Test 1

测试1

Question 1

1. How is the development of cost effective solutions to practical problems through the application of scientific knowledge called?

- Live-cycle
- Building
- Engineering
- Application

问题1

1. 通过应用科学知识为实际问题开发具有成本效益的解决方案如何称为?

- 生命周期
- 建筑
- 工程
- 应用

What is engineering?

"Engineering is the development of cost-effective solutions to practical problems, through the application of scientific knowledge"

"…Cost-effective…"

- Consideration of design trade-offs, esp. resource usage
- Minimize negative impacts (e.g. environmental and social cost)

"… Solutions …"

- Emphasis on building devices

"… Practical problems …"

- solving problems that matter to people
- improving human life in general through technological advance

"… Application of scientific knowledge …"

- Systematic application of analytical techniques

什么是工程?

"工程是通过应用科学知识，为实际问题开发具有成本效益的解决方案"

"……性价比高……"

- 考虑设计权衡，尤其是。资源使用

最大限度地减少负面影响（例如环境和社会成本） ".....解决方案....."

- 重视构建设备

"……实际问题……"

- 解决对人们重要的问题
- 通过技术进步改善人类生活

"……科学知识的应用……"

- 分析技术的系统应用

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Question 2

2. What are the major stakeholder interests?

- Development interests
- Usage interests
- Financial interests
- Observational interests

问题2

2. 主要利益相关者的利益是什么?

- 发展利益
- 使用兴趣
- 经济利益
- 观察兴趣

Stakeholders

- **Stakeholder analysis**:
  - Identify all the people who must be consulted during information acquisition

- **Example stakeholders**
  - Users
    - concerned with the features and functionality of the new system
  - Designers
    - want to build a perfect system, or reuse existing code
  - Systems analysts
    - want to "get the requirements right"
  - Training and user support staff
    - want to make sure the new system is usable and manageable
  - Business analysts
    - want to make sure "we are doing better than the competition"
  - Technical authors
    - will prepare user manuals and other documentation for the new s
  - The project manager
    - wants to complete the project on time, within budget, with all objectives met.
  - "The customer"
    - Wants to get best value for money invested!

- **Financial interests**
  - Customer
- **Development interests**
  - Designer, System analyst, technical author, etc.
- **Usage interests**
  - Users

利益相关者

- 利益相关者分析：
  - 确定信息获取过程中必须咨询的所有人员

- 利益相关者示例
  - 用户
    - 关注新系统的特性和功能
  - 设计师
    - 想要构建一个完美的系统，或者重用现有的代码
  - 系统分析师
    - 想要“满足要求”
  - 培训和用户支持人员
    - 希望确保新系统可用且易于管理
  - 商业分析师
    - 希望确保“我们比竞争对手做得更好”
  - 技术作者
    - 将为新系统准备用户手册和其他文档
  - 项目经理
    - 希望在预算范围内按时完成项目并实现所有目标。
  - “顾客”
    - 想要获得最大的投资价值！

- 经济利益
  - 顾客
- 发展利益
  - 设计师、系统分析师、技术作者等
- 使用兴趣
  - 用户

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Question 3

3. During which activities requirements inconsistencies can be found?

- Requirements validation
- Requirements elicitation
- Requirements documentation
- Requirements management

问题3

3. 在哪些活动中可以发现需求不一致的情况?

- 需求验证
- 需求启发
- 需求文档
- 需求管理

Conflicts in different RE activities

Identify
Analyse
Resolve
Document

- **During the elicitation workshop**
  - Two stakeholders state requirements that contradict each other and hence cannot be realised together
- **When documenting requirements**
  - The stakeholders detect a conflict between two requirements that originate from different interviews
- **Requirements management**
  - Conflict occurs during requirements prioritisation – different stakeholders have different opinions regarding the requirements priority
- **Requirements validation**
  - Conflicts occurs while stakeholders check the specified requirements for correctness
  - One stakeholder considers a requirement correct – another objects

不同情况下的冲突
可再生能源活动

确认
分析
解决文档

- 在启发研讨会期间
  - 两个利益相关者提出的要求相互矛盾，因此无法共同实现
- 记录需求时
  - 利益相关者发现来自不同访谈的两个要求之间存在冲突
- 需求管理
  - 需求优先级划分过程中会出现冲突——不同的利益相关者对需求优先级有不同的看法
- 需求验证
  - 当利益相关者检查指定要求的正确性时会发生冲突
  - 一位利益相关者认为某项要求是正确的，而另一位利益相关者则反对

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Question 4

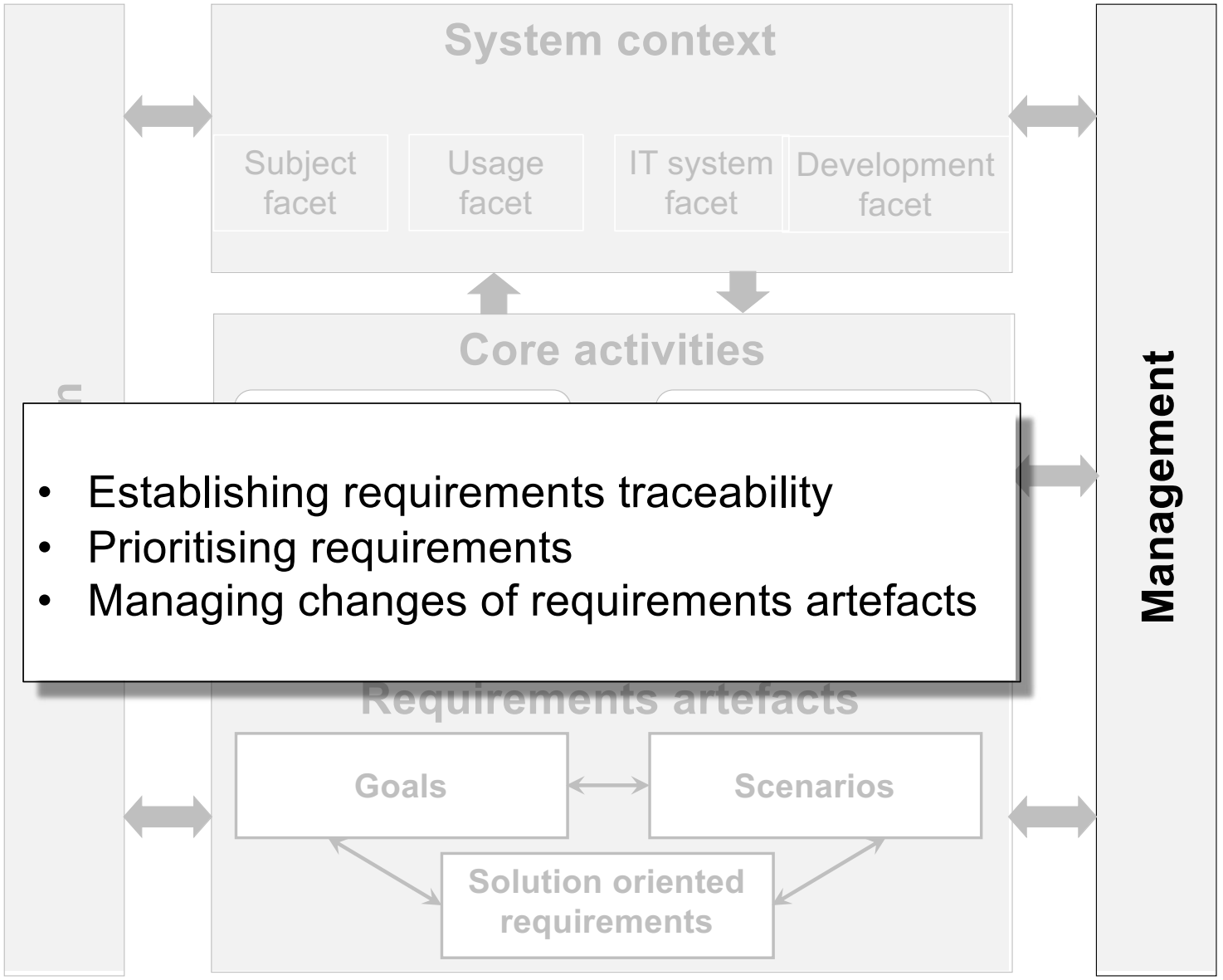
4. During which activity does requirement engineer establish requirements traceability, prioritise requirements, and manage changes of requirements artefacts?

