Software Reuse

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- Software products are expensive.

- Software project managers are worried about the high cost of software development and desperately look for ways to cut development cost.

- A possible way to reduce development cost is to reuse parts from previously developed software.

Artifacts that can be reused

- Almost all artifacts associated with software development, including project plan and test plan can be reused.

- However, the prominent items that can be effectively reused are:
    - Requirements specification
    - Design
    - Code
    - Test cases
    - Knowledge

Pros and cons of knowledge reuse

- Two major difficulties with unplanned reuse of knowledge are that a developer experienced in one type of software product might be included in a team developing a different type of software.

- it is difficult to remember the details of the potentially reusable development knowledge.

- A planned reuse of knowledge can increase the effectiveness of reuse.

Easiness of reuse of mathematical functions

- The routines of mathematical libraries are being reused very successfully by almost every programmer.

Basic issues in any reuse program

- The following are some of the basic issues that must be clearly understood for starting any reuse program.
  - Component creation
  - Component indexing and storing
  - Component search
  - Component understanding
  - Component adaptation
  - Repository maintenance