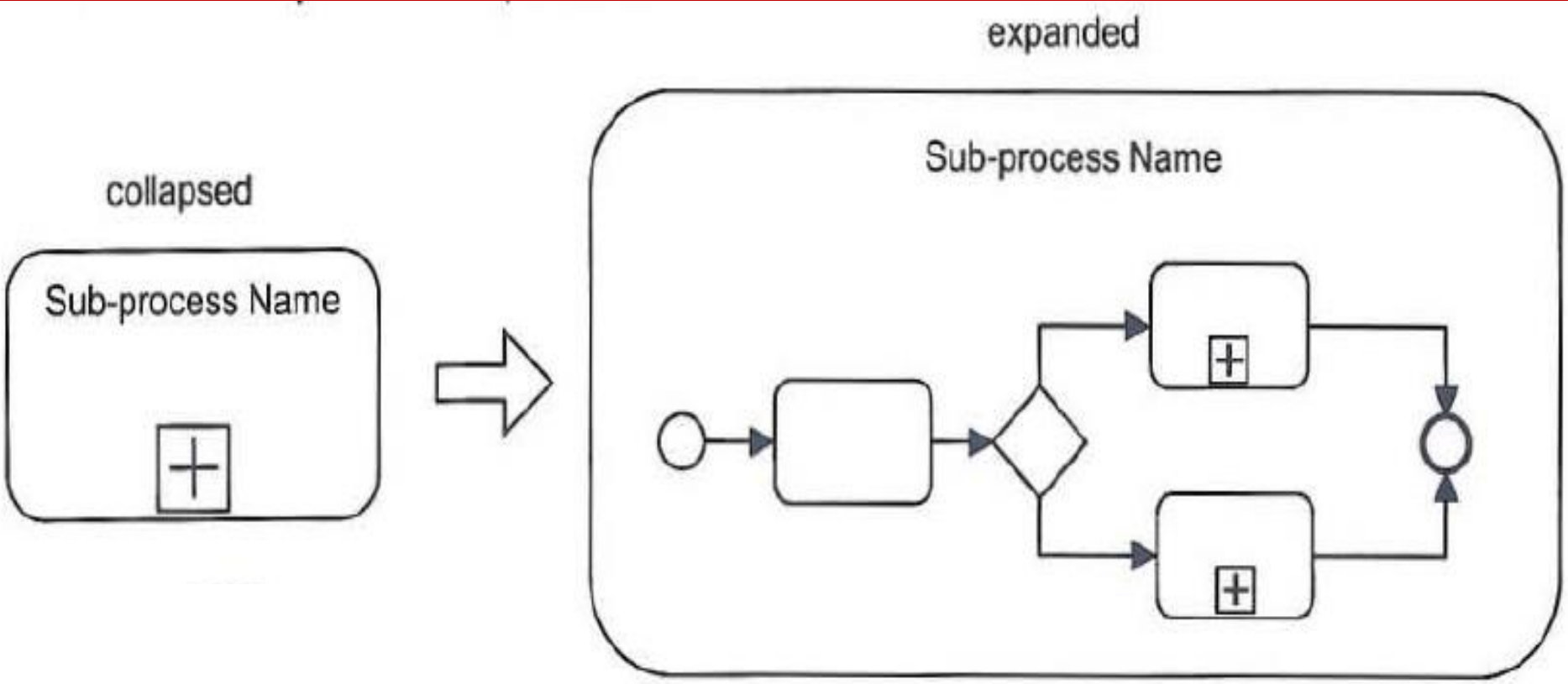


Activities

- An activity is **work that is performed within a business process**
- A task is an atomic activity
  - **Cannot be decomposed**
  - **Lowest level of detail**