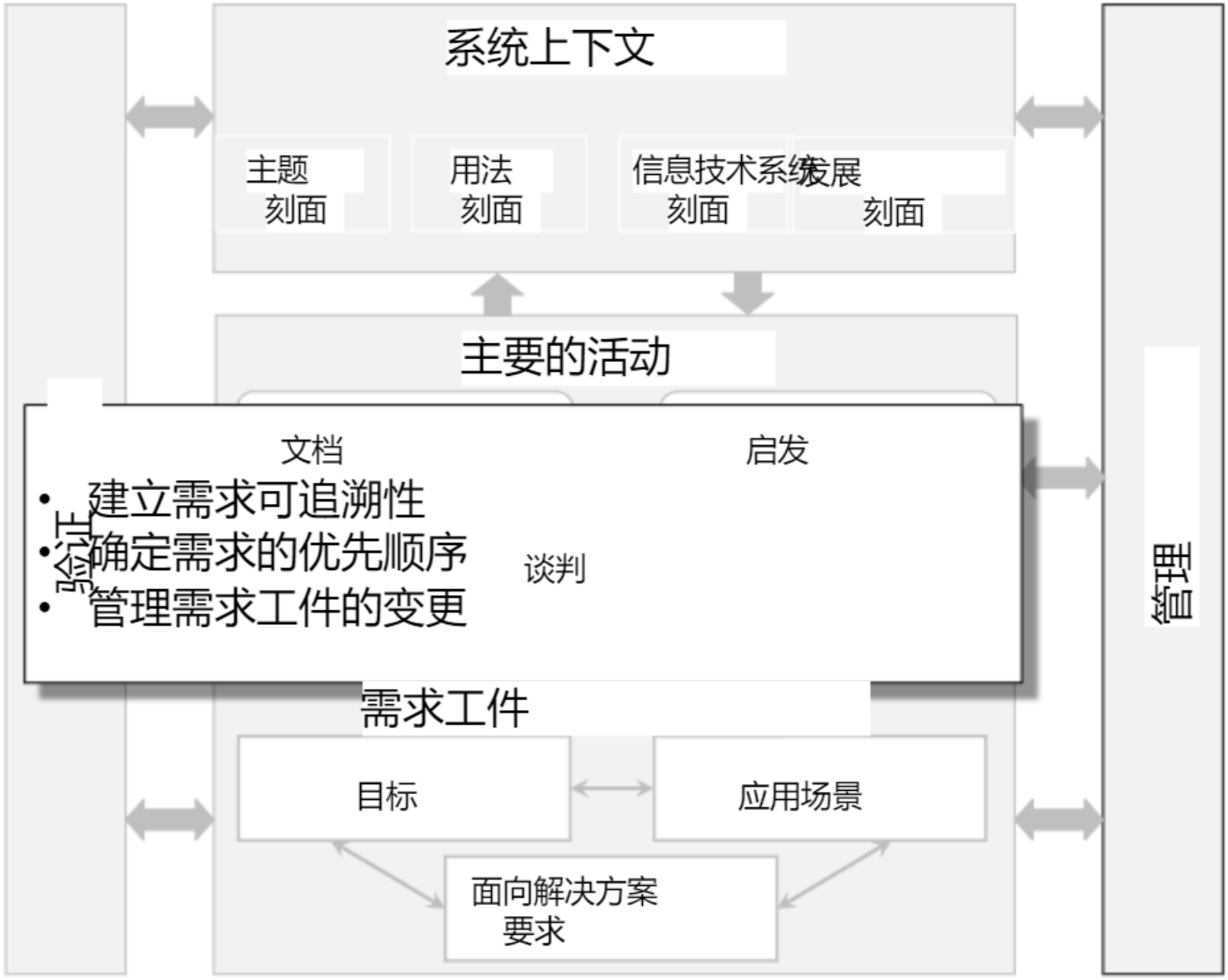
- Requirements management
- Requirements representation
- Requirements validation
- Requirements documentation

问题4

4. 需求工程师在哪些活动中建立需求可追溯性、确定需求优先级并管理需求工件的变更?

- 需求管理
- 需求表示
- 需求验证
- 需求文档


System context
Subject facet
Usage facet
IT system facet
Development facet
Core activities
Requirements artefacts
Goals
Scenarios
Solution oriented requirements
Management
• Establishing requirements traceability
• Prioritising requirements
• Managing changes of requirements artefacts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谈判
需求工件
目标
应用场景
面向解决方案
要求
管理

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Question 5

5. What concerns should be included to requirement specification (document)?

- Performance
- Attributes
- Design constraints imposed on and implementation
- Functionality

问题5

5. 需求规范（文档）中应包含哪些问题?

- 表现
- 属性
- 设计约束和实施
- 功能性

Specification Contents

- Specification should address:
  - Functionality
    - What is the software supposed to do?
  - External interfaces
    - How does the software interact with people, the system's hardware, other hardware, and other software?
    - What assumptions can be made about these external entities?
  - Performance
    - What is the speed, availability, response time, recovery time of various software functions, and so on?
  - Attributes
    - What are the portability, correctness, maintainability, security, and other considerations?
  - Design constraints imposed on an implementation
    - Are there any required standards in effect, implementation language, policies for database integrity, resource limits, operating environment(s) and so on?

规格内容

- 规范应解决：
  - 功能性
    - 该软件应该做什么？
  - 外部接口
    - 软件如何与人、系统硬件、其他硬件和其他软件交互？
    - 对于这些外部实体可以做出哪些假设？
  - 表现
    - 各种软件功能的速度、可用性、响应时间、恢复时间等如何？
  - 属性
    - 可移植性、正确性、可维护性、安全性和其他考虑因素是什么？
  - 对实现施加的设计约束
    - 是否有任何有效的必需标准、实施语言、数据库完整性策略、资源限制、操作环境等？

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- **Attributes**
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- **Functionality**

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- 表现
- 属性
- 设计约束和实施

- 功能性

Question 6

6. Why is it important to resolve requirements conflicts?

- For the interdependence and clarity
- For the complete specification of the requirements
- For the acceptance of the system by stakeholders
- For the successful (i.e., timely, within the budget, and etc.) completion of the project

问题6

6. 为什么解决需求冲突很重要?

