**Software Development Project Requirements**

IST303, Fall 2015

You, as part of an instructor-assigned team, must complete the software development project specified in this handout.

Your team must use techniques from this course to develop the software. Use of other techniques, including traditional software engineering and project management tools, is discouraged. Concentrate on being able to create software using the techniques covered in this course, namely agile methods and tools.

The user interface for the software does not need to be fancy. It can be text-intensive, rather than graphical. Project teams should not spend time or effort on making the software pretty. **The most important aspects of the project are the use of the agile software development concepts and methods covered in the course, not the slickness of the programming.**

The team must deliver presentations on the days shown in the schedule at the end of the syllabus. All team members must contribute equally, to the project and the presentations. Presentations must demonstrate working software, as well as explain clearly what was done to produce it, justifying all project actions and decisions in terms that would be understandable to clients.

In agile development terms, each presentation corresponds to an iteration/milestone. (In “real world” projects, there can be multiple iterations per milestone.)

The first presentation must provide an initial solution for the project; the second must provide an improved solution. You must submit working code with each presentation. You must demo your code in class. Your code must be written in Python, Java, Ruby, or VB.net. (If you *really* want to use another OO language, ask permission from the instructor. Non-OO languages will not be allowed.) Any slides or handouts used during the presentation must be submitted, as well.

Presentations should run no more than 25 minutes (20 minutes software demo and explanation, plus 5 minutes questions and answers). Penalties will apply for significant deviations (+/-) from the 25-minute limit.

Each student will receive the grade assigned to her/his team. Team grades will depend on use of the concepts and techniques in the course, quality of the software developed, and quality of the presentations made.

The instructor will include peer evaluations in determining presentation grades. The instructor will explain the peer evaluation rating form(s) and procedures prior to the first presentation.

No individual submissions will be allowed. Team members must share the work involved equally, and must strive to resolve any issues related to unequal participation, should these arise. The instructor reserves the right to remove uncooperative team members from teams and assign them grades indicative of non-performance.

The project is to create software for “Mud in Your Eye” (MiYE), a new, small hot spring health spa, located in a remote, scenic part of the US. The software must support the spa’s front desk clerks in managing service reservations and bills for customers.

MiYE is a full-time resort spa facility[[1]](#footnote-1), but it has just one front desk clerk on duty at any time. Front desk clerks are local people, hired primarily for their friendliness, not their computer skills—one can’t assume any sophistication in the use of computer software.

For now, the **only** purpose of the software is to support service reservations and bills. Management has chosen to defer elaboration of the software, connection to the Internet, or interconnection with other applications.

A typical hot springs health spa provides a range of services, including mineral baths, massages, facials, and specialty treatments. MiYE offers such services seven days a week, from 8am to 8pm. (Services are scheduled to begin before 8pm; it is the latest end time.)

Each guest has a unique number, which is assigned at check-in (a separate process) and allows (among other things) the look-up of the beginning and end of the guest’s stay at the spa. To reserve or receive a service, the guest must use this number. The service can only be scheduled during the guest’s stay—no reservations for future stays are allowed.

Guests are charged for every service they reserve. Charges are made at the time of reservations. Reservations are necessary for all services. Payment of charges occurs at checkout. (Payment is a separate process, which also includes charges for rooms, food, and other things besides services.)

A guest may cancel a reservation for a service at no charge, if he/she does so within 10 minutes of making the reservation or at least 90 minutes before the reservation time; otherwise the guest is charged for the service, received or not.

**Services:**

* Guests can reserve a mineral bath services for 60 minutes or 90 minutes @ $2.50/minute.
* There are three kinds of massage services (Swedish, shiatsu, and deep tissue), which guests can schedule for 30 or 60 minutes @ $3.00/minute.
* There are 2 kinds of facial services (normal and collagen), which guests can schedule for 30 or 60 minutes @ $2.00/minute.
* There are 4 kinds of specialty treatment services (hot stone, sugar scrub, herbal body wrap, botanical mud wrap), which guests can schedule for 60 or 90 minutes @ $3.50/minute.

No guest may reserve overlapping services, although consecutive services are allowed. Only one guest at a time may reserve any service, except mineral bath services, which have no limit. The software should make it clear to the front desk clerk what appointments are available at any particular day/time. It should only allow a reservation for a service to be made if: 1) the guest has no overlapping reservation already booked, 2) there is no other reservation for the service for that day/time, and 3) the reservation would begin no earlier than 8am and end no later than 8pm.

The system should produce a bill that lists the services reserved, other than those cancelled (if any), by the customer. It should calculate the amount charged for each service, as well as a total (pre-tax).

The software will be implemented on a stand-alone, single-workstation system. Neither multi-user nor network capabilities are required.

The software must be correct. Full testing is expected, and should be explained during the presentation.

The software must be flexible enough to easily accommodate changes in the number, types, times, and prices of services. The software must be maintainable by management or their designees. It should have one interface for operation and another for maintenance. Both should be demonstrated during the presentation.

Consider the instructor to be your client for project purposes, including answering questions not answered by this document. For purposes of the project, treat the instructor as you would treat an actual client—make an appointment to discuss your work on the project, including questions about requirements.

Last Revision: September 9, 2015

1. 1 A resort spa is one at which services are provided only to overnight guests, and the emphasis is on providing guests with a relaxing, vacation-like experience, centered on spa services. [↑](#footnote-ref-1)