

Phases of SDLC

1

Planning

The purpose of this first phase is to find out the scope of the problem and determine solutions. Resources, costs, time, benefits and other items should be considered here.



2

Systems Analysis & Requirements

The second phase is where teams consider the functional requirements of the project or solution. It's also where system analysis takes place—or analyzing the needs of the end users to ensure the new system can meet their expectations.

3

Systems Design

The third phase describes, in detail, the necessary specifications, features and operations that will satisfy the functional requirements of the proposed system which will be in place.



Phases of SDLC



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7

Operations & Maintenance

The last phase is when end users can fine-tune the system, if they wish, to boost performance, add new capabilities or meet additional user requirements.

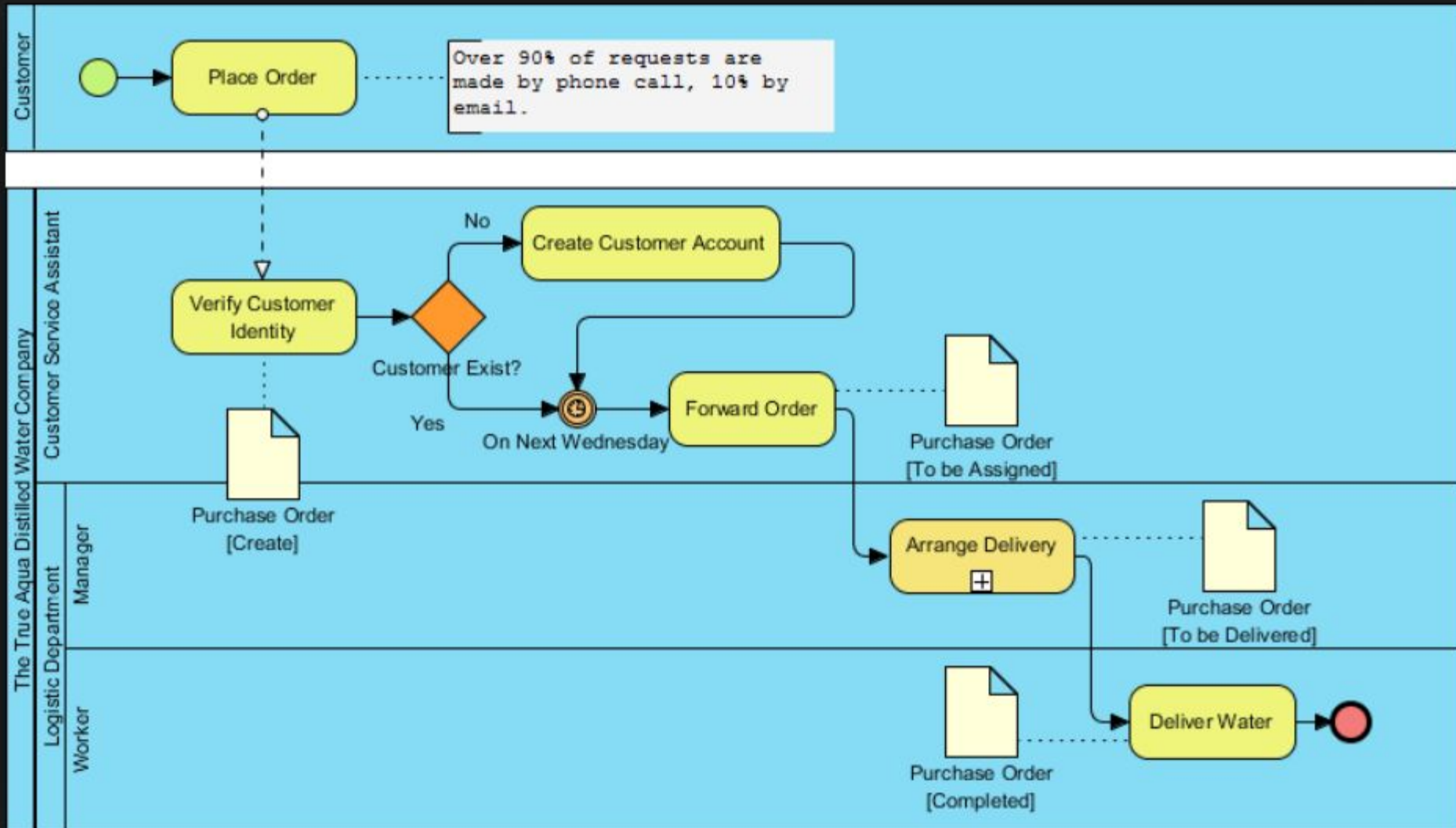


Requirement Analysis

- Interviewing users
- Studying relevant documentation
- Identifying Processes
- Identifying Actors
- Identifying business rules
- Reporting Problems and Opportunities
- Preparing Software Requirement Specification (SRS)
 - ☐ Designing BPMN
 - ☐ Preparing process description
 - ☐ Writing Usecases
 - ☐ Writing technical specification

To be covered in CSE
325, ISD

BPMN Example



System Design

- Database design: Entity Relationship Diagram
- UML design: **Class diagram** and others
- **User interface design**
- Report template design
- Design of reusable components
- **Design patterns**

Non-red topics are to be covered in CSE 325, ISD

Software Quality Assurance

- Code review
- Testing
 - ☐ Unit testing
 - ☐ Input validation
 - ☐ Concept of test partitioning, coverage and boundary testing
 - ☐ Security concept and testing
 - ☐ Performance testing
 - ☐ Automated Program Repair

Software Architecture and Practices

- Model View Controller
- Micro service
- Software development frameworks
 - ☐ Spring (Java)
 - ☐ Struts (Java)
 - ☐ Laravel (Php)
 - ☐ Dot Net (C#)
- Version controlling
- Deployment
- Continuous Integration