软件工程 2022 期末刷题精选

Karry Ren

万丈高楼平地起

1 单项选择题 20 * 1

> 配套选择.md 中有课上必须要做的选择题，都是十分重要的选择题

1. Which the following statement is incorrect ( ) .

a. Software maintenance is essentially same as hardware maintenance.
b. Software is the product of human intellectual labor.
c. Software does not wear out.
d. software is a logical entity.

【a】

2. The software process framework defines （ ） for software development.

a. activities and task sets
b. a sequence of activities
c. requirements of activities
d. a plan of activities

【a】 process framework 的定义

3. In the context of object-oriented software engineering, a component contains ( )

a. attributes and operations
b. instances of each class
c. roles for each actor (device or user)
d. a set of collaborating classes

【d】

4. In Windows operating system, users can find the required application step by step through the "start" button. This design embodies （ ）.

a.　Establish meaningful defaults.

b.　The visual layout of the interface should be based on a real world metaphor.

c.　 Disclose information in a progressive fashion.

d.　Maintain consistency across a family of applications.

【c】 关键词在于 step by step

5. The best way to conduct a requirements validation review is to （ ）

a.　examine the system model for errors

b.　have the customer look over the requirements

c.　send them to the design team and see if they have any concerns

d.　use a checklist of questions to examine each requirement

【d】

6. The main work of requirement elaboration is: ( )

a.　agree on a deliverable system that is realistic for developers and customers

b.　establish basic understanding of the project

c.　elicit requirements from all stakeholders

d.　create an analysis model that identifies data, function and behavioral requirements

【d】 会背就会做

7. Which design is equivalent to the floor plan of a house? （ ）

a.　Architectural design

b.　Component-level design

c.　Data design

d.　Interface design

【a】

8. Which of the following is NOT an umbrella activity ? ()

a. Construction
b. Technical reviews
c. Measurement
d. Risk management

【a】是 generritic 的活动 其余的都是普适性活动

9. Which of the following does not apply to agility to a software process?

a) Uses incremental product delivery strategy
b) Only essential work products are produced
c) Eliminate the use of project planning and testing
d) All of above

【c】

10. What is the first step of requirement elicitation?

a) Identifying Stakeholder
b) Listing out Requirements
c) Requirements Gathering
d) All of above

【a】

11. Exhaustive testing is   .

a) always possible
b) practically possible
c) impractical but possible
d) impractical and impossible

【c】 对于一些小的系统是可能的

12. It is relatively common for different customers to propose conflicting requirements, each arguing that his or her version is the right one.（）
【True】

13. The goal of software engineering is : the production of fault-free software that satisfies the user's needs and that is delivered on time and within budget.

14. 比较不同的 process model 的区别

The spiral model of software development includes project risks evaluation during each iteration.

The main difference between waterfall model and evolutionary model is in different way of activity organization.

15. UML

系统的软件和硬件元素都有的 UML 是：Activity diagrams, Class diagrams, Deployment diagrams (use-case 没有)

14. A successful application of transform or transaction mapping to create an architectural design is supplemented by

a. entity relationship diagram
b. module interface descriptions
c. processing narratives for each module
d. test case for each module

【b & c】

20. Which of the following statements characterize a successful software testing ?

a. no errors to be found in the software
b. find the errors detected before in the software
c. find the errors before in the software

【ac】

22. Views are "slices" of architecture which view focuses on structural issues?

a. use-case
b. process
c. implementation
d. logical

【d】

23. The state of an object is defined by an object's attributes and relationships

24. Which of these not a characteristic of personal software process?

a. emphasizes personal measurement of work product
b. practitioner requires careful supervision by the project managern
c. individual practitioner is reponsible for estimating and scheduling
d. practitioner is empowered to control quality of software work peoducts

【c】

2 判断分析题

课后练习.md 中含有部分判断题

1. Diversity of team member skill sets is not key attributes of an effective software team.

错误，成员 skill 很强 + 多样性都是必须要的能力

2. An objective for building an analysis model is to develop an abbreviated solution for the problem.

错误，需求分析从来不会给出 solution，只是在发现问题

3. Exhaustive testing is impossible.

这句话的确是对的，但是有更好的表述：is impractical but possible

4. Software Debugging is a set of activities that can be planned and conducted systematically.

错误，Debug 不能够被计划，完全有可能越 de 越多

5. The reason for reducing the user's memory load is make his or her interaction with the computer quicker to complete

错误，是为了优化用户的使用体验

3 名词解释 5 * 3

4 简答题 5 * 6

5 分析设计题 30

5.1 需求分析

Customers can check available rooms (rooms that are not booked). Customers can book one or more rooms with their names, phone numbers, check-in time and check-out time. Customers can check the room they reserved by their names. They may withdraw their reservation. System administrators can set the type and number of rooms for customers to book. Reserved rooms cannot be booked by other customers for same time period.

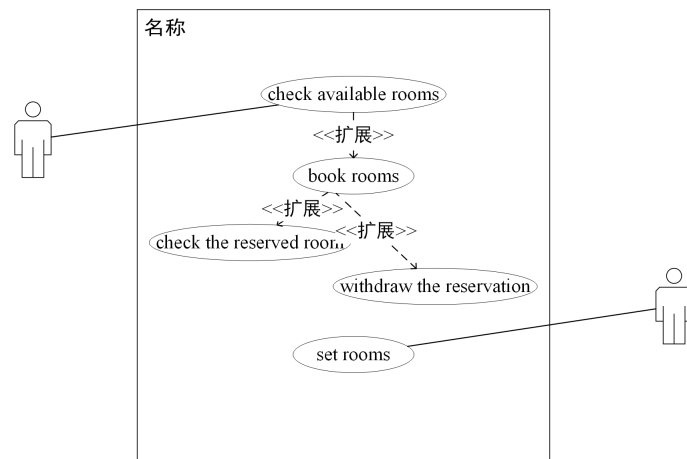### 5.1.1 用例图

Step 1. 识别 Stakeholder

1. Customers
2. System administrators

Step 2. 识别用例

1. check available rooms
2. book rooms
3. check the reserved room
4. withdraw the reservation
5. set rooms

Step 3. 识别相关关系，并绘制

1.是独立的； 2.扩展出来了 3.和 4.； 5.是独立的（不要想成 set rooms 会扩展出来 check available rooms ！！！）

名称

check available rooms

<<扩展>>

book rooms

<<扩展>> <<扩展>>

check the reserved room

withdraw the reservation

set rooms

Step 4. 写用例规范

1. 用例名称
2. 参与者
3. 用例描述
4. 前置条件
5. 后置条件
6. 输入数据
7. 输出数据
8. 事件流
9. 备选事件流

5.1.2　活动图

5.1.3　顺序图

【例子】画一个退票的顺序图

Step 1. 先分析清楚有几个参与方

1. Customer
2. System administrators
3. Room

Step 2. 给出过程描述语言

Step 3.绘图

5.1.4　数据流图

5.1.5　状态图

绘制 room 的状态，空闲，预定，入住。很好写哈

5.1.6　类图

5.2　测试