SEIT

Assessed Exercise 2

This is a follow up to Assessed Exercise using the same teams. It involves design software using UML class and sequence diagrams, and a small amount of implementation.

这是使用相同团队的评估练习的后续。它包括使用UML类和序列图设计软件，以及少量的实现过程。

You should implement the following small part of the PTT specification used in AE1.

您应该实现AE1中使用的PTT规范的一小部分。

*Before the start of each term or semester, the class directors produce a list of teaching requirements which we must try and fill. Our administrator will then attempt to find suitable staff and organise training for them.*

在每个学期开始之前，the class directors会列出一份教学要求清单，我们必须尝试填写。然后，我们的管理员将尝试寻找合适的员工，并为他们组织培训。

You should use an Agile approach to designing your software and Trello to communicate between team members.

您应该使用敏捷的方法来设计您的软件，并使用Trello在团队成员之间进行交流。

You should find appropriate User Stories, they don’t have to be the same as your stories from AE1. Note, only include stories related to the limited part of the software described above.

你应该找到合适的用户故事，它们不必与你在AE1中的故事相同。请注意，仅包括与上述软件的有限部分相关的故事。

You should use sequence diagrams for each User Story to design your classes and methods, producing a Class Structure Diagram. Each class must be owned by one team member who is responsible for implementing it. Your stories will involve several different objects from different classes. Each class owner should implement the part of the story related to their class. This is how stories are split into tasks.

您应该为每个用户故事使用sequence diagrams来设计您的classes和methods，产生一个Class Structure Diagram。每个class必须由一个负责实现它的团队成员拥有。你的故事会涉及到不同classes的几个不同的objects。每个class的所有者都应该实现与他们的class相关的故事部分。故事就是这样拆分成任务的。

You should use a simple implementation and develop a standalone app that does not require a database. All permanent information should be stored in a single file and this file should be read in when the program starts and the information written to the file when the program finishes. Your program will have an internal representation of lists of class, teachers and so on. They will be similar to the LoP class in the lab work, and so you have had some experience of implementing them. Don’t try and make them too elaborate, you don’t have much time! These lists are empty when the program starts and then filled with data by reading from the file. The updated version of the data is then preserved by writing to the file before the program finishes. You should design this part of the code so that a better implementation, using a database, could be provided in release 2 with minimum changes to the code base. You should not try and write a database version for this exercise!

您应该使用简单的实现，开发一个不需要数据库的独立应用程序。所有永久信息都应该存储在一个文件中，这个文件应该在程序启动时读入，而信息应该在程序结束时写入文件。您的程序将有一个班级、教师等列表的内部表示。它们将类似于lab work中的LoP类，因此您已经有了一些实现它们的经验。不要试图把它们做得太复杂，你没有太多时间！这些列表在程序启动时是空的，然后通过从文件中读取来填充数据。然后，在程序完成之前，通过写入文件来保存数据的更新版本。您应该设计代码的这一部分，以便在第2版中使用数据库提供更好的实现，对代码库的改动最小。您不应该尝试为这个练习编写数据库版本！

You will gain marks for using good design principles and using patters, covered in week 2, when appropriate. Marks will also be awarded for working functionality.

在适当的时候，你会因为使用好的设计原则和模式而获得分数，这将在第2周讲述。工作功能也将获得分数。

Note that a well designed program where some things don't quite work can score just as

many marks as a program that does everything but without good design principles.

请注意，一个设计良好的程序，如果有些东西不能很好地工作，那么它的分数和一个什么都做但没有好的设计原则的程序一样多。

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**The Report**

Your team report should contain the following:

您的团队报告应包含以下内容:

• Your team name and a list of each team member's contribution, including classes

they were responsible for.

您的团队名称和每个团队成员的贡献列表，包括他们负责的课程。

• A list of User Stories, as in AE1.

用户故事列表，如AE1所示。

• Your class structure diagram.

你的类结构图。

• The sequence diagrams for each of the user stories.

每个用户故事的序列图。

• All the code from your program, together with screenshots showing it running. I

will run each of your programs to see how well they work. Please comment your

code so that I can understand what you were intending so that you can get marks if

something doesn't quite work.

你程序的所有代码，以及显示它运行的截图。我将运行你的每一个程序，看看它们运行得如何。请评论你的代码，这样我就可以理解你的意图，这样你就可以在事情不太顺利的时候得到分数。

• A retrospective on what went well and what was challenging while completing this

assignment.

完成这项任务时，回顾什么进展顺利，什么具有挑战性。

Provide an individual report on your team members as in AE1.

提供一份关于您团队成员的个人报告，如AE1所示。

Additional help

In general, keep the implementation as simple as possible.  You just need to demonstrate that you can construct a class structure diagram and a small number fo sequence diagrams, and then use them to generate code.  Your code should match you design documents.  Don't try to do too much, there are no extra marks for a lot of content.

通常，使实现尽可能简单。您只需要证明可以构造一个类结构图和少量序列图，然后使用它们来生成代码即可。您的代码应与您的设计文档匹配。不要尝试做太多，很多内容都没有多余的标记。  
  
Training: The system just records what training has been taken by each teacher.  Each teacher will have a list of training undertaken and each training course is a simple string with no spaces.

培训：系统仅记录每位老师所接受的培训。每个老师都有一份培训清单，每个培训课程都是一个简单的字符串，没有空格。  
  
A teaching requirement is a lab, together with the number staff required for that lab and the training that they need.  Each course will have several teaching requirements.

教学要求是一个实验室，以及该实验室所需的人员数量和他们所需的培训。每门课程将有几个教学要求。

You don't need to consider constraints.

您无需考虑约束。  
  
Authentication Service: You don't need to set up an authentication service.  You don't need to consider passwords and the like.

身份验证服务：您无需设置身份验证服务。您无需考虑密码等。  
  
Sample Input / Expected Output.  This will be related to the tests for each of the the stories.  You should include your test programs, together with sample input / expected output and screenshots for each of the tests.

样本输入/预期输出。这将与每个故事的测试有关。您应该包括测试程序，以及每个测试的示例输入/预期输出和屏幕截图。