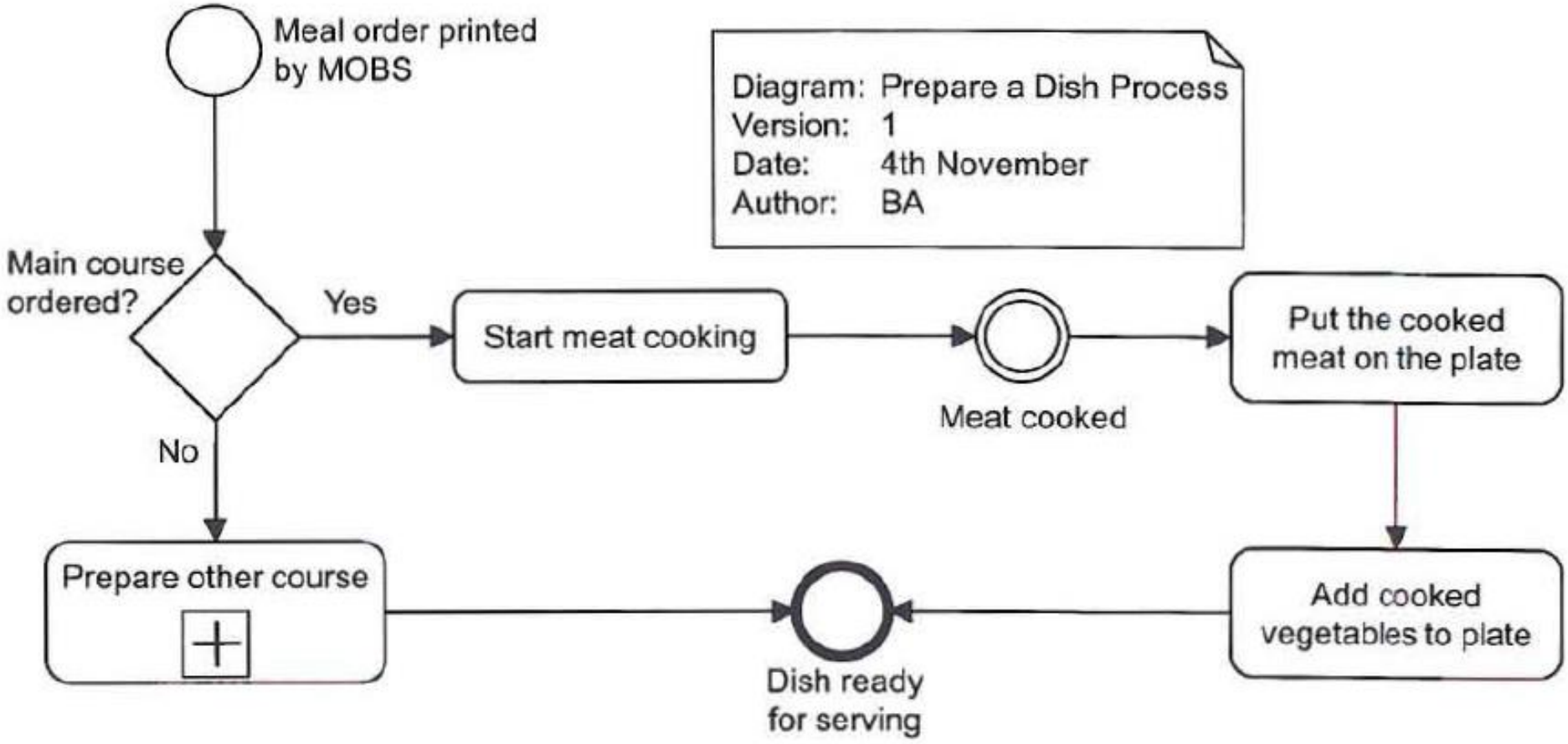
Activities

- A **sub-process is a compound activity**
  - Drawn collapsed or expanded



Activities

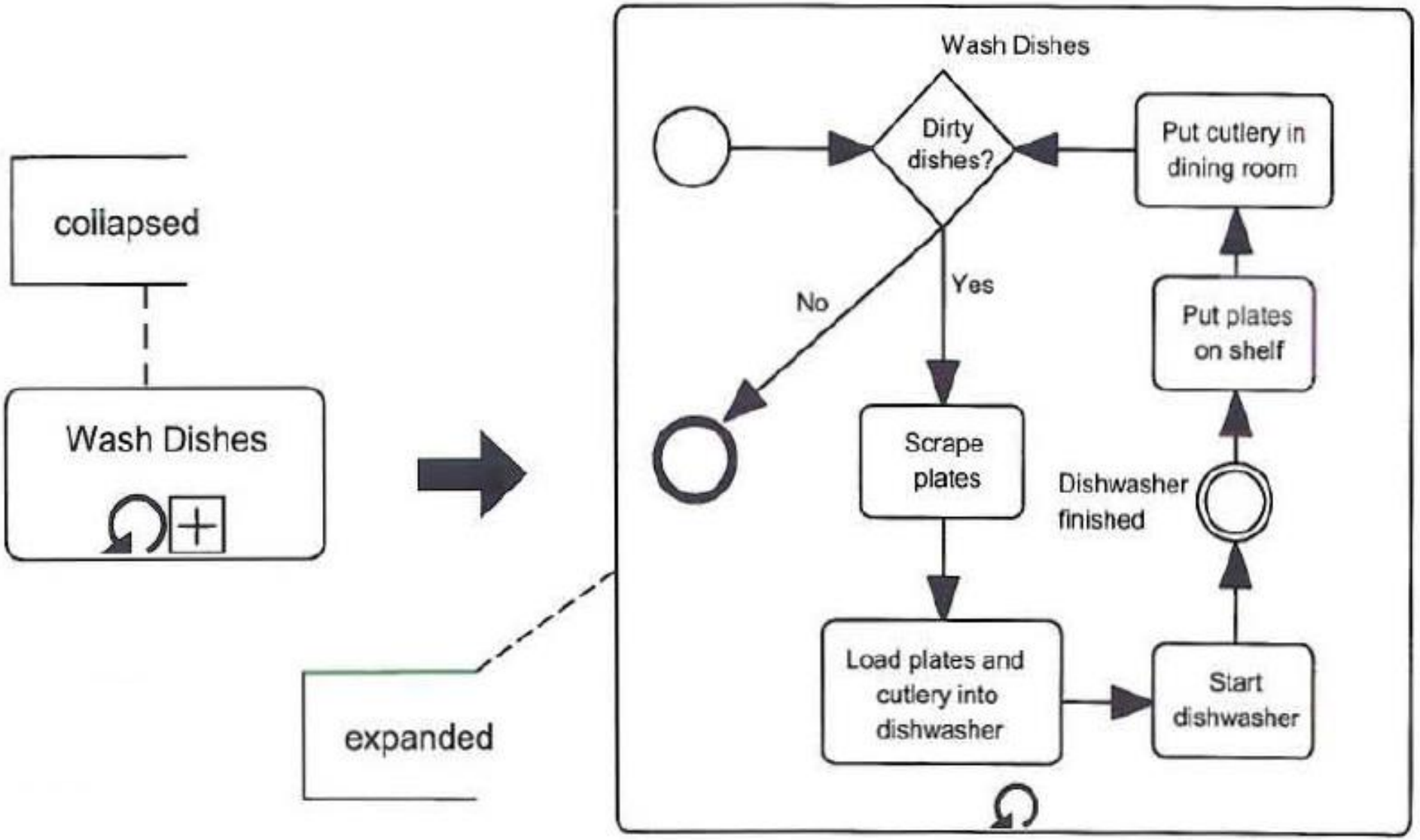
- A process is a **sequence of events, activities, and gateways (flow objects)**