- 为了相互依存和清晰
- 有关要求的完整规范
- 为了让利益相关者接受系统
- 为了成功（即及时、在预算范围内等）完成项目

Conflicts

- **Conflict (in RE)**
  - Exists if the needs and wishes of different stakeholders (or groups of stakeholders) regarding the system contradicts each other,
  - Exists if some needs and wishes cannot be taken into account

- **Risks of unresolved conflicts**
  - Compromise acceptance of the system by stakeholders
  - If conflict disregarded or suppressed, some stakeholders may not support development of the system
  - May result in failure of the project

- **Involve relevant stakeholders**

冲突

- 冲突（**RE**)
  – 如果不同利益相关者（或利益相关者群体）对系统的需求和愿望相互矛盾，则存在， – 如果无法考虑某些需求和愿望，则存在

- 未解决的冲突的风险
  – 损害利益相关者对系统的接受度 – 如果冲突被忽视或抑制，一些利益相关者可能不支持系统的开发 – 可能导致项目失败

- 让相关利益相关者参与

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Question 7

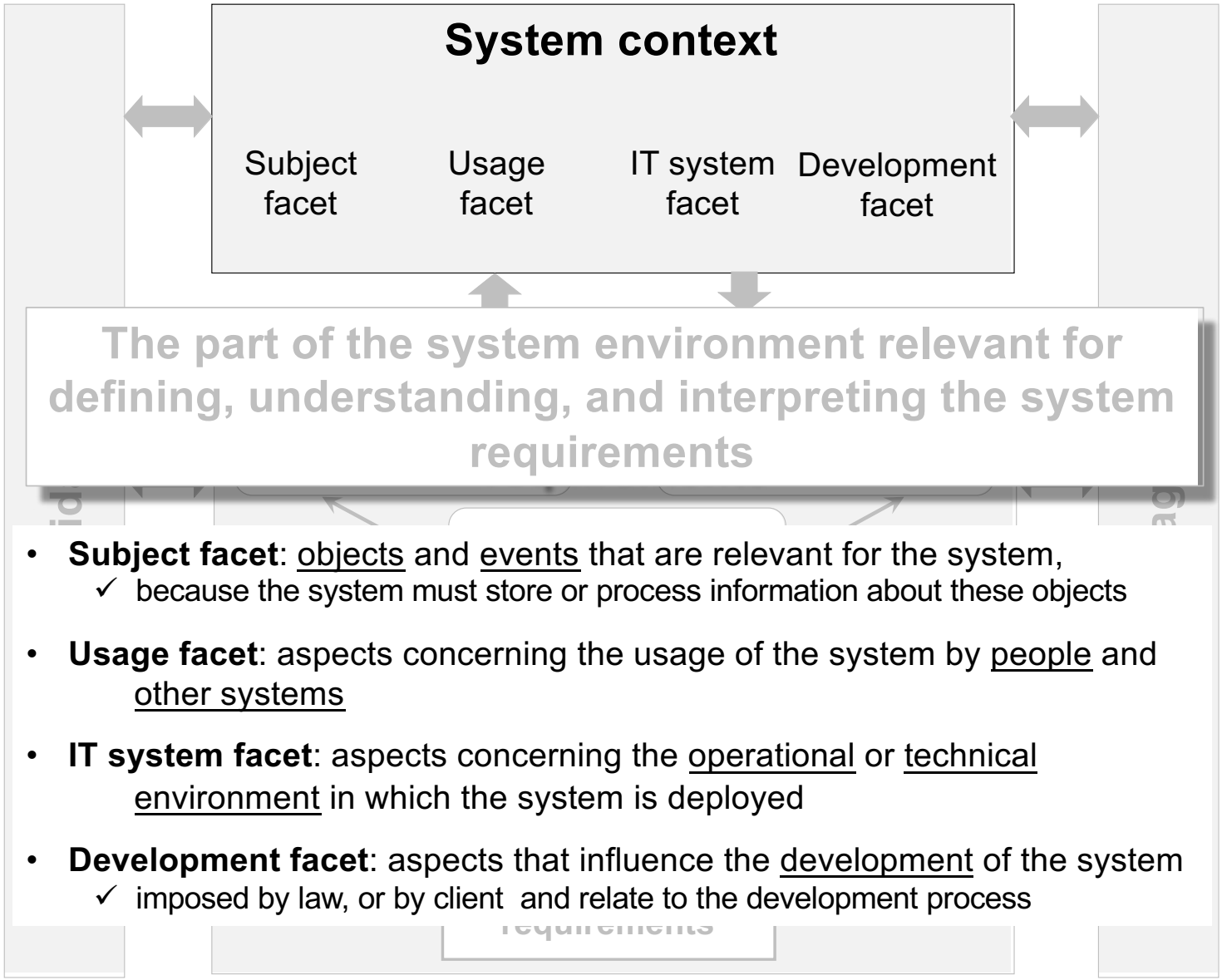
7. How are aspects which concern the operational or technical environment where the system is deployed, called?

- Subject facet
- Usage facet
- Development facet
- IT system facet

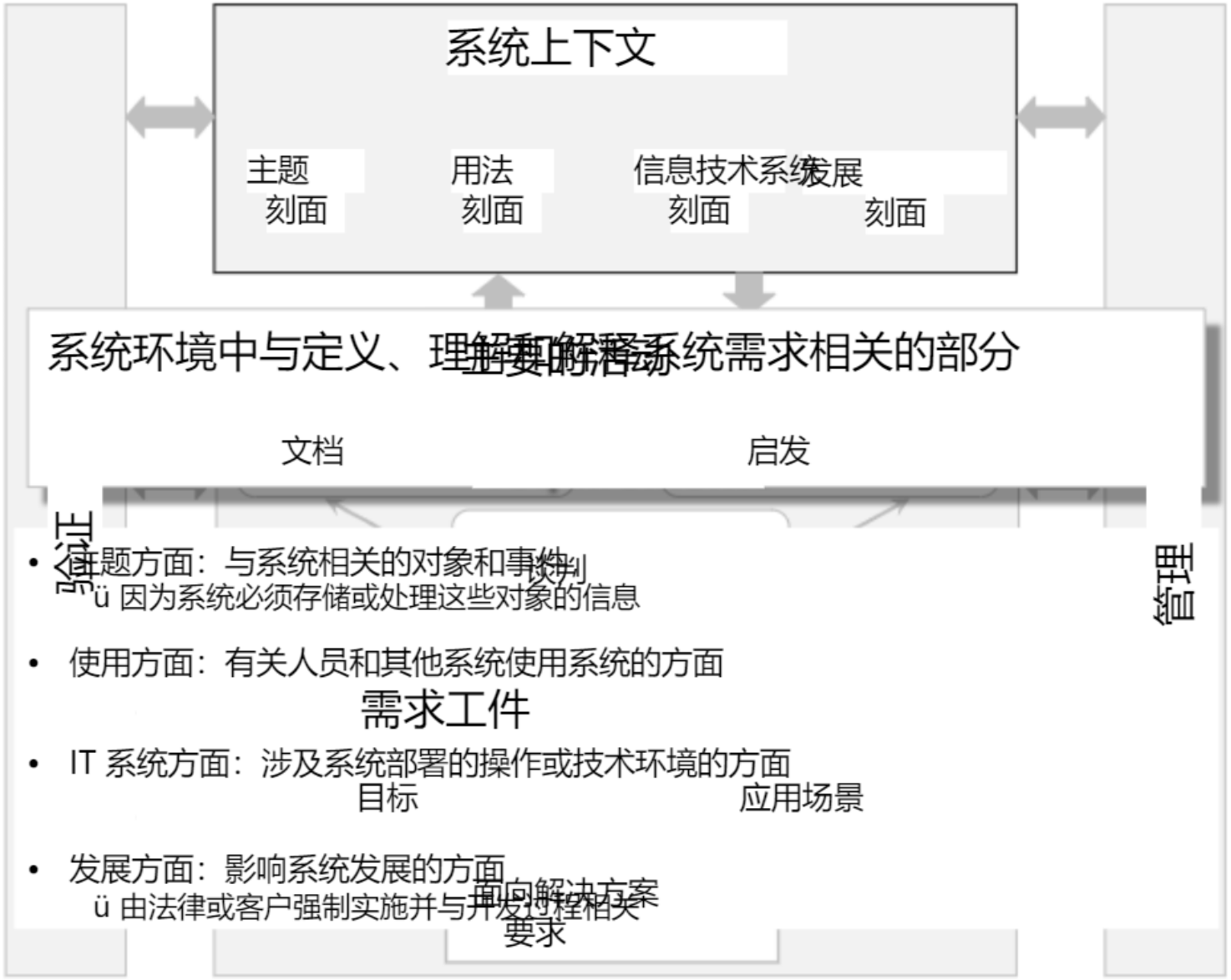
问题7

7. 涉及系统部署的操作或技术环境的方面如何称呼?

