Week 2 Requirements   
Why do use cases focus on *business goals* and the *business task* of an actor?

**Definition of a use case**: A collection of一批 possible sequences of interactions相互作用 between the system under discussion and its Users (or Actors), relating to相关联 a particular特别的 goal. Definition by Alistair Cockburn

**Use cases focus on business goals and tasks of an actor**: This is a user-centered 以用户为中心的 approach to find out 找出 the functions that has a real business value and that the user really wants these functions to be developed. Sometimes developers focus on some trivial 不重要的 functions speculated 推测 from their system perspective观点 (must have user perspective).

**Use case Model: Used for capturing 捕捉 functional requirements**

**3 main parts of a use case:**

**actors & goals,**

**main success scenario 方案**

**Extensions 扩张**

**No need to worry about “include” and “extend” relationships in model.**

Draw a UML class diagram to explain the relationships between actor, goal, use case, and scenarios?

Add main scenario, alternative scenarios, exceptional scenarios, recovery and failure scenarios to your UML class diagram to explain the relationships between actor, goal, use case, and scenarios?

What is a stakeholder? List some examples of stakeholders.

**A Stakeholder is anyone who could be affected by the new system or has input to provide in the development of the new system.**

**Examples: customer users developer development manager. Users: (puzzle maker, solver), Managers, External regulators System developers (project team).**

What is a functional requirement?

**Functionality or services that the system is expected to provide – Addresses the input & output behavior of a system**

**Examples:**

 **Business Rules (slide 84)**

 **Transaction corrections, adjustments and cancellations** 事务修正、调整和取消

 **Administrative functions**行政职能

 **Authentication**证明

 **Authorization levels**授权级别

 **Audit Tracking**审计跟踪

 **External Interfaces**外部接口

 **Certification Requirements**认证要求

 **Reporting Requirements**报告需求

 **Historical Data**历史资料

 **Legal or Regulatory Requirements**法律或监管要求

What is a non-functional requirement?

**A non-functional requirement specifies指定 criteria 标准 that can be used to judge 审理the operation of a system, rather than specific behaviors.**

**Non-functional requirements describe how the system works or behaves while** F**unctional requirements describe what the system should do or define specific behavior or functions.**

 **Examples: Maintainability可维护的, Accessibility已接近的, Usability, Modifiability可变的, Testability可测量的, Operability可操作的.**

Why does a requirement have to be *testable*?

**Any software artifact人工制品 including requirements has to be able to support testing in order to enable developers to find faults in the system and make testing easier.**