Looping Activities

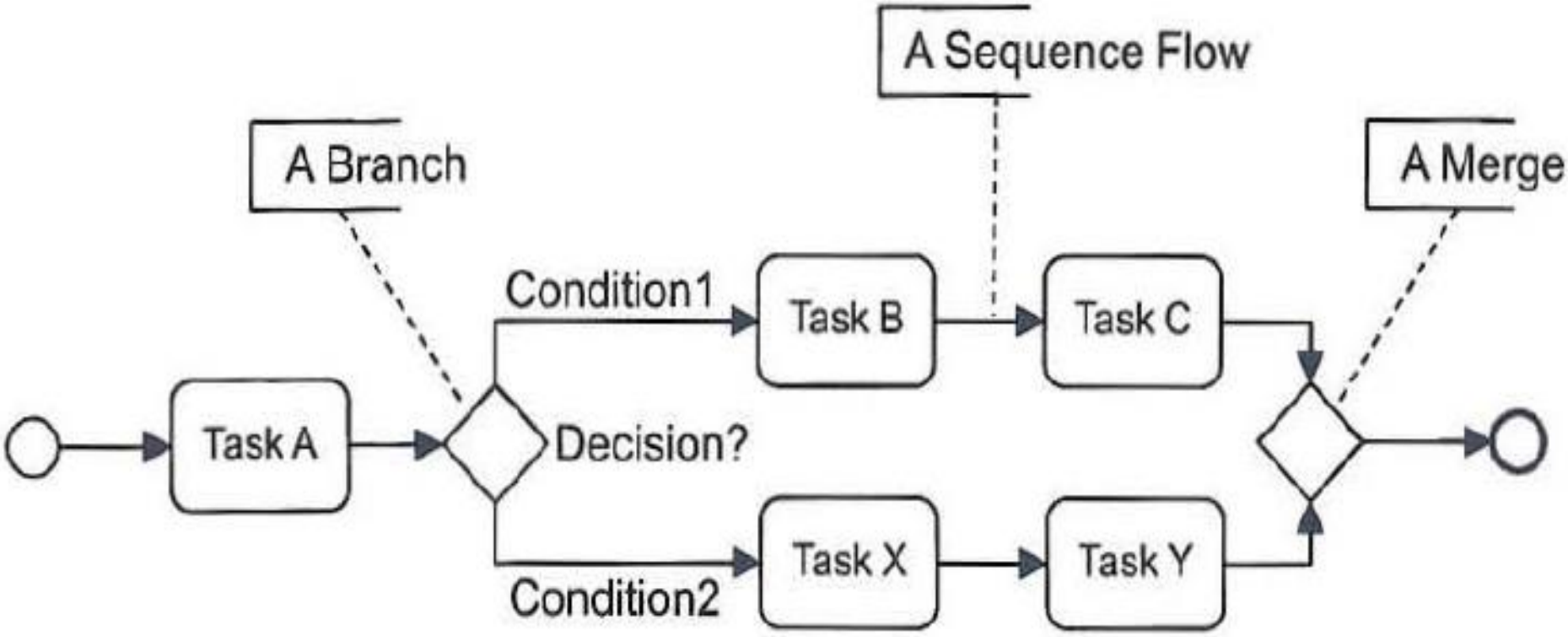
- **A Looping process repeats as long as a Boolean expression remains true**
- A looping marker is used

Looping Activities



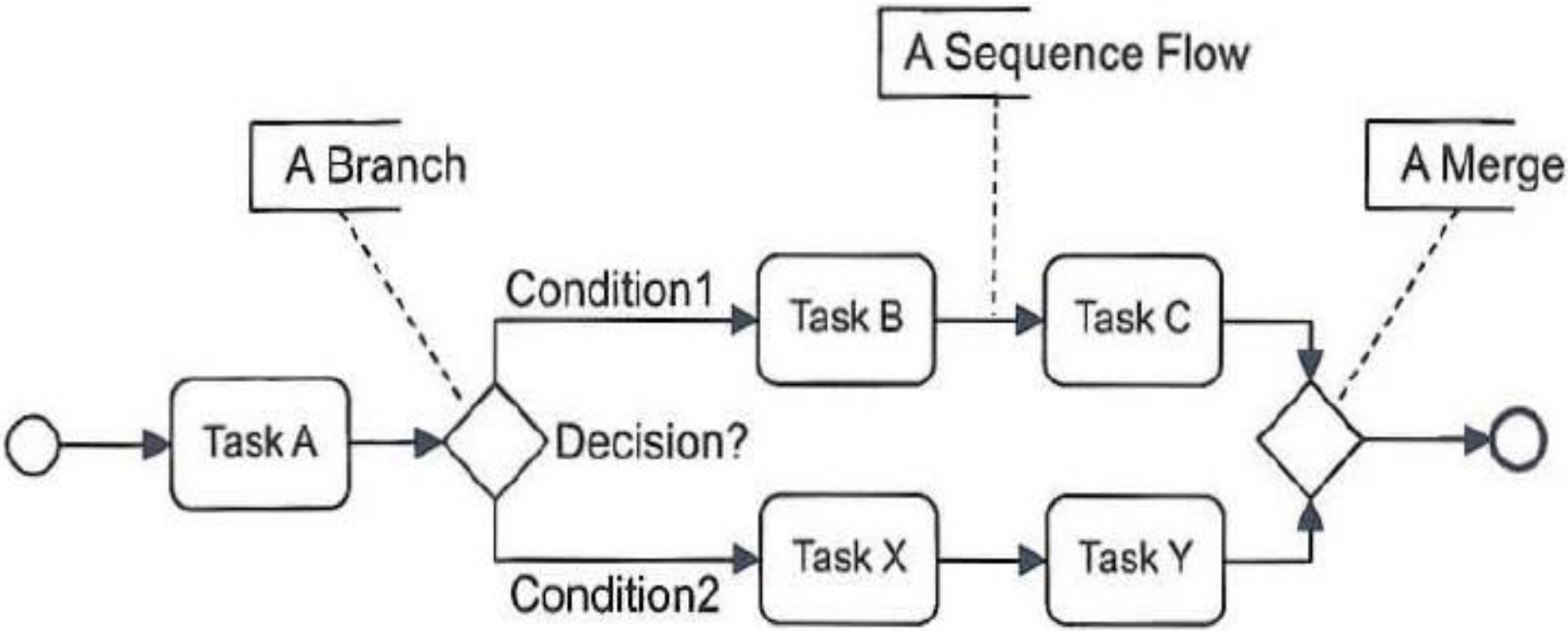
Sequence Flow and Gateways

- **Sequence flow shows the order in which activities are performed**
  - Connected from a **source flow object to a target flow object**



