Software Engineering Group 11

SE\_11\_TS\_02

Database Test Specification

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# Introduction

## Purpose of Document

The purpose of this document is to give a comprehensive guide to the tests we will carry out on our database once we reach the testing phase.

## Scope

This document aims to be a brief but detailed document listing our test specifications for the database.

## Objectives

This document covers:

* Recordings
* Reserves
* Species
* Species Occurrence
* Users

# Database Test Specification

### 2.1 Recordings Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Ref** | **Req being tested** | **Test Content** | **Input** | **Output** | **Pass Criteria** |
| SE-F-001 | FR2,FR8 | Check if the database can store a valid reserve\_id | A valid reserve id such as 7 or 75 which has a corresponding reserve record | The reserve id is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-002 | FR2,FR8 | Check if the database can store an invalid reserve\_id | An invalid reserve id such as “reserve 51” | The reserve id is not successfully stored and an error is given | Data is not stored and an error is given |
| SE-F-003 | FR2,FR8 | Check if the database can store a valid user\_id | A valid user id such as 3 or 22 which has a corresponding user record | The user id is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-004 | FR2,FR8 | Check if the database can store an invalid user\_id | An invalid user id such as “user 98” | The user id is not successfully stored and an error is given | Data is not stored and an error is given |

### 2.2 Reserves Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test ref** | **Req. being tested** | **Test content** | **Input** | **Output** | **Pass criteria** |
| SE-F-005 | FR7 | Check if database can store common reserve name | Name of the nature reserve | The database should store the newly entered reserve | Data is stored correctly without any problems |
| SE-F-006 | FR7 | Check if database can store common reserve name past the varchar limit | Enter a name of length greater than 50 | The data entry should fail | Data should not appear in the database |
| SE-F-007 | FR8 | Enter an OS grid reference that corresponds to the location of the reserve | A grid reference of correct length and format | The database should store the reference | Data is stored correctly without any problems |
| SE-F-008 | FR8 | Enter an OS grid reference that corresponds to the location of the reserve | A grid reference of correct length but incorrect format | The data entry should be re-formatted and stored in the database | Data is stored correctly without any problems |
| SE-F-009 | FR8 | Enter an OS grid reference that corresponds to the location of the reserve | A grid reference of incorrect length and incorrect format | The data entry should fail | Data is not stored in the database |
| SE-F-010 | FR8 | Enter a textual description of the reserve | Text of length greater than 0 | The database should store the description | Data is stored correctly without any problems |
| SE-F-011 | FR8 | Enter an empty description of the reserve | An empty string | The data entry should fail | Data is not stored in the database |

### 2.3 Species Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Ref** | **Req being Tested** | **Test Content** | **Input** | **Output** | **Pass Criteria** |
| SE-F-012 | FR7 | Check if database can store common name. | Enter the common name of the Species e.g. European Silver-fir | The database should store the newly entered species. | Data is stored correctly without any problems |
| SE-F-013 | FR7 | Check if database can store a common name past the varchar (50) limit. | Enter a common name of the species which is beyond the 50 character limit. | The data entered into the database should fail. | Data should not appear in the database |
| SE-F-014 | FR7 | Check if database can store Latin name. | Enter the Latin name of the Species e.g. Abies alba Mill | The database should store the newly entered species. | Data is stored correctly without any problems |
| SE-F-015 | FR7 | Check if database can store a Latin name past the varchar (100) limit. | Enter a Latin name of the species which is beyond the 100 character limit. | The data entered into the database should fail. | Data should not appear in the database |
| SE-F-016 | FR7 | Check if database adds a timestamp every time a new row gets created or updated | Add a new species to the database | A time stamp should be automatically created in the database. | Timestamp should be created with the right time. |

### 2.4 Species Occurrence Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Ref** | **Req being tested** | **Test Content** | **Input** | **Output** | **Pass Criteria** |
| SE-F-017 | FR7 | Check if the database can store a valid species\_id | A valid species id such as 2 or 24 which has a corresponding species record | The species id is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-018 | FR7 | Check if the database can store an invalid species\_id | An invalid species id such as “species 123” | The species id is not successfully stored and an error is given | Data is not stored and an error is given |
| SE-F-019 | FR7 | Check if the database can store a valid recording\_id | A valid recording id such as 5 or 47 which has a corresponding recording record | The recording id is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-020 | FR7 | Check if the database can store an invalid recording\_id | An invalid recording id such as “recording 34” | The recording id is not successfully stored and an error is given | Data is not stored and an error is given |
| SE-F-021 | FR7 | Check if the database can store a valid longitude | A valid longitude such as 52° 24' 55.0908" | The longitude is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-022 | FR7 | Check if the database can store an invalid longitude | An invalid longitude which exceeds the 20 character limit | The longitude stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-023 | FR7 | Check if the database can store a valid latitude | A valid latitude such as -4° 4' 58.5114" | The latitude is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-024 | FR7 | Check if the database can store an invalid latitude | An invalid latitude which exceeds the 20 character limit | The latitude is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-025 | FR7 | Check if the database can store a valid abundance | A valid abundance which is either ‘D’, ‘A’, ‘F’, ‘O’ or ‘R’ | The abundance is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-026 | FR7 | Check if the database can store an invalid abundance | An invalid abundance such which is not in the enum such as “lots” | The abundance is not successfully stored and an error is given | Data is not stored and an error is given |
| SE-F-027 | FR7 | Check if the database can store a valid comment | A valid comment such as “plenty of this species in this area” | The comment is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-028 | FR7 | Check if the database can store an invalid comment | An invalid comment which exceeds the limit of the text type. (***L*** + 2 bytes, where ***L*** < 216) [1] | The comment is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-029 | FR7 | Check if the database can store a valid general photo | A valid general photo such as “img0029.jpg” | The general photo is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-030 | FR7 | Check if the database can store an invalid general photo | An invalid general photo which exceeds the 255 character limit | The general photo is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-031 | FR7 | Check if the database can store a valid specimen photo | An valid specimen photo such as “img0103.jpeg” | The specimen photo is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-032 | FR7 | Check if the database can store an invalid specimen photo | An invalid specimen photo which exceeds the 255 character limit | The specimen photo is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |

### 2.5 Users Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Ref** | **Req being tested** | **Test Content** | **Input** | **Output** | **Pass Criteria** |
| SE-F-033 | FR7 | Check if the database can store a valid email | A valid email such as “kid10@aber.ac.uk” | The email is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-034 | FR7 | Check if the database can store an invalid email | An invalid email which exceeds the 254 character limit | The email is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-035 | FR7 | Check if the database can store a valid password | A valid password such as an encrypted version of “pass1234” | The password is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-036 | FR7 | Check if the database can store an invalid password | An invalid password which exceeds the 255 character limit | The password is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-037 | FR7 | Check if the database can store a valid name | A valid name such as “Joe Bloggs” | The name is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-038 | FR7 | Check if the database can store an invalid name | An invalid name which exceeds the 50 character limit | The name is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |
| SE-F-039 | FR7 | Check if the database can store a valid phone number | A valid phone number such as 0123456789 | The phone number is successfully stored in the relevant row | Data is stored correctly without errors or warnings |
| SE-F-040 | FR7 | Check if the database can store an invalid phone number | An invalid phone number which exceeds the 25 character limit | The phone number is stored but is truncated | Data is only partly stored and a warning is given regarding truncation |

# REFERENCES

[1] - <http://dev.mysql.com/doc/refman/5.0/en/storage-requirements.html>

# DOCUMENT HISTORY

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| --- | --- | --- | --- | --- |
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