Course Project
Sakhir International Resort (SIR)

Description

Sakhir International Resort (SIR) is a new hotel complex built to accommodate the existing and upcoming attraction and places of interest in Sakhir area. These include Bahrain International Circuit (BIC), Gravity Village, Zallaq Springs, and the University of Bahrain. New attractions such as Exhibition Complex, Sports City, Diving Park, and the renovated Jazair Beach are also in the planning or development stages.

The resort includes two accommodation types: hotel rooms and residency apartments. There are three types of hotel rooms: Standard (50 BD per night), Deluxe (70 BD per night), and Suites (100 BD per night) and two types of apartments: two bedrooms (120 BD per night), and three bedrooms (150 BD per night). Each room in the resort can accommodate 2 adults and 2 children.

Functional Requirements

- Develop a C# solution for the Sakhir International Resort Booking System that should allow different user roles to create and edit bookings and generate occupancy and statistical reports. The solution should also be able to generate bill and replicate a payment process.

User Roles:

- There should be user roles in the system, these can be considered as separate accounts with a different username and password.
- Roles should include front-desk staff, restaurant staff, and managers.
- The front-desk staff can create a booking, edit a booking, start a check-in and check-out process, enter discount codes, and set additional fees.
- The restaurant staff can only add breakfast or room service meals.
- Managers can perform all the above and can delete existing services, delete a booking, and add a loyalty discount.
- Manager should be able to view and edit all bookings and produce reports, such as total bookings per week, total payments, occupancy rates, etc.

Bookings:

- A booking is reserved by specifying the dates of stay and the duration of stay nights), type of accommodation, number of rooms, and number of guests.
- Each booking should have a unique number and a paying guest name and information.
- A booking can include breakfast for its guests. This is calculated as follows: 7 BD per adult and 3 BD per child for each night.
- Each booking will incur 5% VAT tax for the whole stay and 5 BD tourism tax (per night).
- Special offers can be included. For example, guests can get a discount based on loyalty between 10% to 20%, only with a manager approval. Some attractions can offer discount codes such as “BIC” to get 15% or “UoB” to get 10%.
- Each stay is from 1 to 10 max nights. Extra nights require a manager approval.
- After check-in, a booking can incur additional fees. For example, room services meals, spa service, or airport transfer.

Solution Guidelines

- All requirements should work as described with accurate calculations and formatting.
- Use multi-forms and different types of controls. All forms and their controls should be coded and fully functional.
- Distribute the solution functionality and features amongst various forms, tabs, menu items, and controls. Include various features rather than repeating the same features in each form.
- Aim to have a clear and logical flow for the solution forms. The solution should be user friendly and the solution should use colors, icons, and images.
- Use controls beyond the course scope like Calendar Controls, Toolbars, Dialogs, Reporting Services, etc. Additionally, aim to release the solution with an installation package.

Deliverables

- The project objective is to implement the required software solution in Visual C#. This should include:
  - A complete functional solution interface design and code for the software, with multi-forms and a selection of active visual controls.
  - A database which is used by the solution data operations.
- An accompanying report which includes a brief description of the project, its main features and functionality, and a walkthrough of the software including screenshots.

Deadlines

- **Thursday 25 April 2019:** Group members selection.
- **Sunday 12 May 2019:** Project progress review. Each group will have to demonstrate their working prototype and submit a progress sheet.
- **Sunday 26 May 2019 at 23:00 PM**: The project submission deadline.
- **Monday 27 May 2019** and **Tuesday 28 May 2019**: project presentations and report submission.

Presentation & Report

- Each group should present a demo of their solution with all members presenting their contribution.
- Presentations should typically not exceed 10 minutes.
- Submit the hard (printed) paper copy and upload a soft (PDF) document copy of the report before the presentation.

Groupwork Progress and Distribution

- Each group should have 2 – 4 members. Members should exchange communication details.
- Group members should work together and set a semi-weekly (twice a week) meeting to discuss their work and assignments. A good time to meet is after the lab session. More time will be required to assemble the project parts and finalize the report.
- A shared folder between the members should be created for project-related work.
- While the work will be distributed amongst the group members, all should contribute in every aspect of the project. “Slacking” is not tolerable.

Assessment Criteria

	Category	***Description***
1	Interface	• The interface should feature a variety of functional controls covered in the course and additionally other controls (such as calendar controls, dialogues, etc.).
2	Functionality and Calculation	• The software should include various functional aspects and calculations. These include counters, totals, discounts, etc. • The calculations should be accurate, clear, with proper formatting. • Use validation for user input and proper error catching and handling.
3	Code	• The code should be error-free, commented, with all controls and variables named properly. • Proper and various coding structures should be used, e.g. different loops and conditions. • Any external code (from websites or tutorials) should be explicitly referenced and mentioned.
4	Databases and Data Operations	• Include functional database connectivity and basic and detailed data-bound controls. • The software should allow various data manipulation operations (CRUD: Create, Read, Update and Delete). • Include proper tables and fields with meaningful names and proper data types. • The database should include sample data.
5	Project Report and Presentation	• The project report should include details about the solution and the groupwork work allocation and distribution of work amongst group member. • The report should include screenshots of the software with description of each form's functionality. It should have a walkthrough of the software using sample data. • Include any external references used (either for techniques and/or code samples). • In the report, highlight any challenges faced in your project and if/how they were solved. • The presentation should be clear, brief, concise and cover important aspect of the project. • The main part of the presentation will be to run a demonstration of a typical operation of the system. • All members should present their roles and parts.
6	Overall Quality and Originality	• Quality solutions have an overall smooth running of the software with proper solution design, coding, and overall implementation. • A quality system will balance between all assessment aspects. • The report and presentation should showcase original and additional features and content beyond the requirements scope.

Marking Scheme

- Each category above is marked from 5 to 0 as follows:
    - 5: Excellent; 4: Very good; 3: Good; 2: Fair; 1: Poor; 0: Missing.
- The project is marked out of 30 and converted to 15 %.