2020-Spring System Analysis and Design Quiz Questions

# Part I (10 points) Unique Choice (5 questions, 2 points each)

1. Which of the following is not a common method of requirements elicitation (fact finding)? ( )
   1. Interviews
   2. Questionnaires
   3. Verification & Validation
   4. Observations
   5. JRP

2，What type of class relationship can be read as “Object A contains Object B and Object B is part of object A”? ( )

1. Generalization
2. Aggregation
3. Persistent
4. Association
5. Specialization

3, Degree in ERD means ( ).

1. The number of entities that participate in the relationship
2. The minimum number of occurrence of one entity that may be related to a single occurence of the other actity
3. The maximum number of occurrence of one entity that may be related to a single occurence of the other actity
4. None is correct

4, What aspects should be considered and specified when you define a software system as your conception for a solution after business analysis. ( )

1. Function & Information
2. Function & Communication
3. Information & Communication
4. Knowledge，Process & Communication
5. Function, Data , UI or Interface

5, For the purpose to increase the independency of modules, the weakest coupling below is ( )

1. Control coupling
2. Data coupling
3. Common coupling
4. Content coupling

# Part II Systm Analysis and Design (90 points)

校园订餐服务系统分析与设计

(The requirement analysis and logical design of ordering service system)

需求概述：

本服务系统的运营者为校园网运营单位（如学校的网路中心）或学校负责餐食及为校园师生日常生活提供服务的管理部门（如后勤部），旨在通过校园网为校园师生提供更好的生活服务，服务形式为将校园餐厅、食堂以及入驻校园的各类实体经营服务者（超市、水吧等等）以及校园周边 1 公里范围经认证的餐饮经营者纳入服务系统，向校园师生，特别是学生提供各类网上餐饮服务，如线上预订，支付， 预订餐位等等。

该系统的运营的目标在于提供学生更便捷更好的生活保障服务，而非以盈利为目的。该系统与美团，饿了吗等线上服务非排他关系，但存在竞争。

## 第一部分，范围定义与问题分析

***问题一***， 识别并指出本系统的用户都包括哪些角色(Identify the users of the system)? 概述本系统需提供的基本功能（Please provide the baseline features for each type of the user）？

***问题二***，本系统能够持续运营下去关键在于提供学生独一无二的服务，你是否同意这一观点？ 如果同意，请简述达成这一点的关键问题在于哪些？这些问题的解决思路是什么？如果不同 意，请指出你所认为的关键及其解决办法？ **注： 可参考书上问题陈述与解决办法列表。**

（Problem analysis: Please identify the key value of this system and find the root cause problems and their solutions）

## 第二部分，需求分析与需求定义

***问题三***，请提供餐饮商家的用户故事/用户功能？（Please provide the user stories of a user such as a resturant?）

***问题四***， 提供商家处理学生订单的用例图及用例描述？ （Provide use case and use narrative of a resturant handles an order from a student?））

***问题五***， 商家浏览学生订单的功能规格说明？ (Requirement specification of browsing real-time orders and the orders status)

***问题六***，简述你认为本系统最主要的非功能性需求？ （Describe the key non-functional requirements of the system?）

## 第三部分， 建模与设计

***问题七***，请用 UML 类图或 ERD 图描述本系统的主要业务实体以及其关联关系？（Please use UML class diagram or ERD to model the domain entities and their relations ?）

***问题八***，请用时序图或交互图描述系统处理订餐订单的过程？（Modeling the system process of handling order with sequence diagram or communication diagram?）

***问题九***， 订单的状态图? ( Modeling state transition of order with state diagram?)

**第四部分，方案建议** Proposal

***问题十***，请就系统的实现，简单给出技术方案建议, 如编程语言，应用框架，开发工具等等？

（Please provide the technical solution for the system development, e.g., programming language, frameworks, IDE, middleware and DB infrastructure）

***问题十一***， 请给出系统的部署结构图？(provide the system deployment diagram)