- 主题方面
- 使用方面
- 发展面
- IT系统方面



- **Subject facet**: objects and events that are relevant for the system,
  - ✓ because the system must store or process information about these objects
- **Usage facet**: aspects concerning the usage of the system by people and other systems
- **IT system facet**: aspects concerning the operational or technical environment in which the system is deployed
- **Development facet**: aspects that influence the development of the system
  - ✓ imposed by law, or by client and relate to the development process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刻面
发展
刻面
系统环境中与定义、理解和解释系统需求相关的部分
文档
启发
• 主题方面：与系统相关的对象和事件
ü 因为系统必须存储或处理这些对象的信息
• 使用方面：有关人员和其他系统使用系统的方面
需求工件
• IT 系统方面：涉及系统部署的操作或技术环境的方面
目标
应用场景
• 发展方面：影响系统发展的方面
ü 由法律或客户强制实施并与开发过程相关
面向解决方案
要求

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- Usage facet
- Development facet
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- 主题方面
- 使用方面
- 发展面
- **IT**系统方面

Question 8

8. How are systems useful in the context of some human activities supported by the software, which is run on some hardware, called?

- Computer systems
- Information systems
- Software-intensive systems
- Software systems

问题8

8. 在软件（运行在某种硬件上）支持的某些人类活动的背景下，系统有何用处?

- 计算机系统
- 信息系统
- 软件密集型系统
- 软件系统

Software-Intensive Systems

- **Software (on its own) is useless**
  - Software is an abstract description of a set of computations
  - Software only becomes useful when run on some hardware
    - we sometimes take the hardware for granted
  - **Software + Hardware = "Computer System"**
- **A Computer System (on its own) is useless**
  - Only useful in the context of some human activity that it can support
    - we sometimes take the human context for granted
  - A new computer system will change human activities in significant ways
  - **Software + Hardware + Human Activities = "Software-Intensive System"**
- **'Software' makes many things possible**
  - It is complex and adaptable
  - It can be rapidly changed on-the-fly
  - It turns general-purpose hardware into a huge variety of useful machines

软件密集型系统

- 软件（本身）是无用的
  - 软件是一组计算的抽象描述
  - 软件只有在某些硬件上运行时才变得有用
    - 我们有时认为硬件是理所当然的
  - 软件+硬件=“计算机系统”
- 计算机系统（单独）是没有用的
  - 仅在它可以支持的某些人类活动的背景下有用
    - 我们有时认为人类背景是理所当然的
  - 新的计算机系统将显着改变人类活动
  - 软件+硬件+人类活动=“软件密集型系统”
- “软件”让很多事情成为可能
  - 它复杂且适应性强
  - 它可以即时快速更改
  - 它将通用硬件变成各种各样有用的机器

8. How are systems useful in the context of some human activities supported by the software, which is run on some hardware, called?

- Computer systems
- Information systems
- **Software-intensive systems**
- Software systems

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- 信息系统
- 软件密集型系统
- 软件系统

Question 9

9. What type of conflict does exist if stakeholders are wrongly or incompletely informed about the requirements?

- Values conflict
- Data conflict
- Interest conflict
- Analysis conflict

问题9

9. 如果利益相关者对要求的了解错误或不完整，会存在什么类型的冲突?

- 价值观冲突
- 数据冲突
- 利益冲突
- 分析冲突

Data conflict

Identify
Analyse
Resolve
Document

- **Data conflict exists**
  - if stakeholders are wrongly or incompletely informed about the requirement
  - If stakeholders interpret the meaning of the requirements differently

- **Example:**

  R4: The DVD player shall be able to handle re-writable CDs (CD-RW) and DVDs (DVD-RW).

数据冲突

确认
分析
解决文档

- 存在数据冲突
  - 如果利益相关者错误地或不完整地了解了要求
  - 如果利益相关者对需求的含义有不同的解释

- 例子：
  R4：DVD 播放器应能够处理可重写 CD (CD-RW) 和 DVD (DVD-RW)。

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- 利益冲突
- 分析冲突

Question 10

10. Which requirements negotiation activity might include decision (by authority) making?

- Conflict identification
- Conflict analysis
- Conflict resolution
- Conflict documentation

问题10

10. 哪些需求谈判活动可能包括（由当局）做出决策?

- 冲突识别
- 冲突分析
- 解决冲突
- 冲突文档

Resolving Conflicts:

Decision

Identify
Analyse
Resolve
Document

- Higher **authority** makes a decision
  - in favour of one conflicting party
- Example
  - The client is involved as a higher authority. The client decides that the detection range shall be 500 m.
- Voting

- **Third Party Resolution**
  - **participants appeal to outside source**
    - the rule-book, a figure of authority, or the toss of a coin.
    - can occur with the breakdown of either negotiation or competition as resolution methods.
  - **types of third party resolution**
    - judicial: cases presented by each participant are taken into account
    - extra-judicial: a decision is determined by factors other than the cases presented (e.g. relative status of participants)
    - arbitrary: e.g. toss of a coin

解决冲突：

决定

确认
分析
解决
文档

- 上级机关使决定
  - 有利于一个冲突方
- 例子
  - 客户作为更高的权威参与其中。客户确定检测范围为500m。
- 表决

- 第三方解决方案
  - 参与者呼吁外部资源
    - 规则手册、权威人物或抛硬币。 • 可以通过谈判或竞争作为解决方法的失败而发生。
  - 第三方解决方案的类型
    - 司法：考虑每个参与者提出的案件 • 司法外：决定由所提出的案件以外的因素决定（例如参与者的相对地位）
    - 任意：例如抛硬币