Sequence Flow and Gateways

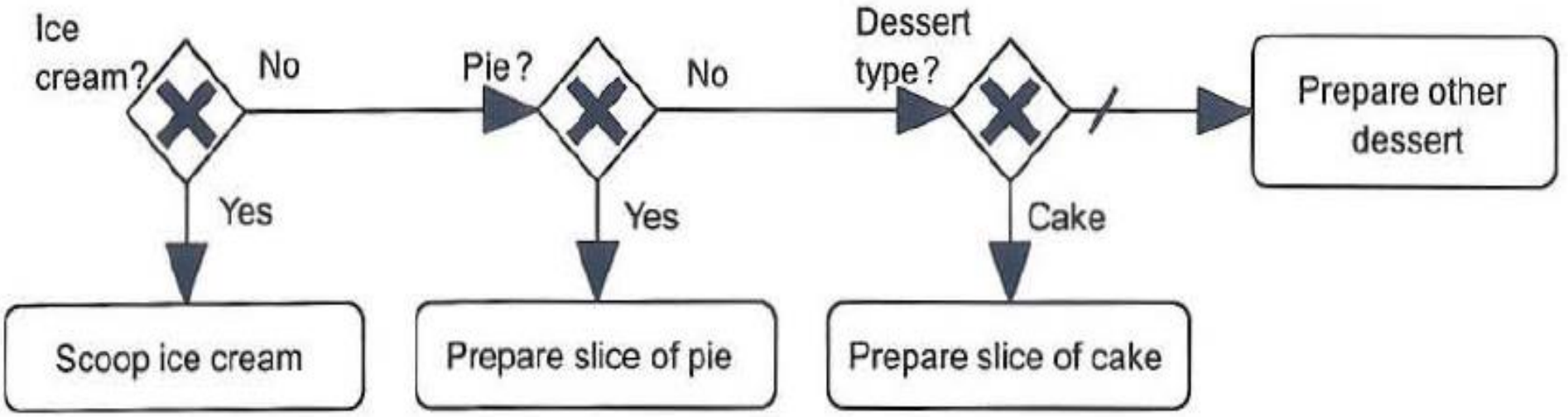
- Gateways control divergence and convergence of sequence flow
  - Branching



Exclusive Gateways and Default Flow

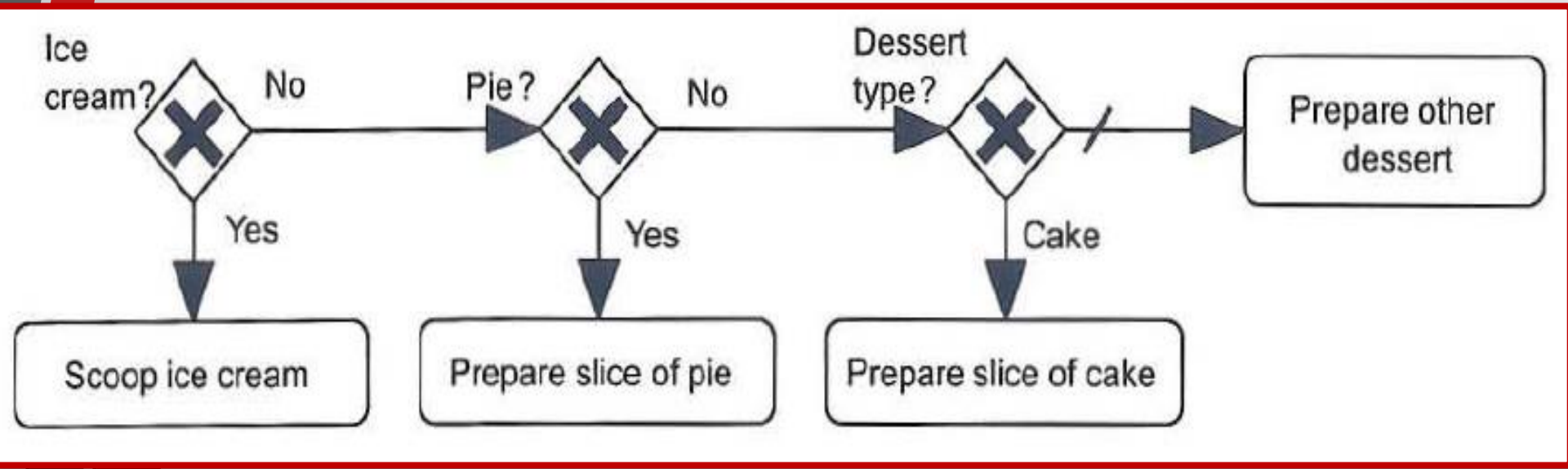
- Exclusive gateways **provide decision points with alternate paths**
  - May contain an "X" marker

- **Conditions on outgoing sequence flows must be mutually exclusive**
  - Only one sequence flow can be taken



Exclusive Gateways and Default Flow

- **The default sequence flow is taken if all other conditions are not met**
  - Marked with a slash



