Case Study: APU Photography Database for Online Booking and Ordering System

Database Project Assignment

You have been invited to join the project team that will be involved in developing a computerized booking and ordering system for APU Photography Limited. Your job will be to model the data to be stored in the database that will be created for the new system.

APU invited the project team to a meeting to discuss their requirements. Saba Orange, the founder of APU and outstanding photographer, started the company in 2017 and has slowly achieved the reputation of being Auckland's leading portrait photographer. Her profile is such that appointments for her photography sessions must be made at least two months in advance. Saba now employs three office staff, an accountant, and three assistants. The increase in business has forced Saba and her team to consider implementing an online system to manage the photography session bookings, ordering photographs by customers, and disseminating digital proofs to the customers.

It is planned to develop an APU website where bookings for photo sessions and orders for photo prints can be entered. Both bookings and orders will have to be paid at the time of their entry on the webpage to be accepted. Delivery of the ordered prints is promised within two weeks of ordering. The method of collecting the ordered photographs, whether picked up from the studio or couriered, will be chosen by the people who place the orders on the website.

Through a series of questions from the team, the following information was obtained about the data that should be stored in the system:

To book a photography session on the web page, the customer will select an available date and session time from the charts displayed. Session times currently last 75 minutes, with 15 minutes break between sessions. For each weekday, the session times are as follows: 8.30 am – 9.45 am; 10.00 am – 11.15 pm; 11.30 am – 12.45 pm; 1.30 – 2.45 pm; 5.30 pm – 6.45 pm. Photography sessions are carried out in the APU studio or on a location of the customer's choice, where location can be at a local beach, park, café, or home etc. Currently, a customer is charged $250.00 for a daytime session and $275.00 for an early evening session in the studio, or $400.00 on a location. It is possible that this charge could also change in the future, with individual sessions all having separate charges. Assume that session times will always be constant for all days of the week.

The web page must prompt the customer about the reason for the photographic session: graduation, wedding, baby etc. Customers may enter a different reason if their purpose is not included in the webpage list. If customers cannot attend their booking, they must cancel on the web page at least three days in advance to receive a refund.

Whenever a customer makes a booking on the web page, they must enter their customer details. A new customer will automatically be assigned an account number, or a returning customer can register using their original account number and password. It is not necessary for you to model the password. The customer must supply details of their name (first name, last name), organisation name (if it is a business), contact phone number, billing address (street address, suburb, city, postcode) and email address must be supplied.

Once the photography session is completed, the digitised photographs will be stored in a database table, identified by the session date and start time and each photo's unique number for that session. Once stored, the customer will be emailed with details of accessing the photos online.

Customers will order their printed photographs on the webpage. Each order will automatically receive a unique order number and the date/time of the order acceptance. Customers will be able to view their photos when ordering and select each required image by clicking on its thumbnail photo. For each selected photo, the customer must choose a photo colour (e.g. black and white, sepia, colour etc.), size, whether the photos are to have a glossy or matte finish and specify the number of copies required. It is possible that the same photos will be selected in differing combinations of colour, size, and finish and that different quantities may be ordered for each combination. Each photo combination of colour, size and finish may have its price, which may change over time.

The orderer must indicate whether the finished photographs will be collected from APU's studio or couriered. If the order is to be couriered, a destination postal address must be entered if it differs from the billing address. The destination for the order may be a person or an organisation with details as described previously for customers. For each destination location, APU charges a fixed postage amount. The postal charge set for each location must be stored in the database. The postal charge may change over time.

The total cost of the order, including the cost of the prints and postal charge, if any, will be calculated by the system, and displayed on the webpage, and the customer must pay before the order is accepted. Thus, any booking or order will be paid at the time of recording on the webpage. The handling of the payment will be carried out by a third party so payment details will not be stored in the database. However, a booking or order will only be validated if the third party approves the payment. Thus, only paid bookings and orders will be stored in the database.