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- 冲突分析
- 解决冲突
- 冲突文档

Question 11

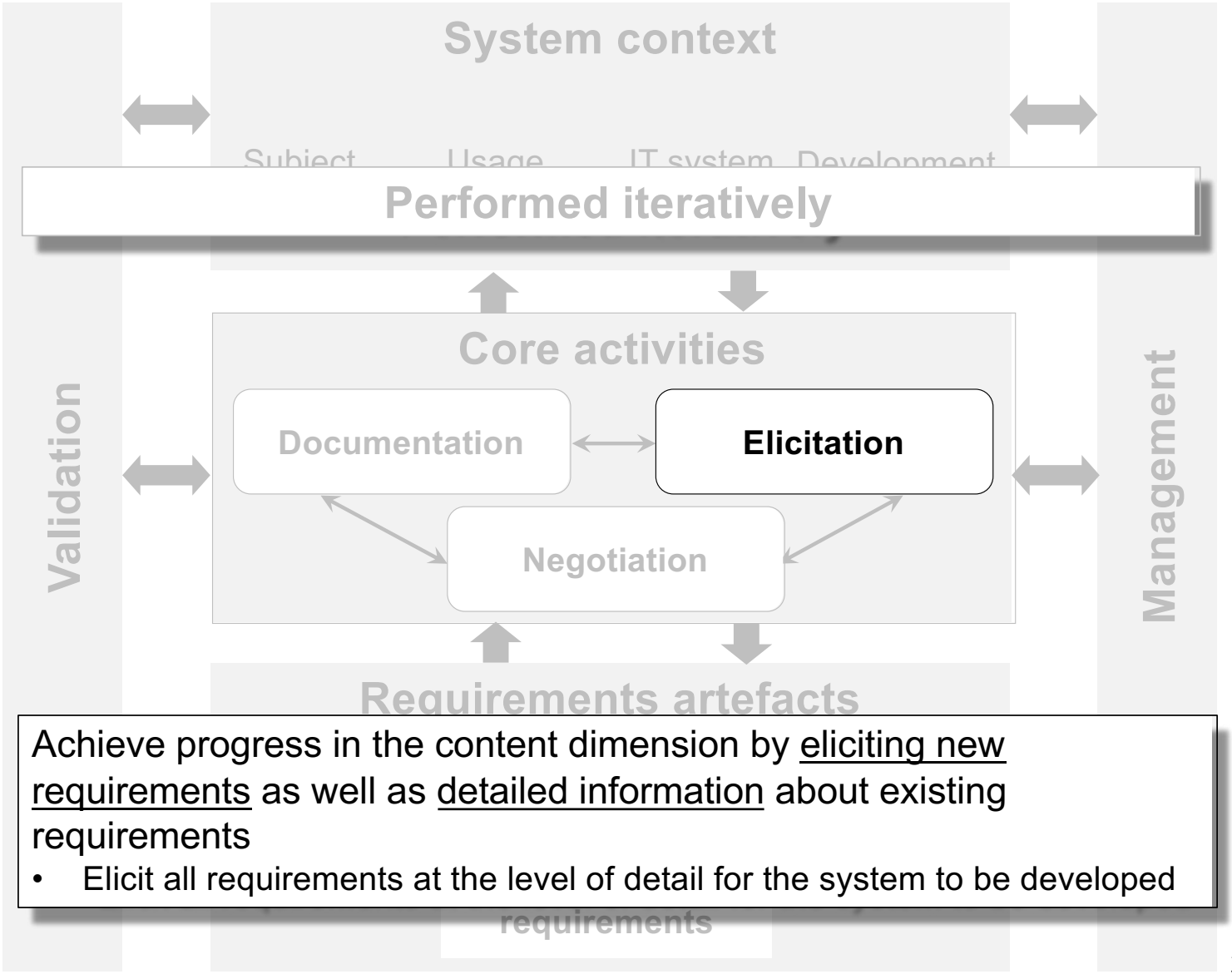
11. Which requirements engineering activity does help to achieve progress in the content dimension by detailing information about existing requirements?

- Requirements validation
- Requirements elicitation
- Requirements management
- Requirements specification

问题11

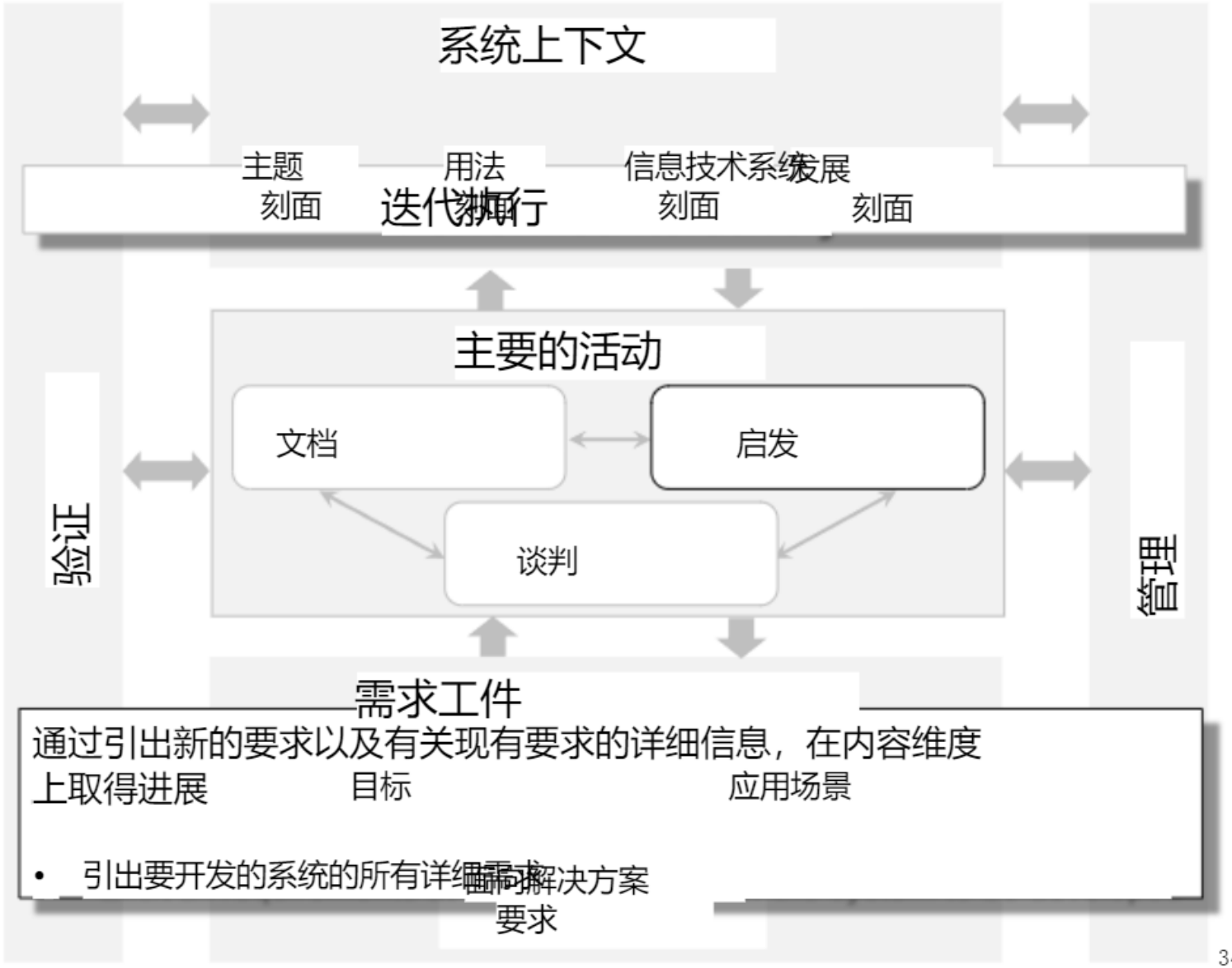
11. 哪些需求工程活动通过详细介绍现有需求的信息有助于在内容维度上取得进展?

- 需求验证
- 需求启发
- 需求管理
- 要求规范



Achieve progress in the content dimension by eliciting new requirements as well as detailed information about existing requirements

- Elicit all requirements at the level of detail for the system to be developed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启发
谈判
验证
管理
需求工件
通过引出新的要求以及有关现有要求的详细信息，在内容维度上取得进展
目标
应用场景
引出要开发的系统的所有详细需求
解决方案
要求

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- 需求启发
- 需求管理
- 要求规范

Question 12

12. What is the part of the system environment relevant for defining, understanding and interpreting the system requirements?

