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**STUDY GUIDE**

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## Case Study #1, Blue Yonder Airlines

### Background

Blue Yonder Airlines is a regional airline that operates 50 scheduled flights per day. The company anticipates rapid future growth. Within six months, the company will operate 150 flights per day. Within one year, it will operate 500 flights per day.

Currently telephone operators handle all reservations. To support the increased number of flights, the company plans to add an online reservation process.

You are contracted to develop a Microsoft .NET solution that will execute the new process.

Your solution must be operational in five months. It must undergo one month of testing before it is available to the public. Within one year, it must be able to support 500 flights per day. To support this expansion, existing flight numbers might need to be reassigned.

Existing IT Environment

Currently Blue Yonder Airlines uses an external vendor to provide flight scheduling services. Fifteen dedicated terminals communicate with the vendor's mainframe computer.

The corporate network includes five Microsoft Windows 2000 Server computers and 15 Windows XP Professional computers. A Microsoft Exchange Server computer provides email services for employees. Internet Information Services (IIS) is used to support intranet application for the human resources department. This department is also supported by a dedicated server that has a single installation of Microsoft SQL Server 2000.

### Interviews

#### IT Department

##### IT Manager

Currently we have one engineer who is responsible for maintaining the dedicated terminals and the corporate intranet. In the future we need to be able to monitor the performance of the new application. Monitoring will tell us when we need to scale the solution.

Within three months, our scheduling vendor will implement an XML Web service to give us

#### Business Stakeholders

##### Chief Executive Officer

My vision is to give our customers an easy-to-use, self-service reservation process. Our new application must provide customers with the following features:

Make reservations quickly

Make reservations at any time, on any day of the week

Store information in a customer profile, if customers choose

Maintain complete confidentiality of customers profiles

Search for available flights either by airport or by city of origin

Create, save and retrieve an itinerary, without actually booking a flight

Retrieve a saved itinerary and initiate booking for the flights saved in the itinerary

Receive suggestions for alternate flights if the flights saved in an itinerary are no longer available for booking

Receive an automatic e-mail message to confirm the itinerary after the flights are booked.

A previous development project required a considerable amount of rework.

We were unable to find out why the rework occurred. If rework is needed during this project, we need to know why.

##### Business Manager

The application should help us provide that we are receiving a return on our investment.

Periodically, detailed usage information must be logged for analysis. We must be able to turn logging on and of without recompiling the application.

When the XML Web service is available from our scheduling vendor, we can stop using dedicated terminals, stop paying a monthly mainframe charge and start reducing our operating expenses. Typically, that vendor meets its deadlines for delivering updates only 50 percent of the time.

#### **Finance Department**

##### **Chief Financial Officer**

Our business model is based in the expansion of our flight schedules. This project is critical to our continued success. Our budget is sufficient to implement and support the new application. However, we need to reduce operating expenses.

##### **Users**

##### **Reservations Agent**

The current application is very confusing to use. It requires special keys to perform many functions. It does not offer online help

##### **Business Process**

Currently customers make reservations by telephoning a Blue Yonder Airlines reservations agent. The agent uses a dedicated terminal to connect to the mainframe computer and then completes each reservation.

## **Case Study #1, Blue Yonder Airlines (15 Questions)**

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### **QUESTION 1**

You are preparing the functional specification for the new reservation application.

Which two functionalities should you specify? (Each correct answer presents part of the solution. Choose two)

- A. Localization
- B. Monitoring of application performance
- C. Secure storage of customer profile information
- D. Availability of application for mobile phones and personal digital assistants
- E. Integration with Active Directory

Answer: B, C

Explanation: We do have requirements to monitor the application and to secure it.

Incorrect Answers:

A: There is no requirements for this.

D: The case study makes no mention of any requirement to support mobile phones or PDA's. Therefore it would not be appropriate to prepare a functional specification for this functionality.

E: There is no requirements for this.

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### **QUESTION 2**

You are completing the technical specification for the new reservation application.

Which technique should you recommend for state management?

- A. ASP.NET ViewState
- B. Server-side database
- C. Client-side cookies
- D. Application cache

Answer: B

- A: This will not be retained when the customer closes the session.
- C: They may not be allowed on the client machine's browser.
- D: Incorrect.

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**QUESTION 3**

Which business constraint poses the greatest potential risk to completing your project for Blue Yonder Airlines?

- A. The current IT staff must support the solution in the future
- B. All testing scenarios and all necessary rework must be completed during the onemonth testing period
- C. The scheduling vendor will begin providing access by XML Web service in three months
- D. The application must be completed within a five-month development period before it is tested

Answer: C

- C: Business Manager says that the vendor only meets its deadlines for delivering updates only 50 percent of the time. This will have the greatest impact.
- A: The question is asking for risks to completing the project. This does not have any impact.
- B: This is all a matter of resources.
- D: Since there is enough funding it should not be a problem.

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**QUESTION 4**

You are establishing a policy to measure the effectiveness of your deployment process. You decide to track one or more phases of development to identify defects. Which phase or phases should you track?(Choose all that apply)

- A. Design and analysis
- B. Development
- C. Stabilization
- D. Requirements

Answer: C

Explanation

- C: It is during the stabilizing phase that the Testing team completes the tasks and creates the deliverables that move the feature-complete build to a state in which the defined quality level is reached and the solution is ready for full production deployment. The two main tasks in the stabilizing phase are: