

User Interaction Design with UML

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| Objectives <ul style="list-style-type: none"> Review OO principles and UML diagrams Review architecture principles Discuss major software system models Utilize collaborations to capture design Review elements of user interaction discipline Identify user interface navigation pattern Understand user interface behavior and structure Design the user interface | | Description <i>User Interaction Design with UML</i> teaches the user interaction and usability professional the fundamental techniques to apply the Unified Modeling Language (UML) to building a model for the user interface (UI) of a software application. The course begins with an overview of user interaction design activities in the software development process and discusses planning, requirements, modeling, prototyping, and testing the user interface. Continuing with a refresher of basic object-oriented principles and the UML, the course then introduces a “universal” process pattern for modeling the behavior and structure of dynamic systems. UML collaborations are applied to capture behavior and structure using communication, sequence, and class diagrams. These principles are used to provide an overview of user interaction architecture, introducing the 2+9+1 modeling framework, user interaction architectural patterns (using collaborations), architectural mechanisms, and user interface design patterns. Then the course focuses on how to apply these techniques to deriving a detailed design model of the user interface from the use case model. | |
| | | Course Outline (Modules and Topics) <ul style="list-style-type: none"> OO and UML Refresher <ul style="list-style-type: none"> Object-oriented concepts UML principles Architecture Overview <ul style="list-style-type: none"> Definition of software architecture 2+9+1 modeling framework Model-Driven Architecture® (MDA®) Collaborations <ul style="list-style-type: none"> Major models of a software system Relationships between the models Universal process pattern for design Formalizing the universal process pattern with collaborations User Interaction Overview <ul style="list-style-type: none"> Relationship to requirements and design Prototyping and testing Modeling and planning Model UI Navigation Pattern <ul style="list-style-type: none"> Definition Use case and system workflow diagrams Identify UI Elements <ul style="list-style-type: none"> UI flows and UI realizations Candidate UI elements Model UI navigation for use cases Model UI Behavior <ul style="list-style-type: none"> Different UI element types View, action, list, value list Represent UI behavior for use cases Model UI Structure <ul style="list-style-type: none"> UI participants diagram Containment, reuse, factoring Develop the UI <ul style="list-style-type: none"> Prototypes Usability testing | |
| Duration 2 day | Course # 01-0103 | Prerequisites <ul style="list-style-type: none"> Use Case Modeling Fundamentals UML Fundamentals | In partnership with |
| Audience <ul style="list-style-type: none"> User interface designer Usability engineer Business analyst System analyst Software architect Test designer | | Continuing education <ul style="list-style-type: none"> Object-Oriented Analysis with UML Object-Oriented Design with UML Test Case Design with UML Classroom requirements <ul style="list-style-type: none"> No computers required | |

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