- System boundary
- Requirement engineering
- Requirements specification
- System context

问题12

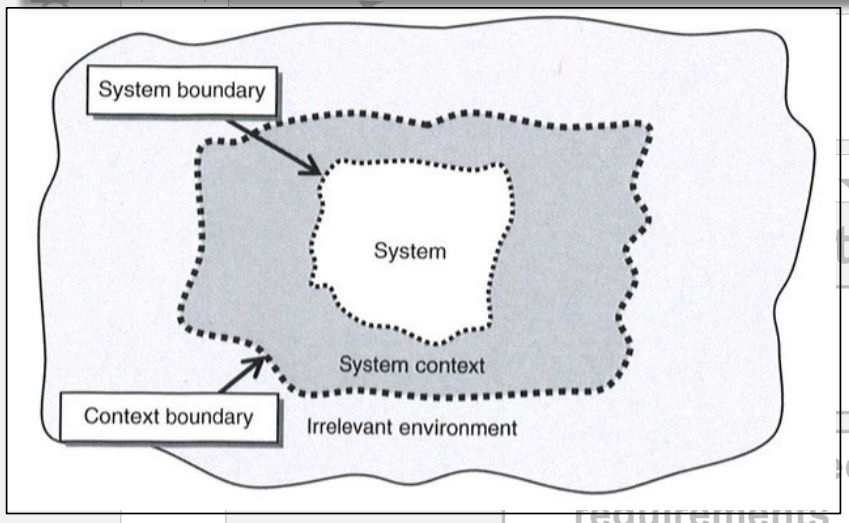
12. 系统环境中与定义、理解和解释系统需求相关的部分是什么?

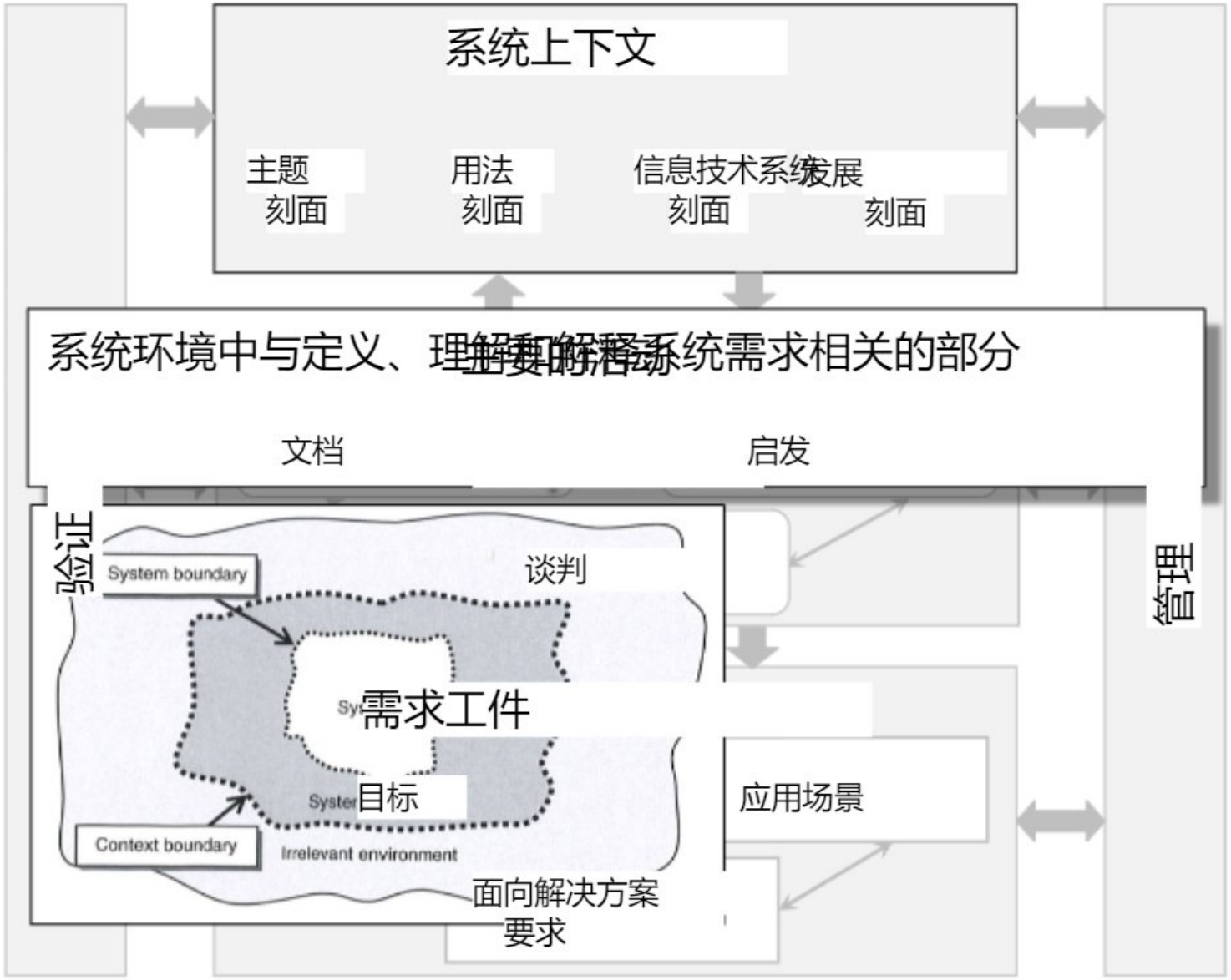
- 系统边界
- 需求工程
- 要求规范
- 系统上下文

System context

Subject facet | Usage facet | IT system facet | Development facet

The part of the system environment relevant for defining, understanding, and interpreting the system requirements




系统上下文
主题
刻面
用法
刻面
信息技术系统
刻面
发展
刻面
系统环境中与定义、理解和解释系统需求相关的部分
文档
启发
验证
System boundary
谈判
管理
需求工件
目标
应用场景
Context boundary
Irrelevant environment
面向解决方案
要求

12. What is the part of the system environment relevant for defining, understanding and interpreting the system requirements?

- System boundary
- Requirement engineering
- Requirements specification
- **System context**

12. 系统环境中与定义、理解和解释系统需求相关的部分是什么?

- 系统边界
- 需求工程
- 要求规范
- 系统上下文

Exercise 1

These requirements are extracted from solutions of your coleagues. Do they correspond to the “criteria of good requirements”? If not, please refine them so that they would correspond to the
“**criteria of good requirements**”.