Sequence Flow and Gateways: Example

- Receive Food business process diagram

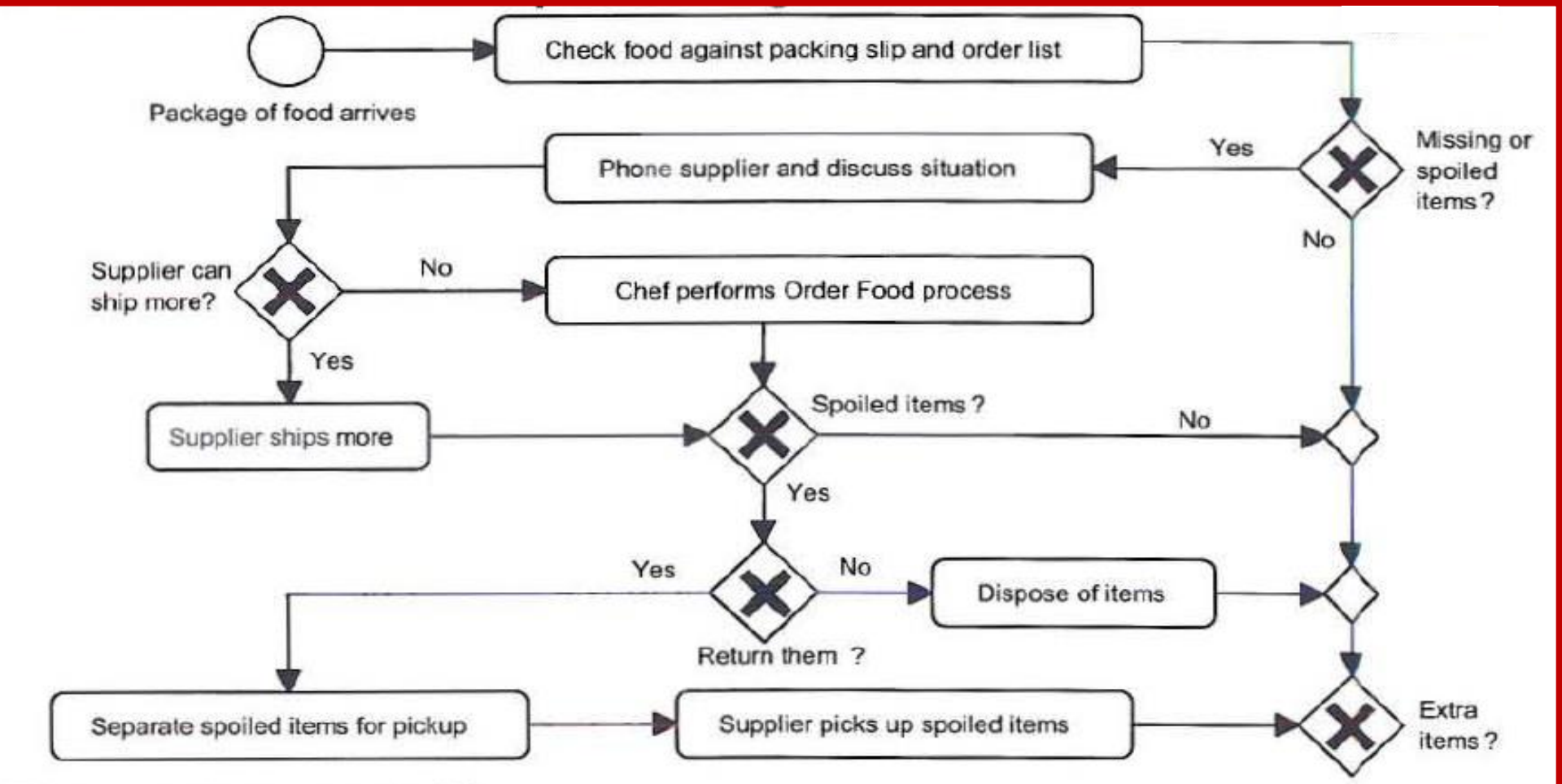
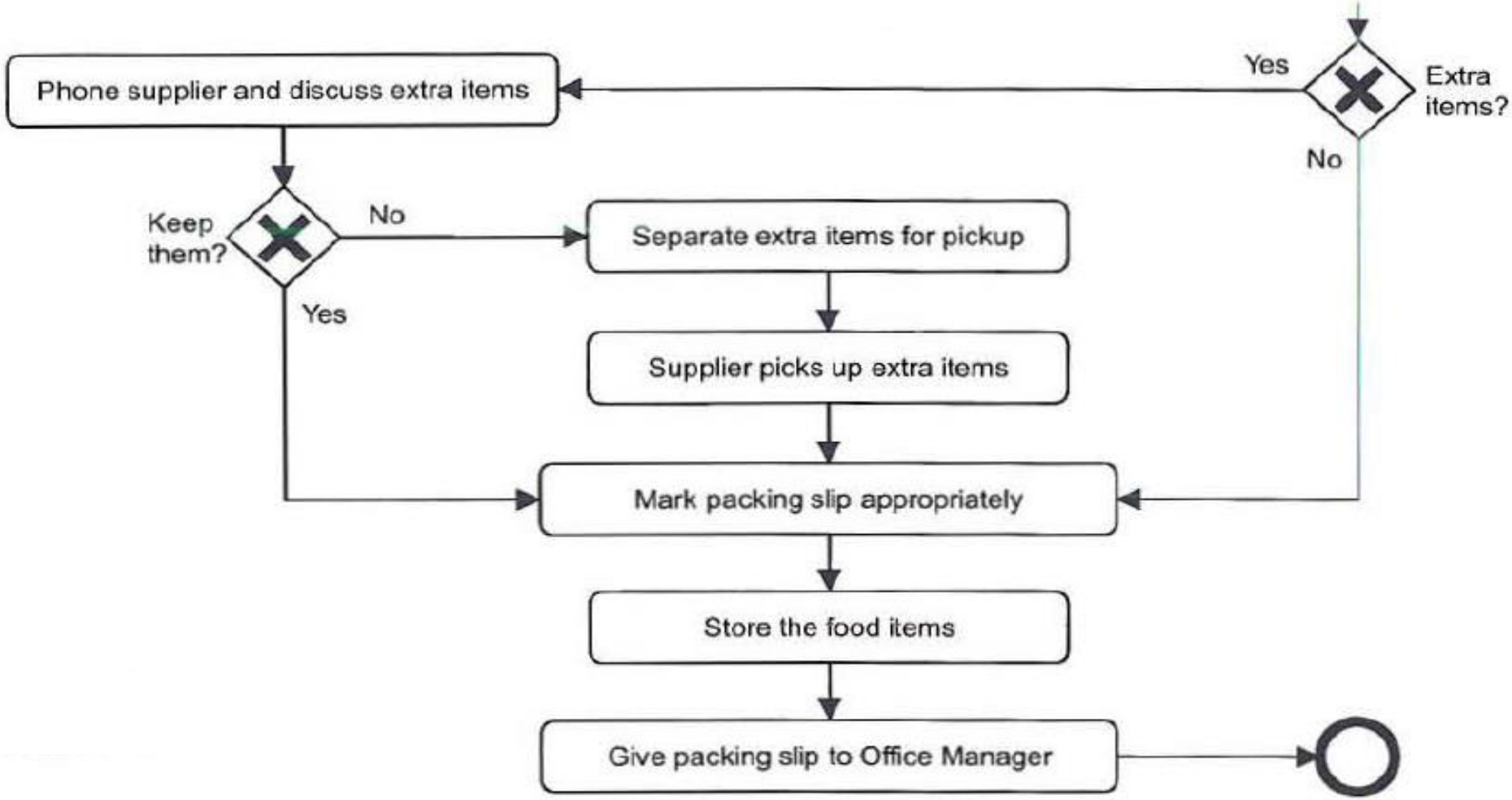


