



# Modern Systems Analysis and Design

Seventh Edition

Jeffrey A. Hoffer  
Joey F. George  
Joseph S. Valacich

## Chapter 7 Appendix B Object-Oriented Analysis and Design: Activity Diagrams

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## Learning Objectives

- ✓ Understand how to represent system logic with activity diagrams.

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## Process Modeling: Activity Diagrams

### ■ Activity Diagrams

- ☐ Show the conditional logic for the sequence of system activities needed to accomplish a business process.
- ☐ Clearly show parallel and alternative behaviors.
- ☐ Can be used to show the logic of a use case.

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## Use Activity Diagrams to:

- Depict the flow of control from activity to activity.
- Help in use case analysis to understand what actions need to take place.
- Help in identifying extensions in a use case.
- Model work flow and business processes.
- Model the sequential and concurrent steps in a computation process.

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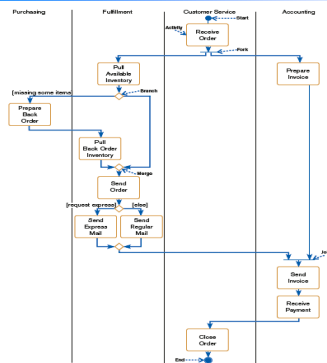
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**FIGURE 7-36**  
Activity diagram for a customer order process

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## Process Modeling: Activity Diagrams (Cont.)

- Elements of Activity Diagrams:
  - **Activity**: a behavior that an object carries out while in a particular state
  - **Branch**: a diamond symbol containing a condition whose results provide transitions to different paths of activities
  - **Merge**: a circular symbol where different paths converge

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## Process Modeling: Activity Diagrams (Cont.)

- **Fork**: the beginning of parallel activities
- **Join**: the end of parallel activities
- **Swimlanes**: columns representing different organizational units of the system

Chapter 7 Appendix B

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## Summary

- In this appendix you learned how to:
- ✓ Understand how to represent system logic with activity diagrams.

Chapter 7 Appendix B

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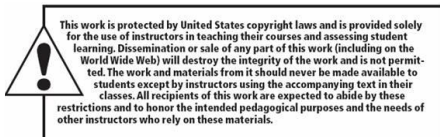
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