练习1

这些要求是从您同事的解决方案中提取的。它们是否符合“ 良好要求的标准”？ 如果没有，请对其进行改进，使其符合“ 良好要求的标准”。

Do not write like this

- **Ambiguity – *or***
  - *The ERIS system shall also be able to generate visible **or** audible caution **or** warning signal for the attention of security **or** business analyst*

- Multiple requirements – ***and, or, with, also***
  - *The warning indicator shall light up when an ERIS intrusion is detected **and** the current Football Federation Employees workspace **or** Game report data shall be saved*

[Alexander and Stevens, 2002]

不要这样写

- 歧义——或者
  - ERIS 系统还应能够生成可见或可听的警告或警告信号，以引起安全或业务分析师的注意

- 多重要求 – 和、或、与、也
  - 当检测到 ERIS 入侵时，警告指示灯应亮起，并保存当前足协员工工作区或比赛报告数据

[亚历山大和史蒂文斯，2002]

Do not write like this

- Let-out clauses

  if, when, except, unless, although, always

  - *The fire alarm shall always be sounded **when** the smoke in Football Federation building is detected, **unless** the alarm is being tested **when** the antivirus is deployed*

- Long rumpling sentences

  - *Provided that the designated Game report input signals from the specified mobile devices are received in the correct order by the way which the ERIS is able to differentiate the designators, the security solution should comply with the required framework to indicate the desired security states*

[Alexander and Stevens, 2002]

不要这样写

- 出租条款

  如果、当、除了、除非、虽然、总是

  - 当检测到足协大楼内的烟雾时，火灾警报器应始终响起，除非在部署防病毒软件时正在测试警报器

- 长长的句子

  - 如果通过 ERIS 能够区分指示符的方式以正确的顺序接收来自指定移动设备的指定游戏报告输入信号，则安全解决方案应符合所需的框架以指示所需的安全状态

[亚历山大和史蒂文斯，2002]

Do not write like this

- Speculation
  usually, generally, often normally, typically
  - *Umpires and Team Representatives normally require early indication of intrusion into ERIS*

- Vague, undefinable terms
  user-friendly, versatile, approximately, as possible, efficient, improved, high-performance, modern
  - *Security-related messages should be versatile and user-friendly*
  - *The OK status indicator shall be illuminated as soon as possible after ERIS security self-check is completed*

[Alexander and Stevens, 2002]

不要这样写

- 投机
  通常，通常，通常，通常，通常
  - 裁判员和球队代表通常需要尽早表明 ERIS 受到入侵

- 模糊、无法定义的术语
  用户友好、多功能、近似、尽可能、高效、改进、高性能、现代
  - 与安全相关的消息应该是通用且用户友好的
  - ERIS安全自检完成后，OK状态指示灯应尽快亮起

[亚历山大和史蒂文斯，2002]

Do not write like this

- Wishful thinking

  100% reliable/ safe/ secure. Handle all unexpected failures. Please all users. Run on all platforms. Never fail. Upgrade to all future situations.

  - *The gearbox shall be 100% secure in normal operation*
  - *The network shall handle all unexpected errors without crashing*

[Alexander and Stevens, 2002]

不要这样写

- 妄想

  100% 可靠/安全/可靠。处理所有意外的失败。请各位用户。在所有平台上运行。永远不要失败。升级到所有未来的情况。

  - 正常运行时齿轮箱应100%安全
  - 网络应处理所有意外错误而不会崩溃

[亚历山大和史蒂文斯，2002]

Do not write like this

- System design:
  no ***names of components***, ***materials***, ***software objects/procedures***, ***database fields***
  - *The antenna shall be capable of receiving FM signals, using a copper core with nylon armoring and a waterproof hardened rubber shield*

- Mix of requirements and design:
  no references to ***system***, ***design***, ***testing***, or ***installation***
  - *The user shall be able to view the current selected channel number which shall be displayed in 14pt Swiss type on an LCD panel tested to standard 657-89 and mounted with shockproof rubber washers*

[Alexander and Stevens, 2002]

不要这样写

- 系统设计：
  没有组件、材料、软件对象/过程、数据库字段的名称
  - 天线应能够接收FM信号，采用铜芯尼龙铠装和防水硬化橡胶屏蔽层

- 需求和设计的组合：
  没有提及系统、设计、测试或安装
  - 用户应能够查看当前选定的频道号，该频道号将以 14 点瑞士字显示在经过标准 657-89 测试并安装有防震橡胶垫圈的 LCD 面板上

[亚历山大和史蒂文斯，2002]

Good requirements

- Use simple direct sentences
  - *Security analyst should be able to view ERIS status.*
- Use a limited vocabulary
  - *Security analyst should be able to change the infected ERIS component in less than 12 h;* **or**
  - *Security analyst should be able to reconfigure the infected ERIS component in less than 12 h*

[Alexander and Stevens, 2002]

良好的要求

- 使用简单的直接句子
  - 安全分析师应该能够查看 ERIS 状态。
- 使用有限的词汇量
  - 安全分析师应该能够在 12 小时内更改受感染的 ERIS 组件；或者
  - 安全分析师应该能够在 12 小时内重新配置受感染的 ERIS 组件

[亚历山大和史蒂文斯，2002]

Good requirements

- Identify the type of user who wants each requirements
  - *The Football Federation Employee shall be able to …*
- Focus on stating result
  - … view game reports …
- Define verifiable criteria
  - … after 2 h after the game.

[Alexander and Stevens, 2002]

良好的要求

- 确定需要每个需求的用户类型
  - 足协员工应能够……
- 专注于陈述结果
  - ..查看比赛报告…
- 定义可验证的标准
  - ……比赛结束后 2 小时后。

[亚历山大和史蒂文斯，2002]

Criteria
for writing good requirements

- **What**, not how (external observability)
  - Avoid premature design or implementation decisions
- **Understandability**, **clarity** (not ambiguous)
- **Cohesiveness** (one thing per requirement)
- **Testability**
  - Somehow possible to test or validate whether the requirement has been met, clear acceptance criteria
  - Often requires quantification, this is more difficult for security than e.g. for performance
    - *The response time of button press should be max 2 s.*
    - *The security of function F should be at least 99.9%*

标准

写出好的需求

- 什么，而不是如何（外部可观察性）
  - 避免过早的设计或实施决策
- 可理解性、清晰性（不含糊）
- 凝聚力（每个要求一件事）
- 可测试性
  - 以某种方式可以测试或验证是否满足要求，明确的验收标准
  - 通常需要量化，这对于安全性来说比例如为了表现
    - 按钮按下的响应时间最长应为 2 秒。
    - 功能F的安全性至少应为99.9%

E1: These requirements are extracted from solutions of your colleagues. Do they correspond to the “criteria of good requirements”? If not, please refine them so that they would correspond to the “criteria of good requirements”.

SecReq.1: The football federation employee, Bob, may remove the league secretary at any time and it should be available.

SecReq.2: After match team representatives sign the report and optionally provide comments.

SecReq.3: Confirmation of game results by the team shall be allowed only for team representative which represents team under action

SecReq.1: The football federation employee should remove the league secretary.

SecReq.2.1: Team representatives should sign the report of the finished match.
SecReq.2.2: Team representatives should provide comments.

SecReq.3: Only team representative should access the confirmation of game results.

E1 这些要求摘自您同事的解决方案。它们是否符合“ 良好要求的标准” ？ 如果没有，请对其进行改进，使其符合“ 良好要求的标准” 。

SecReq.1：足协雇员鲍勃可以随时罢免联赛秘书，并且该秘书应该可用。	SecReq.1：足协雇员应罢免联赛秘书。
SecReq.2：赛后球队代表在报告上签名并可选择提供评论。	SecReq.2.1：球队代表应在比赛结束报告上签名。 SecReq.2.2：团队代表应提供意见。
SecReq.3：仅允许代表参赛球队的球队代表确认球队的比赛结果	SecReq.3：只有团队代表才能访问比赛结果的确认信息。

E1: These requirements are extracted from solutions of your colleagues. Do they correspond to the “criteria of good requirements”? If not, please refine them so that they would correspond to the “criteria of good requirements”.

SecReq.4: Football Federation Employee should be identified before having access to use the functions related to the creation of the game report to prevent unauthorized people to create fake game reports.

SecReq.4.1: System should identify Football Federation Employee.

SecReq.4.2: Football Federation Employee should create the game report.

SecReq.5: ERIS shall allow all Users to view all Data in the Game Report.

