



Software Engineering

هندسة البرمجيات

جامعة بغداد

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الهيثم

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المرحلة الثالثة

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Prototyping Model

Topics covered



- ✧ What is Prototyping Model?
- ✧ Iterative approach to software development
- ✧ Phases of prototyping Model
- ✧ Strengths of prototyping Model
- ✧ Weaknesses of prototyping Model

What is Prototyping Model?



- ✧ Prototyping is development of a preliminary version of a software in order to allow certain aspects of what that software to be investigated.
- ✧ Often the primary purpose of a prototype is to obtain feedback from the intended users; the requirements specification for the software can then be updated to reflect this feedback, and so increase confidence in the final software.

What is Prototyping Model?



- ✧ Prototyping is a type of evolutionary development, the method of building a software where developers get the general idea of what is needed by the users, and then build a fast, high-level version of the software as the beginning of the project.
- ✧ The idea of prototyping is to quickly get a version of the software in the hands of the users and to jointly evolve the system through a series of iterative cycle of design.

Iterative approach to software development



Figure 4: Iterative approach to software development

Phases of prototyping Model (in each version)

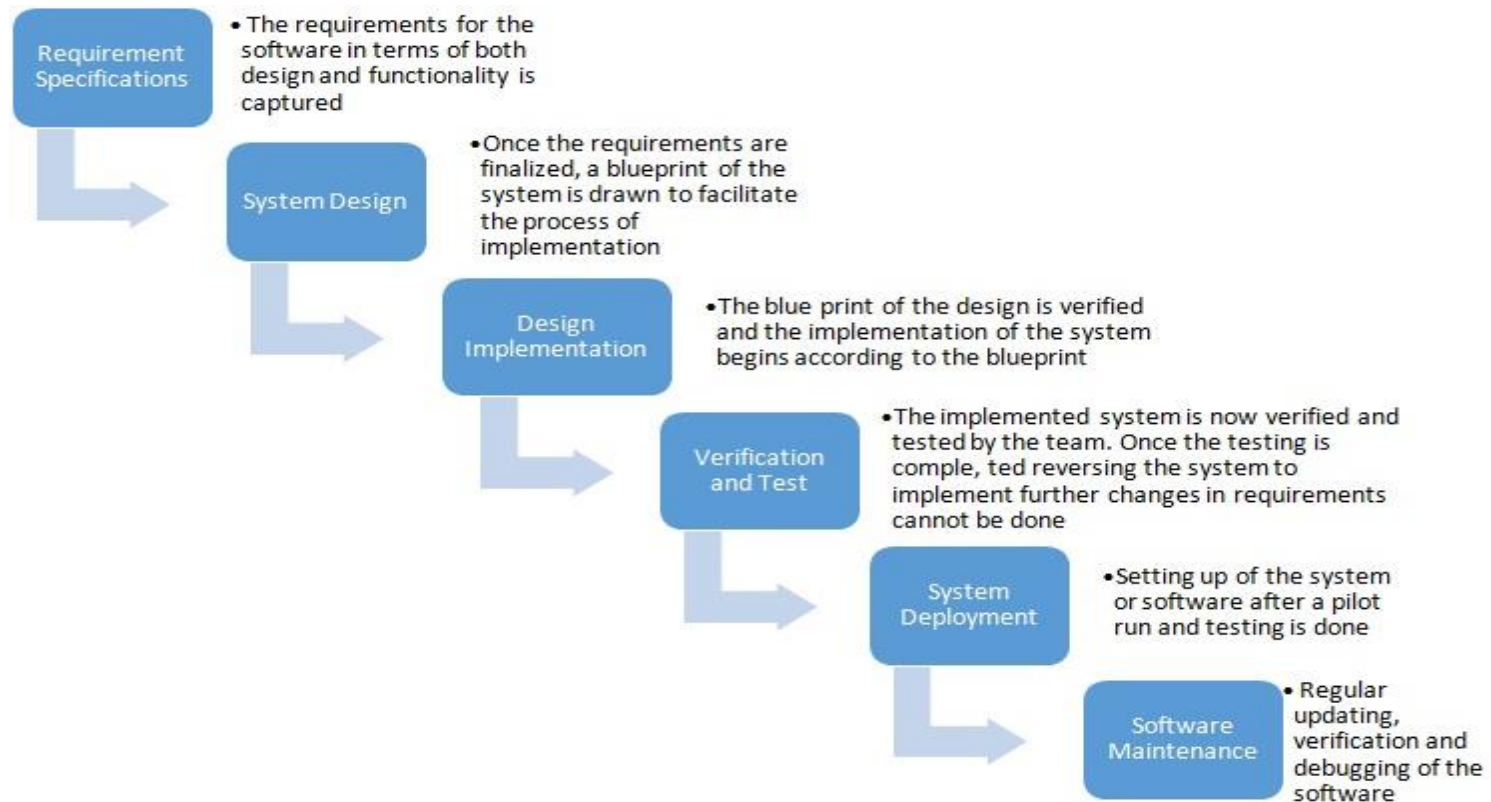


Figure 5: Phases of prototyping model (in each version)

