

Prototyping

Software
Maintenance

Prototype

Prototype – partial, preliminary or possible implementation of a software system

Used to explore and validate requirements and design approaches

Material from: Software Requirements , 3rd ed. by Karl Wieggers and Joy Beatty, Chapter 15 “Risk reduction through prototyping”

Types of Prototypes

Characteristics of prototypes:

- evolutionary versus throwaway
- paper versus electronic
- mock-up versus proof of concept

Mock-up Versus Proof of Concept Prototype

Mock-up implies behavior without actually implementing it aimed to refine requirements

- “horizontal” prototype

Proof of concept implements a portion of a software-containing system that slices through multiple layers of the architecture aimed to explore technical feasibility and performance

- “vertical” prototype

Proof of Concept Prototype

Proof of concept prototypes can help to:

- Optimize algorithms
- Evaluate a proposed database schema
- Confirm the soundness of a cloud solution
- Test critical timing requirements
- Improve the teams ability to estimate the effort involved in implementing a specific user story or block of functionality

Agile – sometimes refer to a proof of concept prototype as a “spike”

Project Prototype

Handling permissions via web service middleware has been suggested

Today: create proof of concept, paper, throw-away prototypes to evaluate the technical feasibility of this