

**UE21CS341A - Software Engineering**  
**Test Plan Documentation**

*CRIMINAL MANAGEMENT SYSTEM*

Team #: 5

|               |                 |               |                     |
|---------------|-----------------|---------------|---------------------|
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**Test Cases:**

| Test Case ID | Name of Module     | Test Case Description  | Pre-conditions   | Test Steps   | Test Data                    | Expected Results  | Actual Results  | Test Result |
|--------------|--------------------|--|--|--|------------------------------|---|---|-------------|
| TC_01        | Database Insertion | Verify that new criminal records can be added to the database without violating the primary key constraint on Case_id. | No existing criminal records with the specified Case_id. | <div> Insert a new criminal record into the database.<br/> Attempt to insert another criminal record with the same Case_id. </div> | New criminal record details. | The first insertion should succeed. The second insertion should fail due to the primary key constraint. | The first insertion is successful. The second insertion fails | Pass        |

|       |                |   |      |   |   |  |   |      |
|-------|----------------|---|------|---|---|--|---|------|
| TC_02 | Error Handling | Test how the system responds to errors during the insertion of criminal records | None | <p>Attempt to insert a criminal record with missing information .</p> <p>Attempt to insert a criminal record with age as a string</p> | Incomplete criminal record, age as a string | Both insertions should fail, and appropriate error messages should be generated. | Both insertions fail, and error message is generated. | Pass |
|-------|----------------|---|------|---|---|--|---|------|

|       |                        |  |                           |  |  |   |   |      |
|-------|------------------------|--|---------------------------|--|--|---|---|------|
|       |                        |  |                           |  |  |   |   |      |
| TC_03 | Database Update        | Confirm that the UpdateCriminal stored procedure successfully updates the address and occupation of a criminal | Existing criminal records | <p>Select a criminal record.</p> <p>Update the address and occupation.</p> <p>Execute the UpdateCriminal procedure.</p>                                  | Criminal record details before and after the update.   | The selected criminal record should reflect the updated address and occupation in the database. | record reflects the updated address and occupation in the database.   | Pass |
| TC_04 | Age Validation Trigger | Validate that the trigger prevents the insertion of criminal records with invalid age values.                  | None.                     | <p>Attempt to insert a criminal record with a negative age.</p> <p>Attempt to insert a criminal record with an age less than 18 or greater than 120.</p> | Criminal records with invalid age values.              | Both insertions should fail, and the trigger should generate appropriate error messages.        | Both insertions fail, an error message is generated                   | Pass |
| TC_05 | Login Validation       | Validate that the system enforces username and password validation rules in the                                | None                      | <p>Attempt to insert a new login record with a blank username.</p> <p>Attempt to</p>   | Login records with blank username, blank password, and | All three insertions should fail, and appropriate error messages should be                      | All three insertions fail, and appropriate error message is generated | Pass |

|       |                                      |  |                           |   |   |   |   |      |
|-------|--------------------------------------|--|---------------------------|---|---|---|---|------|
|       |                                      | login table.   |                           | insert a new login record with a blank password.<br><br>Attempt to insert a new login record with mismatched passwords. | mismatched passwords.                         | generated .   | .   |      |
| TC_06 | Foreign Key Constraint - Crime Table | Verify that the system enforces the foreign key constraint on the crime table. | Existing criminal records | Attempt to insert a crime record with a criminal_id that does not exist in the criminal table.                          | Crime record with a non-existent criminal_id. | The insertion should fail due to the foreign key constraint | The insertion fails due to the foreign key constraint | Pass |

|       |                              |  |   |   |   |   |   |      |
|-------|------------------------------|--|---|---|---|---|---|------|
| TC_07 | All information required     | Ensure that the system requires all necessary information to be provided when inserting a new criminal record. | None  | <p>Attempt to insert a new criminal record with all required information .</p> <p>Attempt to insert a new criminal record with missing information or blank fields</p>  | Criminal records with complete information and records with missing information | The first insertion with complete information should succeed. The second insertion with missing information or blank fields should fail | First insertion is successful. Second insertion fails .   | Pass |
| TC_08 | Frontend-Backend Integration | Test whether the frontend successfully updates the backend when modifying criminal information.                | Running frontend and backend with a connected database. | Open the criminal management system frontend. Navigate to the page where you can update criminal information. Select a criminal record and modify some information. Click the "Update" or "Save" button to apply the changes. | Updated criminal record details   | The frontend and backend should communicate effectively, and the updated information should be reflected in the database                | The frontend and backend communicate effectively, and the updated information should be reflected in the database | Pass |

