



الجامعة السورية الخاصة
SYRIAN PRIVATE UNIVERSITY

المحاضرة 12

كلية الهندسة المعلوماتية

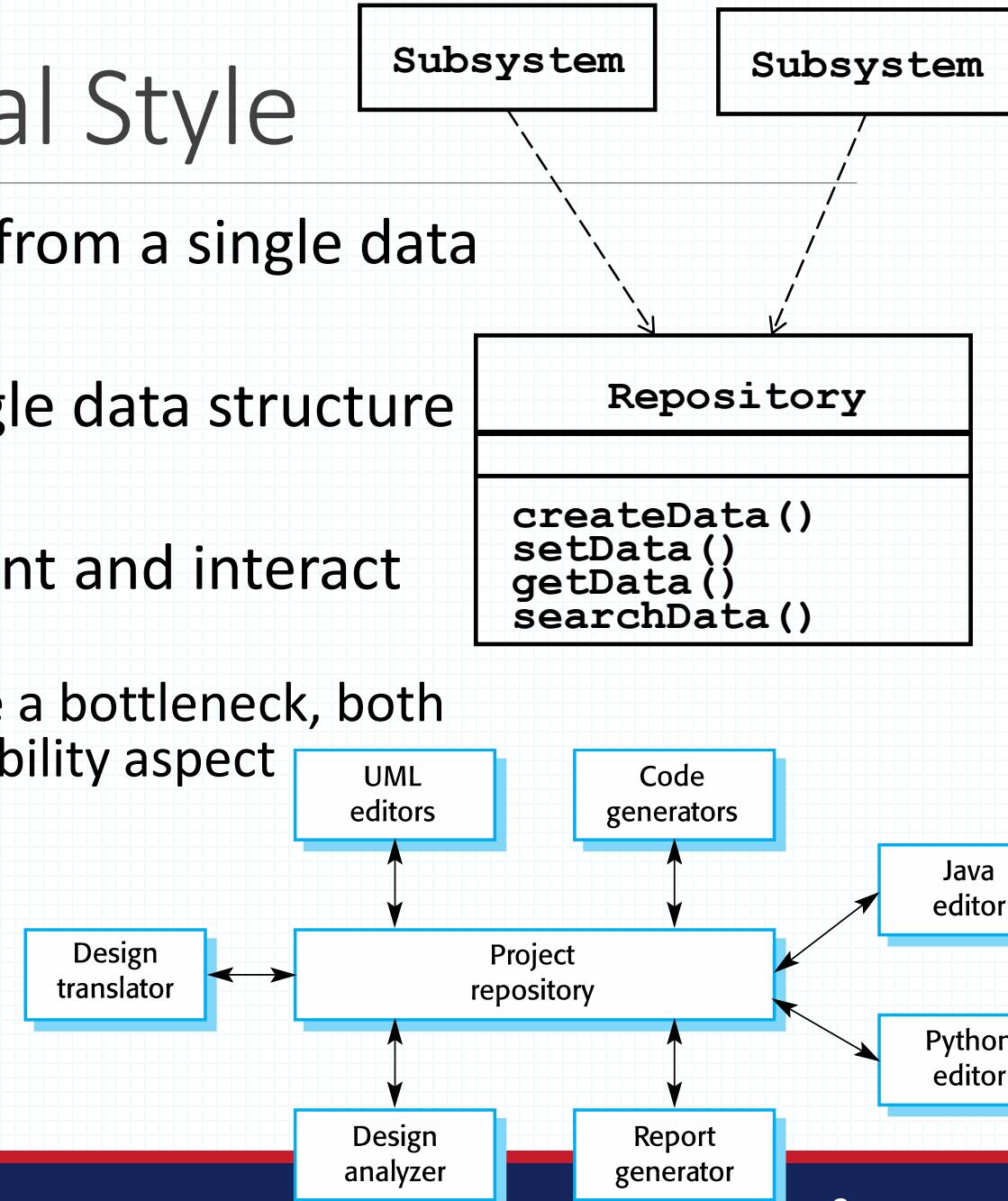
مقرر بنيان البرمجيات

More Architectural Styles

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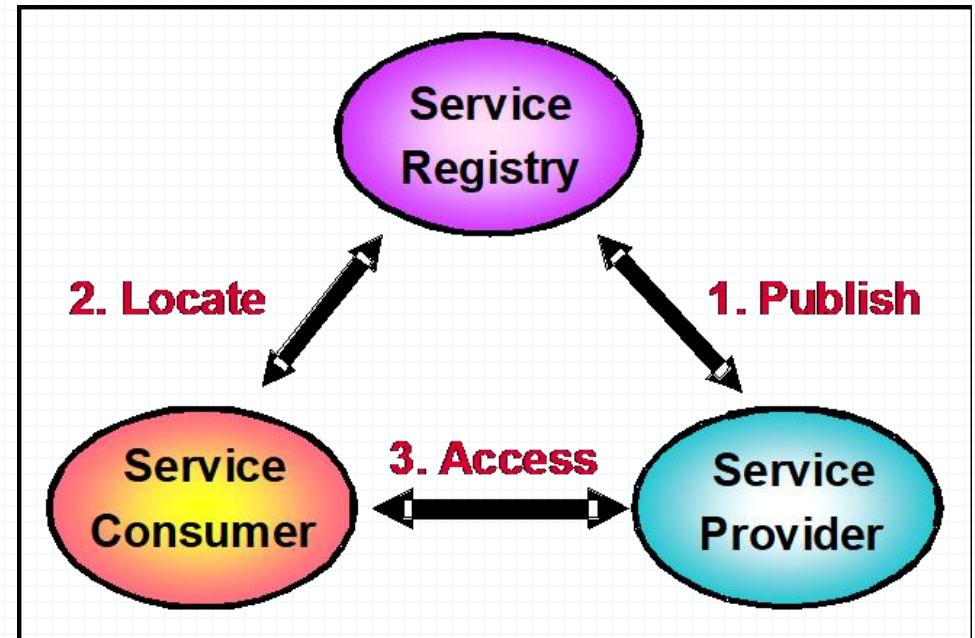
Repository Architectural Style

- Subsystems access and modify data from a single data structure called the **repository**.
- Subsystems access and modify a single data structure called the central repository.
- Subsystems are relatively independent and interact only through the repository.
 - the central repository can quickly become a bottleneck, both from a performance aspect and a modifiability aspect
- Sample Application?
 - DB management.
 - IDE (save artifacts which working on software projects management)



Service-Oriented Architecture (SOA) Architectural Style

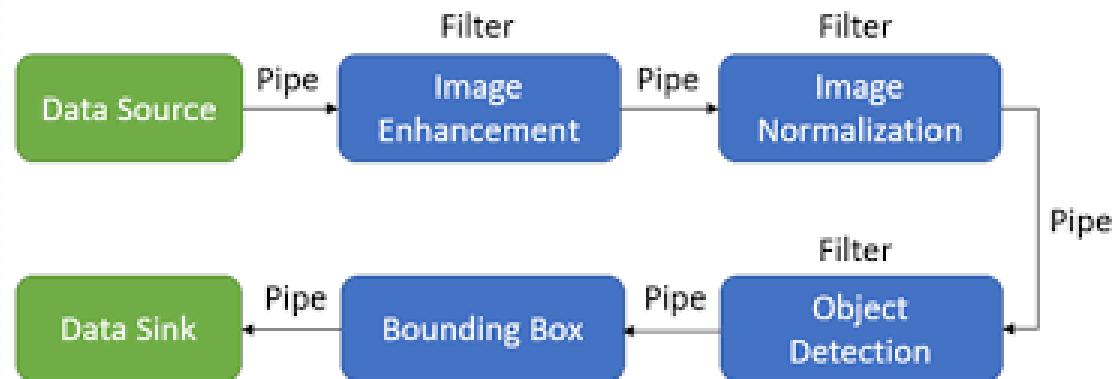
- SOA is an architectural approach in which applications make use of services available in the network.
- Each service in SOA is a complete business function in itself
- Usually, the services are published in such a way that it makes it easy for the developers to assemble their apps using those services
- Standard protocols have been developed to support service communication and information exchange



Three key roles: consumer, provider, registry

Pipes and Filters

- A **pipeline** consists of a chain of processing elements (processes, threads, etc.), arranged so that the output of one element is the input to the next element
 - Usually some amount of buffering is provided between consecutive elements
 - The information that flows in these pipelines is often a stream of records, bytes or bits.



Example

- **Can you recommend an architectural design for a system that enables users to upload images, apply various computer vision functionalities offered by the system, and subsequently save and edit the resulting images? Additionally, the system should encompass features for account management and billing to handle user subscriptions effectively.**