Software Engineering Group 11
SE_11_TS_02
Database Test Specification

Author:	Kieran Dunbar (kid10)
Configuration Ref:	SE_11_TS_02
Date:	2014-11-06
Version:	1.0
Status:	Draft

Department of Computer Science

Aberystwyth University

Aberystwyth

Ceredigion

SY23 3DB

Table of Contents

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

1. 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 255	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 (255) limit.	Enter a common name of the species which is beyond the 255 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 (255) limit.	Enter a Latin name of the species which is beyond the 255 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	A valid longitude such as 52° 24' 55.0908"	The longitude is successfully stored in the	Data is stored correctly without errors or

		longitude		relevant row	warnings
SE-F-022	FR7	Check if the database can store an invalid longitude	An invalid longitude which exceeds the 255 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 255 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	A valid comment such as “plenty of this species in	The comment is successfully stored in the	Data is stored correctly without

		comment	this area”	relevant row	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 $L < 2^{16}$) [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 255 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 255 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 255 character limit	The phone number is stored but is truncated	Data is only partly stored and a warning is given regarding truncation

2. REFERENCES

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

3. DOCUMENT HISTORY

Version	CCF No.	Date	Changes made to document	Changed by
1.0	N/A	06/11/14	Document Created and Structured	Add20