

## VB6.0 Assessment

Duration: 6 Hrs

### Ticket Tracking System

Design and implement an internal ticket tracking application for a software company. It will be used to log a ticket, to close a ticket and to view tickets with the turnaround time taken to resolve a ticket.

Database design with sample data is listed below. Do not add/remove columns to this table, create the tables

“EMPLOYEE”, “EmployeeAuthentication” and “TICKETS” as listed.

**EMPLOYEE table: EID is Primary Key**

EID	Employee_Name	Hire_Date	Dept
E100100	Venkat	2004-1-10	MGM
E100101	Krishna	2004-1-10	MGM
E100102	Chandrashekhar	2005-3-11	DEV
E100103	Saheer Ali Khan	2008-10-13	DEV
E100104	Shashikanth	2007-2-17	DEV
M100103	Avinash	2007-3-10	DEVOPS
M100105	Ashok	2008-6-18	DEVOPS

**EMPLOYEEAUTHENTICATION table: EID is Foreign Key**

EID	User_ID	Password
E100100	Venkat	venkat@123
E100101	Krishna	krishna@123
E100102	Chandrashekhar	chandrashekhar@123
E100103	Saheer Ali Khan	Saheer@123
E100104	Shashikanth	shashi@123
M100103	Avinash	avinash@123
M100105	Ashok	ashok@123

**TICKET table: TICKET\_ID is Primary Key**

TICKET_ID	LOGGED_BY	RAISED_DATE	SEVERITY	TICKET_DESC	RESOLVED_BY	RESOLUTION	RESOLVED_DATE	STATUS
1	E100101	2012-10-3	Major	App server not working	M100103	Need to restart with LAN cable	2012-10-4	CLOSED
2	E100104	2013-7-10	Critical	Laptop restart problem	NULL	NULL	NULL	OPEN

## Implement Use case #1 and Use case #2 using VB6.0 and ADO.

The home page contains the following links:

“Log a Ticket”

“Close a Ticket”

Use case #1	User Authentication
Trigger	User clicks on the application icon
Pre-Conditions	The table containing the details of “EMPLOYEESAUTHENTICATION” should be created and pre- populated with a set of values manually from the back-end.
Post-Conditions	The authentication details to be checked in the table. Based on the Dept, respective menus should be displayed.
UI Screen details	<p>The input form contains:</p> <ul style="list-style-type: none"> <li>➤ EmployeeId: <b>should not be blank</b></li> <li>➤ Password: should not be blank</li> <li>➤ Department: Drop down with unique “Dept” values from employee “Dept” table</li> <li>➤ Submit button</li> <li>➤ Cancel button</li> </ul>
Main flow	<p>User provides the required details in the form and clicks the “Submit” button. On successfully login, Main Form should be opened. Based on the “Dept” respective menu should be displayed on the main screen.</p> <p>&gt;&gt; If the Dept is DEVOPS, Tickets → “View Tickets” menu should be displayed.</p> <p>&gt;&gt; If the Dept is anything apart from DEVOPS, Tickets → “Create Ticket” menu should be displayed.</p>
Data validations	<p>All the form fields are mandatory</p> <p>Password character should be “*”</p>
Alternate flow	User chooses on “Cancel” the application should get closed.
Use case #2	Log a ticket
Trigger	User clicks on “Log a Ticket” Menu on the home screen.
Pre-Conditions	The table containing the details of “EMPLOYEES” should be created and pre-populated with a set of values manually from the back-end.
Post-Conditions	The complete information about employee’s ticket is stored in the application database.
UI Screen details	<p>The input form contains:</p> <ul style="list-style-type: none"> <li>➤ Employee: <b>dynamic dropdown combo box [ select]</b> displaying list of employees which are present in the database</li> <li>➤ Ticket Date-Time: Text box to accept Date-Time in the format [DD-MM- YYYY HH:MM]</li> <li>➤ Severity: dropdown combo box [select] displaying “Critical”, “Major”and “Normal”</li> <li>➤ Ticket Description: Multi line text box.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Submit button</li> <li>➤ Cancel button</li> </ul>
Main flow	User provides the required details in the form and clicks the “Submit” button. On successfully saving the details, A unique ticket identifier is generated. The form should be closed and the following message is displayed: “Ticket ticketNo is submitted successfully”. [ Ex: Ticket 5 is submitted Successfully]
Data validations	<p>All the form fields are mandatory</p> <p>Ticket Date-Time should be in the specified format</p> <p>Ticket Date-Time should be earlier than the current date-time</p>
Business rules	<p>An employee can have more than one ticket logged in the system.</p> <p>The list of employees does not include employees from the DEVOPS department.</p>
Alternate flow	User chooses to abort the “Log a Ticket” operation by clicking on the “Cancel” button, he should be redirected to the home page
<b>Use case #3</b>	<b>Close a Ticket</b>
Trigger	User clicks on “Close a Ticket” Menu on the home screen.
Pre-Conditions	A ticket has been logged in the application database.
Post-Conditions	The status of the ticket is changed from “Open” to “Closed”.
UI Screen details	<p>The input form contains:</p> <ul style="list-style-type: none"> <li>○ <b>Ticket ID:</b> dynamic dropdown combo box [select] displaying list of tickets which are not closed [present in the database].</li> <li>○ <b>Resolved by:</b> dynamic dropdown combo box [select] displaying list of employees from “DEVOPS” team which are present in the database</li> <li>○ <b>Resolution:</b> Multi line text box.</li> <li>○ <b>Submit button</b></li> <li>○ <b>Cancel button</b></li> </ul>
Main flow	User provides the required details in the form and clicks the “Submit” button. On successfully updating the details, User is redirected to the home page and the following message is displayed: “Ticket ticketNo is closed”. [ Ex: Ticket 5 is closed]
Business rules	The current system timestamp is recorded as the time of closing the ticket
Alternate flow	User chooses to abort the “Close a Ticket” operation by clicking on the “Cancel” button, he/she should be redirected to the home page
<b>Use case #4</b>	<b>Password ACTIVEX control</b>
Control	The password control should be an ActiveX control
UI Details	<ul style="list-style-type: none"> <li>○ All the character should be display as “*”</li> <li>○ Should not take more than 12 characters</li> <li>○ Password character should include 1 upper case, 1 special character and total length should be more than 8 character</li> <li>○ If password does not match the condition, following error should be displayed: “Invalid password. Password should be combination of Upper character, Special character and length should be at least 8 character”</li> </ul>

### Use case #3      View Tickets with the Turnaround Time

#### Execute this using Crystal Report

A ticket has been closed in the application database table “tickets” with the status “CLOSED”.

Create Crystal Report which exposes a function “**ViewTickets**” to get the details of all the “CLOSED” tickets. Create a Menu in the home screen to display the closed tickets as below:

The details of all tickets, with the turnaround time [total time taken between the submission and resolving] are displayed in the exact format given below [Given below is just a sample data]:

Employee Name	Ticket	Severity	Turnaround Time (in hours)	Description	Resolved By
Krishna	1	Major	6.5	App server not working	Avinash
Shashikanth	2	Critical	22.5	Laptop restart problem	Avinash