Diagram continues on next slide

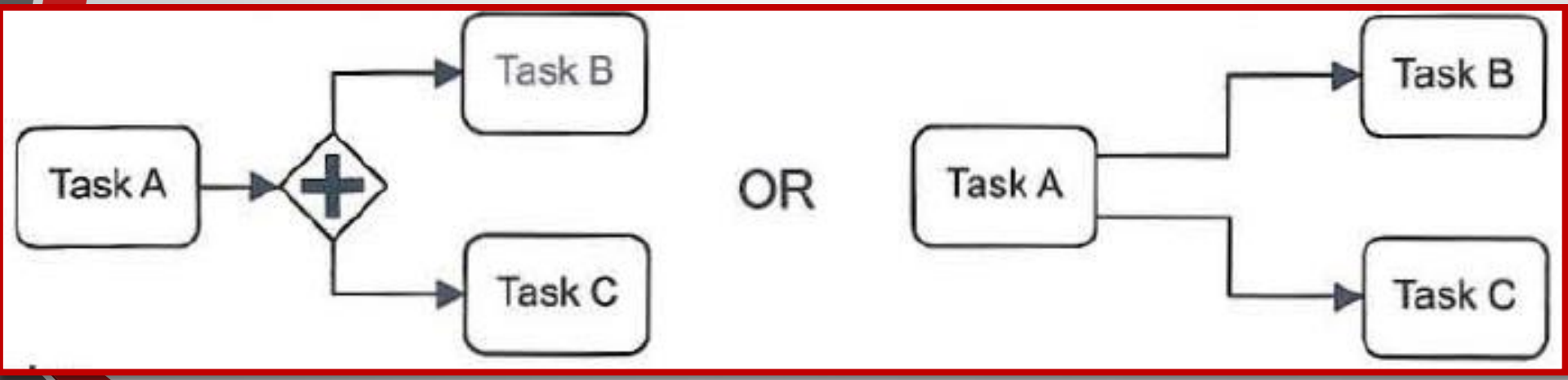
Sequence Flow and Gateways: Example

- Receive Food business process diagram (continued)



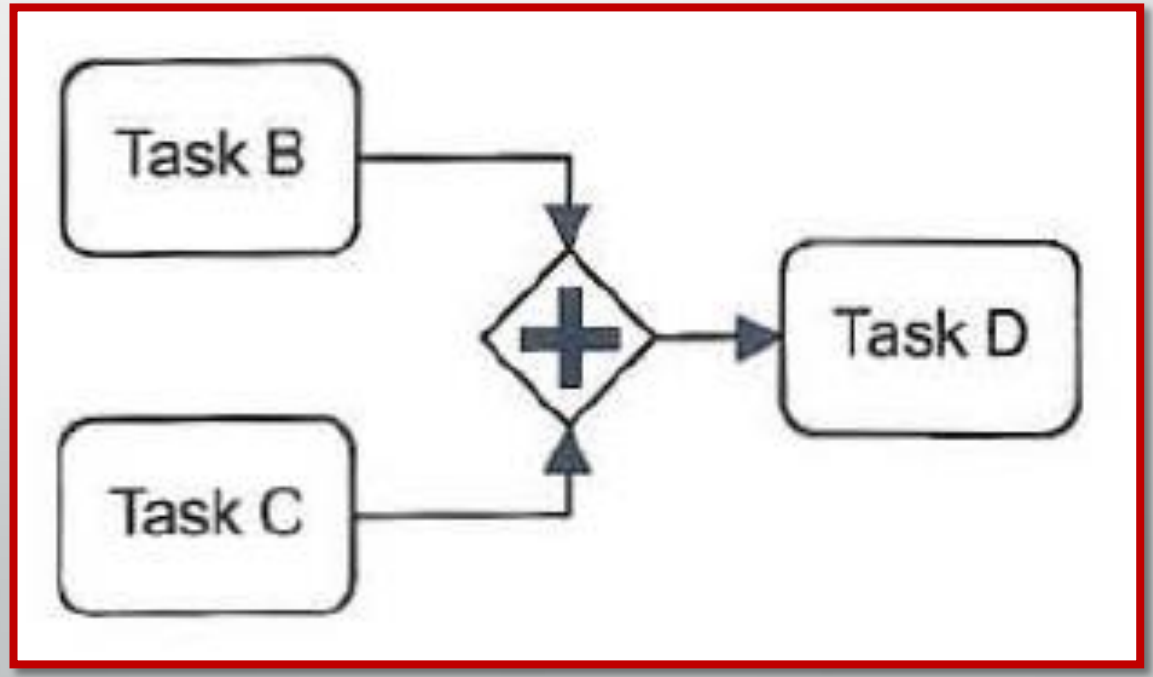
Parallel Activities

- Activities performed independently (in parallel) are shown with:
  - Forks
    - **If the fork gateway is missing, both flows are taken in parallel**



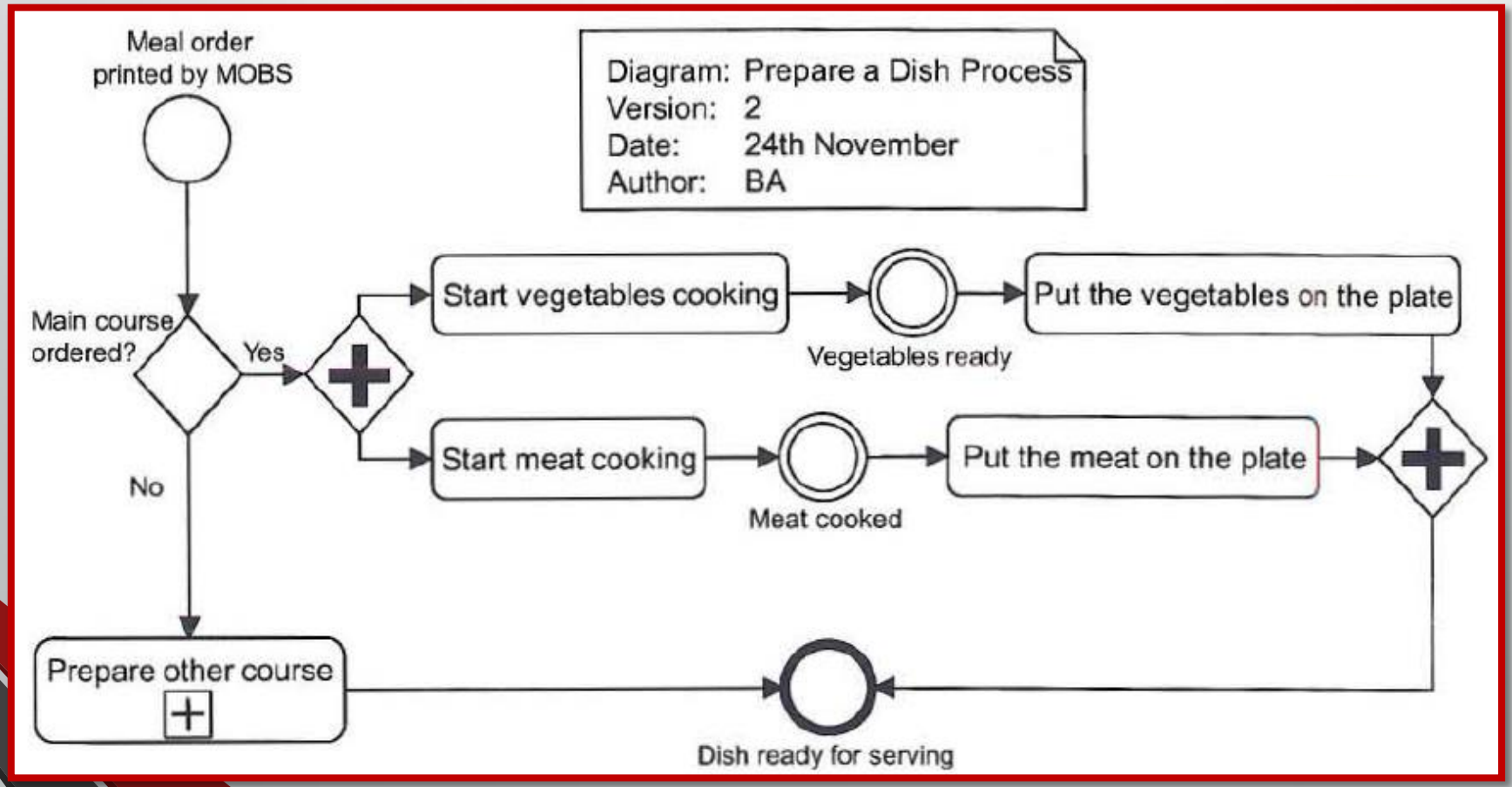
Parallel Activities

- Activities performed independently (in parallel) are shown with
  - Joins
    - **The join gateway is mandatory so both flows arrive before proceeding**



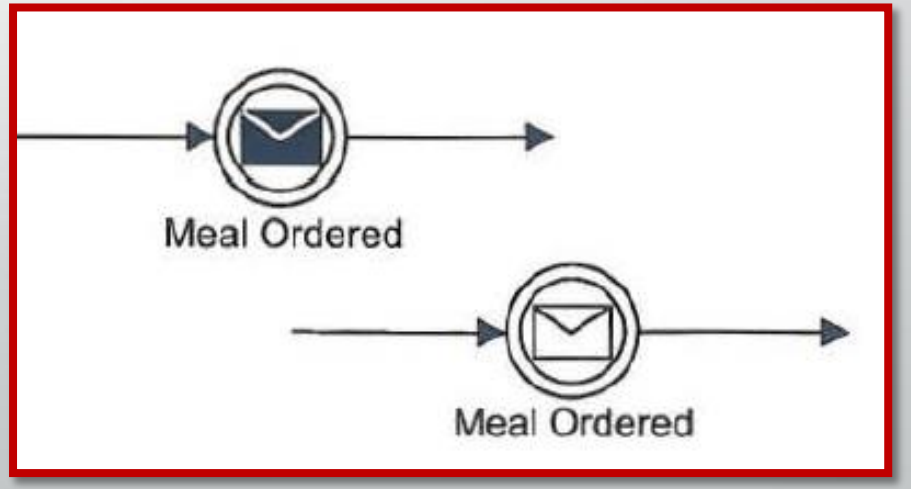
Parallel Activities: Example

- It is good practice to **draw the fork explicitly**
  - Otherwise it is hard to find



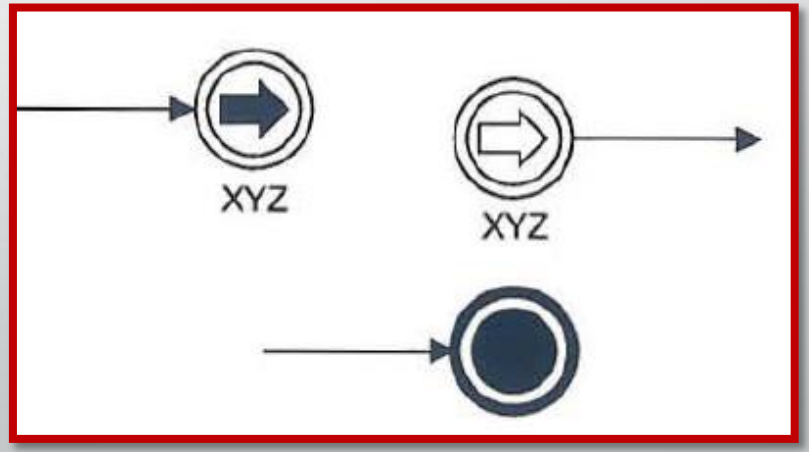
Other Events

- Message event
  - Creating a message
    - **A throw event in a sequence flow**
    - **All throw events have filled in icons**
- Waiting for a message
  - **A catch event in a sequence**
  - Known as a process break