SecReq.5: User should view *Data* in the *Game Report*.

E1 这些要求摘自您同事的解决方案。它们是否符合“ 良好要求的标准” ？
如果没有，请对其进行改进，使其符合“ 良好要求的标准” 。

SecReq.4：足协员工在使用与创建比赛报告相关的功能之前应进行身份验证，以防止未经授权的人员创建虚假比赛报告。

SecReq.4.1：系统应识别足协员工。

SecReq.4.2：足协员工应创建比赛报告。

SecReq.5：ERIS应允许所有用户查看游戏报告中的所有数据。

SecReq.5：用户应查看游戏报告中的数据。

E1: These requirements are extracted from solutions of your colleagues. Do they correspond to the “criteria of good requirements”? If not, please refine them so that they would correspond to the “criteria of good requirements”.

SecReq.6: Football Federation Employee (legal secretary) needs authorization to insert the initial data, Final confirmation in the game report.

SecReq.7: Security Criteria: Integrity of creating Team Composition Security Control: Implementing authorization policy for team representatives roles.

SecReq.8: User must be logged in and have a role of “League Secretary” to confirm game report and “Team Representative” must have submitted Game Report

SecReq.6.1: System should authorize Football Federation Employee under role Legal Secretary.

SecReq.6.2: Legal Secretary should insert initial data and final confirmation in the game report.

SecReq.7: ??? *I do not know how to fix it*!

SecReq.8.1: League Secretary” should confirm game report

SecReq.8.2.: Team Representative” should submit Game Report

E1 这些要求摘自您同事的解决方案。它们是否符合“良好要求的标准”？
如果没有，请对其进行改进，使其符合“良好要求的标准”。

SecReq.6：足协员工（法定秘书）需要授权才能在比赛报告中插入初始数据、最终确认。

SecReq.7：安全标准：创建团队组成的完整性安全控制：实施团队代表角色的授权策略。

SecReq.8：用户必须登录并具有“联赛秘书”角色才能确认比赛报告，并且“战队代表”必须已提交比赛报告

SecReq.6.1：系统应授权足协员工担任法定秘书角色。

SecReq.6.2：法律秘书应在游戏报告中插入初始数据和最终确认。

SecReq.7：？？？我不知道如何解决它！

SecReq.8.1：联赛秘书”应确认比赛报告
SecReq.8.2：球队代表”应提交比赛报告

E2: Think of the Universities OIS system *https://ois2.ut.ee/*. Describe the four facets of this system context:

- **Usage facet**:
  - OIS is a platform to provide an administration of academic-related details. OIS would have three different kinds of users i.e. students, teachers and administrative staff. The OIS system would contain students course registration, students grades records, timetable, students status, curriculum and other details

- **Subject facet:**
  - OIS uses by students to perform course registration, to keep track of their grades, to check course timetable and students status. It also allows seeing student information and other details
  - Another interaction with the OIS system is from teachers. OIS allows teachers to check student progress, course timetable and other relevant details
  - Third interaction is from administrative staff to add course information, to update course timetable, to add students grades and other relevant details
  - The OIS system will interact with other University of Tartu systems which hold the student relevant information or require student information

E2: Think of the Universities OIS system https://ois2.ut.ee/. Describe the four facets of this system context:

- 使用方面：
  - OIS 是一个提供学术相关详细信息管理的平台。 OIS 将拥有三种不同类型的用户，即学生、教师和行政人员。 OIS系统将包含学生课程注册、学生成绩记录、时间表、学生状态、课程和其他详细信息

- 主题方面：
  - 学生使用 OIS 进行课程注册、跟踪成绩、检查课程时间表和学生状态。它还允许查看学生信息和其他详细信息
  - 与 OIS 系统的另一种互动来自教师。 OIS 允许教师检查学生进度、课程时间表和其他相关详细信息
  - 第三次交互是行政人员添加课程信息、更新课程时间表、添加学生成绩和其他相关详细信息
  - OIS 系统将与保存学生相关信息或需要学生信息的塔尔图大学其他系统进行交互

E2: Think of the Universities OIS system *https://ois2.ut.ee/*.
Describe the four facets of this system context:

- **IT system facet:**
  - The OIS system would have a URL and deploy on a web server. The web server would be managed by the University of Tartu IT department. Due to a large number of users, the OIS system should be deployed on the dedicated server. The server will take timely backups as well.

- **Development facet:**
  - The OIS system will be accessible only after student authentication. The security of user personal data should be analysed. The OIS system would not disclose or share information to the third party without the consent of the University or Student. The OIS system should be GDPR compliant or compliant with European privacy policy laws.

E2: Think of the Universities OIS system https://ois2.ut.ee/. Describe the four facets of this system context:

- IT系统方面：
  - OIS 系统将有一个 URL 并部署在 Web 服务器上。网络服务器将由塔尔图大学 IT 部门管理。由于用户数量较多，OIS系统应部署在专用服务器上。服务器也会及时进行备份。

- 发展方面：
  - 只有在学生身份验证后才能访问 OIS 系统。应分析用户个人数据的安全性。未经大学或学生同意，OIS 系统不会向第三方披露或共享信息。 OIS 系统应符合 GDPR 或欧洲隐私政策法。

E3: Analyse the given accounting document and elicit at least five requirements

Mary's Design Service
Balance Sheet
September 30, 2018

ASSETS		LIABILITIES	
Cash	$ 300	Notes payable	$ 1,000
Accounts receivable	1,000	Accounts payable	325
Supplies	160	Wages payable	75
Prepaid insurance	90	Unearned revenues	100
Land	10,000	Total liabilities	1,500
		OWNER'S EQUITY	
		M.Smith, Capital	10,050
Total assets	$ 11,550	Total liabilities & owner's equity	$ 11,550

E3：分析给定的会计凭证并得出至少五个要求

Mary's Design Service
Balance Sheet
September 30, 2018

ASSETS		LIABILITIES	
Cash	$ 300	Notes payable	$ 1,000
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Supplies	160	Wages payable	75
Prepaid insurance	90	Unearned revenues	100
Land	10,000	Total liabilities	1,500
		OWNER'S EQUITY	
		M.Smith, Capital	10,050
Total assets	$ 11,550	Total liabilities & owner's equity	$ 11,550

E3: Analyse the given accounting document and elicit at least five requirements

ReqFF1: The system should provide the assets information on the balance sheet

ReqFF2: The system should show the date on the generated report

ReqFF3: An owner should download the report

ReqFF4: The system should perform calculations 99.9% accurately on the balance sheet.

ReqFF5: An accountant should confirm the generated report

E3：分析给定的会计凭证并得出至少五个要求

ReqFF1：系统应提供资产负债表上的资产信息

ReqFF2：系统应在生成的报告上显示日期

ReqFF3：所有者应下载报告

ReqFF4：系统应在资产负债表上执行 99.9% 的准确计算。

ReqFF5：会计师应确认生成的报告

E3: Analyse the given accounting document and elicit at least five requirements

ReqFF6: The owner should see the total assets on the report.

ReqFF7: The system should authenticate user

ReqFF8: The system should show the liabilities related calculations on the generated report

ReqFF9: The system should show company name on the report

E3：分析给定的会计凭证并得出至少五个要求

ReqFF6：所有者应该在报告上看到总资产。

ReqFF7：系统应验证用户身份

ReqFF8：系统应在生成的报告上显示与负债相关的计算

ReqFF9：系统应在报告上显示公司名称

Do not forget to give back your solutions!!!!

不要忘记返回您的解决方案！！！！