

Paper Reference(s)

**6957/01**

# **Edexcel GCE**

## **Applied Information and Communication Technology**

### **Unit 7: Using Database Software**

**January 2008**

#### **Scenario**

Please open this material immediately. It should be distributed to candidates no sooner than three working weeks before the examination.

Note: There are no practice files for this examination.

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## Bronco Brian Gunn's Wild West Theme Park

Brian Gunn grew up in the fifties at the height of the Western films' popularity. Brought up on John Wayne films and television programmes like the Lone Ranger, he became fascinated by the Wild West. At the age of ten he joined the Billericay Wild West Club that boasted forty-five members. Brian's crowning moment was when he won the World Quick-Draw Tournament in 1976 after being National Champion for eight consecutive years.



Inevitably Brian's working life was going to be connected in some way with the Wild West. Consequently on leaving school he opened the first of his fast-food restaurants in Billericay. The "Bronco Brian's Burger & Beans Bars" chain of restaurants is now countrywide and has, over the years, netted Brian a fairly substantial fortune. His empire has expanded and he has opened a theme park "Bronco Brian Gunn's Wild West Theme Park" in Burnham-on-Crouch.

### The theme park

Initially customers paid no entry fee for the theme park but paid individual prices for the rides. There were two problems with that. Firstly the queues taking the money became really long as fees had to be paid and change given which tended to delay the process. Secondly the high volumes of cash made the kiosks which took the money vulnerable to theft. Brian devised a membership scheme. Members were issued with a swipe card similar to a credit card. Members could purchase points for the card either via the internet or at a kiosk in the theme park itself. An alternative entrance to each ride was installed for members only. Each ride was assigned a points value between 10 and 150 points. The members' entrance was an automated gate activated by swiping the membership card through a reader. The number of points a member had available was held on a database. Swiping the card not only activated the gate but subtracted the number of points the ride was allocated from the member's record on the database. The member then merged with the normal queue a little later on. The card was identified using a 16 figure number displayed in four groups of four digits separated by a space.

### Reservations

Although the new system did reduce the queue a little there were a number of complaints from the members. Firstly, they felt that their membership should give them some kind of priority in the queue as they still had to wait over an hour for some rides. Secondly, when the queues were very long there were a number of disputes where the queues merged. Bronco Brian decided that the two entrances should not meet until they were about to get on the ride and then the attendant will choose people to mount the ride alternatively from each queue. This helped but the members asked if they could reserve rides. Bronco Brian decided that this might be a good idea so he came up with the following system which he intends to trial at his theme park one weekend during June of 2008.

Bronco Brian has decided to reserve five places on each of his main rides at three times (sessions) throughout the day. The times of these reserved rides will be the next ride after 11:00, 14:00 and 16:00. Members will be able to book places on these rides via the internet any time prior to their visit.

Bronco Brian would like the system to work in this way. When members sign on to the theme park website and go to the 'Reserve Rides' link, they will be presented with a form asking them to enter their card number. Non members are offered the opportunity to register. If they need to register, they press a button which presents them with a screen to enter their details. When they have entered all their details and hit the enter button, the system will generate a card number for them and display it on the screen. The first eight digits of the card number will always be 5555 1946. The remaining eight digits are formed by an eight digit customer ID. When a new customer registers they are assigned a customer ID of one more than the highest customer ID currently in the system. The customer now becomes a member and should be asked to write this number down for future reference. They will then click a button which will take them back to the original 'Reserve Rides' form. They now have a card number which they can enter. New members are initially allocated 2000 points and their cards will be waiting for them at the entrance of the theme park. These cards will cost the member £55.

Once the member has entered the card number on the 'Reserved Rides' form their details are displayed. An error message is displayed if the card number does not exist and the member is returned to the original form to resubmit the number. The member is asked to confirm the details as correct and, once they do so, is taken to another form where they choose the rides they want to reserve. In each case they must enter the ride and the time they require. The system will check if there is a reserved place available and, if not, will display a message and not store the reservation. If there is a space available and the member has enough points on their card to reserve the ride, the reservation will be stored. The number of reserved places available will be reduced by one and the member's points will be reduced by the points value of the ride, plus ten points as a reservation fee. If the member does not have enough points then a message is displayed and the reservation is not made.

A waiting room is to be created at each of the rides for the members with reservations. To claim their ride the members must arrive at the waiting room prior to the allocated time. The attendant will check their cards on a computer to confirm they are entitled to the ride. The members with reservations are then the first people let on to the first ride after the allocated time.

### **The proposed system**

You need to create a new database which will hold the data from the old membership system and handle the proposed new reservation process.

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