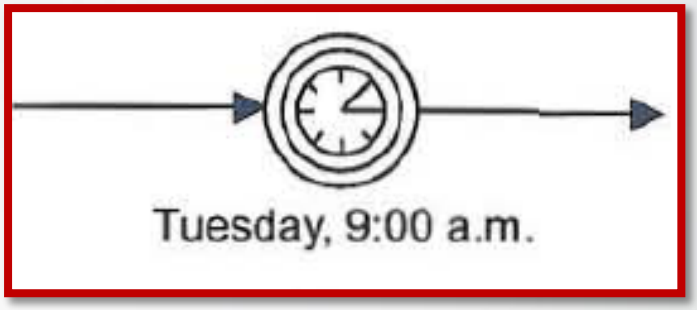


Other Events

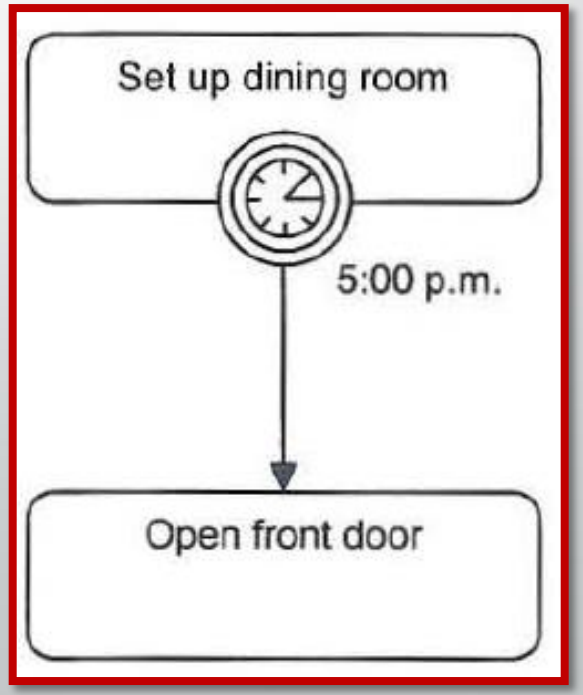
- Link event
  - **Used as an off-page connector**
  - **Thrown on one page**
    - **Caught on another page**
- Terminate event
  - **A throw event that stops all active flows**



Other Events



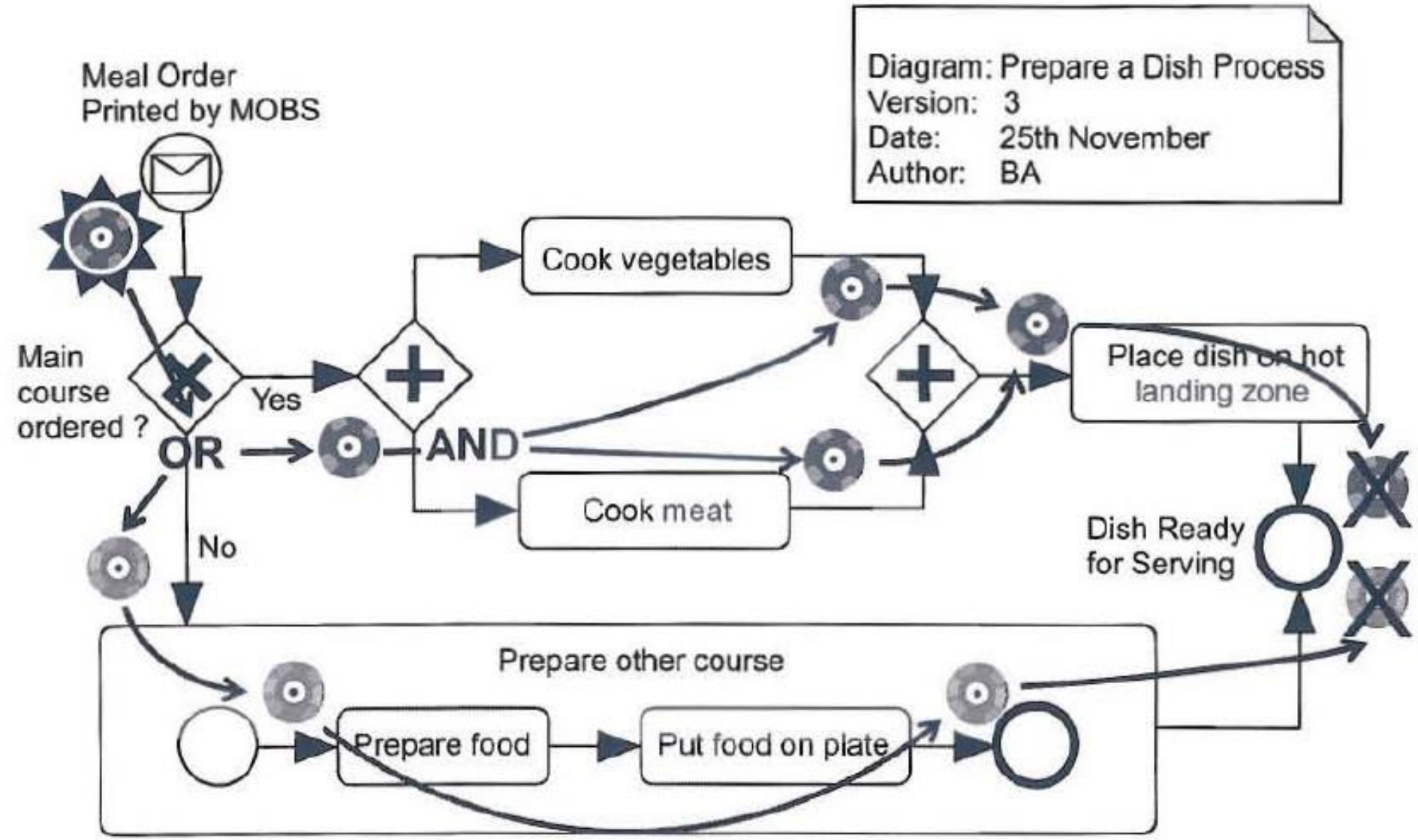
- Timer event
  - **Can only be a catch event**
- Events attached to the boundary
  - **The task is interrupted when the event is caught**



Tokens

- A token **represents the flow of work as it traverses**
  - Sequence flow
  - Flow objects
- **A start event generates a token**
- **Fork gateways split tokens** (What is done)
- **Join gateways combine tokens**
- **An end event consumes tokens**
  - A process or sub-process finishes when **all of its tokens are consumed**
- Tokens do not traverse message flows or associations

Tokens


Meal Order
Printed by MOBS
Diagram: Prepare a Dish Process
Version: 3
Date: 25th November
Author: BA
Main course ordered ?
Yes
No
OR
AND
Cook vegetables
Cook meat
Place dish on hot landing zone
Dish Ready for Serving
Prepare other course
Prepare food
Put food on plate