A Hotel Reservation System for the Practicum

Problem Statement
Many small Bed & Breakfast hotels have limited resources for running their business. Usually only 1 or 2 people handle all of the chores. The reservation work flow can be a very time consuming part of the business and can benefit greatly from website support. A centralized service can be made available to many B&Bs and the needs for room availability, reservations, and billing can thus be outsourced for multiple B&Bs.

Requirements
This document is NOT a full requirements document for the system. That will be developed by the student practicum team for approval by the instructor as part of the project. There will be high level or general directions stated here followed by constraints or design directions in the next section. The instructor will work with the team to formulate a full requirements document.

Feature Ideas
These are the initial ideas on how the system should work. These concepts will be refined into a final feature set as part of the requirements phase.

1. The reservation system will handle multiple hotels (Bed & Breakfasts). Each hotel will have a member id used to determine all items about the transaction including look of the website (e.g. background colors, hotel logo, etc).
2. An administrative interface is need to input rooms (by number and by name, e.g. “mountain room, garden room”) and rates.
3. An availability display should have a calendar view of rooms available by dates in a given month.
4. A form is needed for a potential renter to input vital date to request a reservation. This includes room required, dates required, name, address, email address, credit card info. The credit card should be valid numerically but not verified to a bank (for our little project anyway). The form should be validated as much as possible on the browser side to prevent a lot of errors from getting to the server (e.g. missing required fields).
5. On submitting a request, the reservation should be made into the database and a confirmation email sent to the renter.
6. If time permits, additional features can be implemented. For example, it would be nice to have seasonal rates and temporary special rates possible.

The final feature set will be determined as part of the requirements process. The amount of work to be committed will depend on the experience of the project team and the allotted time available in the semester. The instructor will serve as customer/user.

Design Constraints

The following are design constraints or suggestions

1. The base technology used should be PHP5 code on an Apache platform. The DBMS used should be MySQL.
2. The web framework should use a MVC pattern to separate layout, business logic, and data model. The web framework Code Igniter must be used to speed development.
3. All color/style should be coded in CSS files. The look of the website should thus be controlled from a CSS file. Changing of this file should be the primary way to change the look of the website.
4. Templates can be used for the overall page layouts. This changing of this template (and a CSS file) should be able to change the entire layout of the page. Use of the CSS method to control layout (the “div method”) is strongly encouraged over the use of HTML tables to control layout.
5. Pre-built Javascript code can be used to implement client based features. Suggestions include the use of a free calendar date picker.
6. Credit card info should be validated only to the point where the card number is valid as to the form of the number. Free validation routines are available on the web. No actual billing will be done.