



8. Prototyping

CSE 498, Collaborative Design

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S Prototype

- Developed
 - Early
 - Rapidly
- Implements Subset of the Requirements
- Is Optional
- Done for Variety of Reasons
- Is **Not** Finished Goods

S Why? Answer Questions

Help Determine

- Feature Set
- Usability
- Market
- How Existing Code Works
- Programming Language(s)
- Development Environment(s)
- Operating Environment(s)
- Etc...

S Why? Determine Schedule

Determine how long will it take to...

- learn the development environment.
- learn the existing code.
- convert the existing code.
- convert the existing database.
- get libraries working.
- build 100 interfaces.
- deploy the application.
- etc....

S Why? Reduce Risk

- Operability
 - How do we make a game clock?
 - Where do we store the data?
- Interoperability
 - How does the game clock work with other tablets?
 - How do the tablets all write to the same database?
- Scalability
 - Will the game clock propagate in real time?
 - Will the database engine keep up?
- Reliability
 - What happens if the clock tablet dies?
 - What happens if the database tablet dies?
- Etc...

S Speed

- Critical
- 2-3 Day Tasks
- Use
 - RAD Languages
 - SDK's
 - IDE's
 - Design Tools
 - Wizards
 - Etc...
- Stop When Question(s) Answered

S Tradeoffs: Speed vs...

- Testing
- Documentation
- Security
- Software Engineering Best Practices
- Usability
- Performance
- Coding Standards
- User Interface Standards
- Using Real Data
- Etc...

Hence Normally Not Appropriate in Final Deliverable

5.7

S Basketball Prototypes

- Stat Collection
- Timer
- Radio Stats
- Play Stats

5.8

S Your Prototypes

- What?
- Why?
- How?
- When?
- Where?

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