Strengths of Prototyping Model



- ✧ Improved user communications.
- ✧ Users like it.
- ✧ Speeds up development process.
- ✧ Good for eliciting software requirements.
- ✧ Provides a tangible model to serve as basic for production version.
- ✧ This is useful when requirements are changing rapidly.

Weaknesses of Prototyping Model



- ✧ It is impossible to know at the outset of the project how long it will take.
- ✧ There is no way to know the number of iterations that will be required.
- ✧ It is difficult to build an accurate cost estimate.
- ✧ Documentation may be more difficult.
- ✧ This approach is not suitable for all software.

Weaknesses of Prototyping Model



- ✧ The user sees what appears to be a working version of software. Actually, it is only mock-ups of software.
- ✧ The developer is often makes implementation compromises in order to a get prototype work quickly.

The prototyping Model

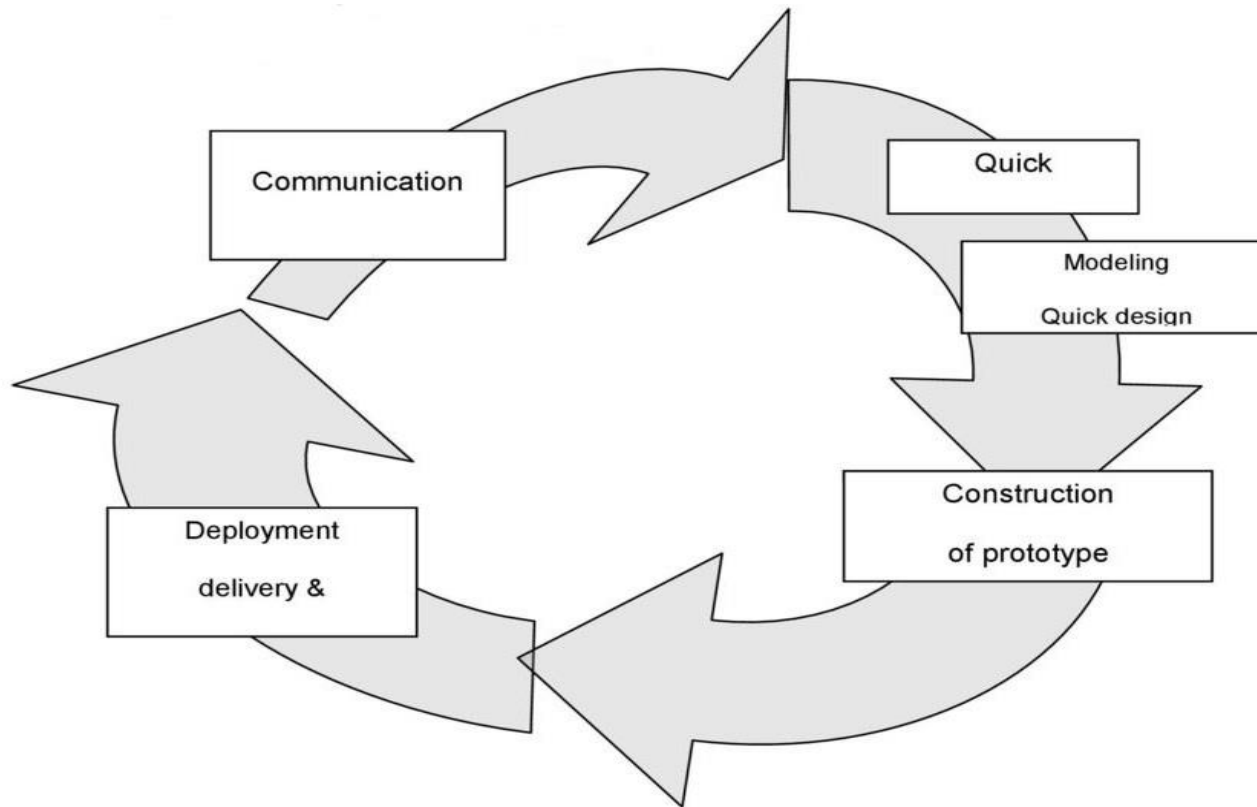


Figure 6: The prototyping model



Thanks