

PES UNIVERSITY, BANGALORE

Department of Computer Science and Engineering B. Tech (CSE) – 5th Semester – Aug-Dec 2023

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. | Insert a new criminal record into the database. Attempt to insert another criminal record with the same Case_id. | New criminal record details. | The first insertion should succeed. The second insertion should fail due to the primary key constrain t. | The first insertion is successful . The second insertion fails | Pass |

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| TC_02 | Error | Test how the | None | Attempt to | Incompl | Both | Both | Pass |
|-------|----------|--------------|------|-------------|----------|-----------|-----------|------|
| | Handling | system | | insert a | ete | insertion | insertion | |
| | | responds to | | criminal | criminal | s should | s fail, | |
| | | errors | | record with | record, | fail, and | and error | |
| | | during the | | missing | age as a | appropri | message | |
| | | insertion of | | information | string | ate error | is | |
| | | criminal | | | | messages | generate | |
| | | records | | Attempt to | | should | d. | |
| | | | | insert a | | be | | |
| | | | | criminal | | generate | | |
| | | | | record with | | d. | | |
| | | | | age as a | | | | |
| | | | | string | | | | |

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| TC_03 | Database Update | Confirm that the UpdateCrimi nal stored procedure successfully updates the address and occupation of a criminal | Existing criminal records | Select a criminal record. Update the address and occupation. Execute the UpdateCriminal procedure. | 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 occupatio n in the database. | Pass |
|-------|------------------------------|--|---------------------------|---|--|---|--|------|
| TC_04 | Age Validation Trigger | Validate that the trigger prevents the insertion of criminal records with invalid age values. | None. | Attempt to insert a criminal record with a negative age. Attempt to insert a criminal record with an age less than 18 or greater than 120. | Criminal records with invalid age values. | Both insertions should fail, and the trigger should generate appropria te error messages | Both insertions fail, an error message is generate | Pass |
| TC_05 | Login Validation | Validate that the system enforces username and password validation rules in the | None | Attempt to insert a new login record with a blank username. | Login records with blank usernam e, blank passwor d, and | All three insertions should fail, and appropria te error messages should be | All three insertions fail, and appropria te error message is generated | Pass |

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| | | login table. | | insert a | mismatc | generated | | |
|-------|------------------------|---|-------------------|--|--------------------------------------|--|--|------|
| | | logiii table. | | | hed | generated | • | |
| | | | | new login record with | | • | | |
| | | | | | passwor | | | |
| | | | | a blank | ds. | | | |
| | | | | password. | | | | |
| | | | | Attempt to | | | | |
| | | | | insert a | | | | |
| | | | | new login | | | | |
| | | | | record with | | | | |
| | | | | mismatche | | | | |
| | | | | d | | | | |
| | | | | passwords. | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| TC_06 | Foreign | Verify that | Existing | Attempt to | Crime | The | The | Pass |
| TC_06 | Foreign Key | Verify that the system | Existing criminal | Attempt to insert a | Crime record | The insertion | The insertion | Pass |
| TC_06 | | - | · · | _ | | | | Pass |
| TC_06 | Key | the system | criminal | insert a | record | insertion | insertion | Pass |
| TC_06 | Key Constraint | the system enforces the | criminal | insert a crime | record with a | insertion should | insertion fails due | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key | criminal | insert a crime record with | record with a non- | insertion should fail due | insertion fails due to the | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on | criminal | insert a crime record with a | record with a non- existent | insertion should fail due to the | insertion fails due to the foreign | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id | record with a non- existent criminal | insertion should fail due to the foreign | insertion fails due to the foreign key | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does | record with a non- existent criminal | insertion should fail due to the foreign key | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in the criminal | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in the criminal | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in the criminal | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in the criminal | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |
| TC_06 | Key Constraint - Crime | the system enforces the foreign key constraint on the crime | criminal | insert a crime record with a criminal_id that does not exist in the criminal | record with a non- existent criminal | insertion should fail due to the foreign key constrain | insertion fails due to the foreign key constrain | Pass |

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| TC 07 | A 11 | Emorana (1) | N. | A 44 1 | Calmain | The C | Finat | Da a - |
|-------|---|---|---|--|---------------------------------|--|---|--------|
| TC_07 | All | Ensure that | None | Attempt to | Crimina | The first | First | Pass |
| | information | the system | | insert a | l records | insertion | insertion | |
| | required | requires all | | new | with | with | is | |
| | | necessary | | criminal | complet | complete | successf | |
| | | informatio | | record with | e | informati | ul. | |
| | | n to be | | all required | informat | on | Second | |
| | | provided | | information | ion and | should | insertion | |
| | | when | | • | records | succeed. | fails . | |
| | | inserting a | | | with | The | | |
| | | new | | Attomet to | missing | second | | |
| | | criminal | | Attempt to | informat | insertion | | |
| | | record. | | insert a | ion | with | | |
| | | | | new | | missing | | |
| | | | | criminal | | informati | | |
| | | | | record with | | on or | | |
| | | | | missing | | blank | | |
| | | | | information | | fields | | |
| | | | | or blank | | should | | |
| | | | | fields | | fail | | |
| TC_08 | Frontend- Backend Integrati on | Test whether the frontend successfull y updates the backend when modifying criminal informatio n. | 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 communic ate effectively, and the updated informatio n should be reflected in the database | The frontend and backend communic ate effectively, and the updated informatio n should be reflected in the database | Pass |
| | | | | | | | | |

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