Programming Foundation With Pseudocode
Lesson 00:

Capgemini

Document History

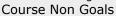| Date	Course Version No.	Software Version No.	Developer / SME	Reviewer	Approver	Change Record Remarks
Jan 2015	1.0	NA	Rathnajothi Perumalsamy		Mahima Sharma	Initial Draft
May 2015	1.1	NA	Shraddha P Jadhav	Veena Deshpande / Satish Joshi	Mahima Sharma	Added contents related to algorithm design and techniques.
May 2016	1.2	NA	Anjulata Tembhare	Kavita Arora	Mahima Sharma	Removed some Topics as per new ToC

Keep this as a hidden slide.

Note to coordinators: Not to be printed for the class book.
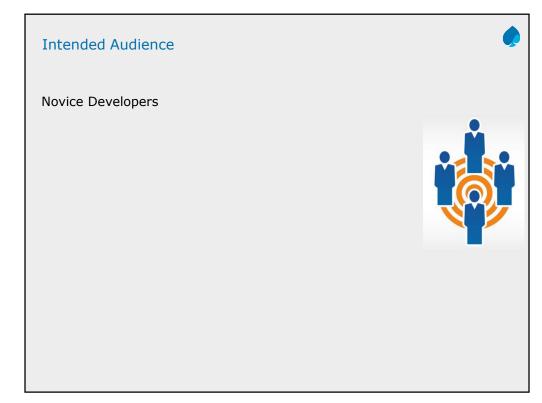
Course Goals and Non Goals

Course Goals
- To learn about how to write good program by understanding concepts like
  - Readability
  - Maintainability
  - Modularity
  - Defensive programming
  - Algorithm analysis and design
- To learn about how to write pseudocode in design phase
- To develop robust programs by performing Code Reviews and Unit Testing (test cases/results)
- Understanding Software testing

Course Non Goals
- To learn any specific language features in this course. (Language features will be covered in subsequent modules.)

Intended Audience

Novice Developers

Day Wise Schedule

Day 1
- Lesson 1: Introduction to program development with pseudocode
- Lesson 2: Good Programming Practices

Day 2
- Lesson 2: Good Programming Practices (Continued)
- Lesson 3: Algorithm Analysis and Design
- Lesson 4: Algorithm Design Techniques

Day 3
- Lesson 5: Exception Handling
- Lesson 6: Software Reviews and Testing

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Lesson 5: Exception Handling
- 5.1 What is exception handling?
  - Guidelines for creating exceptions
  - Importance of Exception Handling

5.2 Case study

5.3 Defensive Programming
  - What is Defensive Programming
  - Purpose of defensive programming
  - Techniques of defensive programming
    - Input Validation
    - Error Handling
    - Error containment

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Lesson 6: Software Reviews and Testing(Contd..)
- 6.6 Testing Techniques
  - Static Testing
  - Dynamic Testing
- 6.7 Static Testing
  - Self review
  - Peer Review
  - Group Review

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Next Step Courses

Any programming language