|  |
| --- |
| **Technical Report** |
| ICTDBS507 Integrate databases with websites |
|  |
| [Student Name] |
| [Pick the date] |
|  |

Table of Contents

[Part 1: Analyse and Plan 3](#_Toc106978179)

[Summary of the project requirements 3](#_Toc106978180)

[Integration Plan 3](#_Toc106978181)

[Data requirements 3](#_Toc106978182)

[The purpose of this integration project 3](#_Toc106978183)

[User interaction 4](#_Toc106978184)

[The tools and technologies that will be utilised in this project 4](#_Toc106978185)

[The method of migrating existing data into the new system 5](#_Toc106978186)

[The intended methods of validating and sanitising data 5](#_Toc106978187)

[The strategy for testing and verifying the integration 5](#_Toc106978188)

[Email to manager requesting a review meeting 6](#_Toc106978189)

[Meeting Details and Feedback 6](#_Toc106978190)

[Actioned Meeting Feedback 7](#_Toc106978191)

[Requirements Checklist 7](#_Toc106978192)

[Part 2: Database Integration 7](#_Toc106978193)

[Database Creation 7](#_Toc106978194)

[Connection String 8](#_Toc106978195)

[Data Access Mechanism 8](#_Toc106978196)

[Data Migration 9](#_Toc106978197)

[Web Application Connection 10](#_Toc106978198)

[Part 3: User Interface Integration 10](#_Toc106978199)

[User Interface - Read 10](#_Toc106978200)

[User Interface – Modify 11](#_Toc106978201)

[User Interface – Formatting 11](#_Toc106978202)

[Validation and Sanitisation 12](#_Toc106978203)

[Testing 12](#_Toc106978204)

[Part 4: Project Review 13](#_Toc106978205)

# Part 1: Analyse and Plan

## Summary of the project requirements

Describe the existing application and your interpretation of the provided scenario

## Integration Plan

### Data requirements

Any data that already exists in the client’s web application that will need to be integrated with the new database system.

### The purpose of this integration project

The outcome or benefits to the user at completion of this integration project.

### User interaction

Describe how the user will be interacting with the web application, including how data will be input, modified and viewed.

### The tools and technologies that will be utilised in this project

Any tools required to plan and perform the migration, including Database Management System that will be utilised in this project.

### Technical upgrades required for this project

Any adjustments to existing hardware and software that will be required to correctly run the new project that were not a requirement before the implementation of this integration.

### The method of migrating existing data into the new system

The process involved in taking any previous data and moving this into the new database system, this can describe tools used or the manual process of moving this data.

### The intended methods of validating and sanitising data

How do you plan on performing validation of the data entering and exiting the database, including sanitisation of data input.

### The strategy for testing and verifying the integration

How do you plan on making sure that the integration is complete and functional.

## Email to manager requesting a review meeting

Provide a mock email detailing the request for a time and date and the purpose of the meeting.

## Meeting Details and Feedback

|  |  |  |
| --- | --- | --- |
| Date and Time of Meeting: |  |  |
| Attendee names: |  |  |
| Review Feedback: | | |
| < Describe any feedback provided by your manager during the review meeting > | | |

## Actioned Meeting Feedback

Record any changes made to the installation plan based on feedback from the review meeting.

1. *< Add more points where necessary >*

## Requirements Checklist

|  |  |
| --- | --- |
| Completed | Requirement |
|  |  |
|  |  |
|  | *< Add more rows where necessary >* |

# 

# Part 2: Database Integration

## Database Creation

Screenshot from within an Integrated Development Environment or Relational Database Management System.

|  |
| --- |
|  |

## Connection String

Screenshot from within the relevant Integrated Development Environment.

|  |
| --- |
|  |

## 

## Data Access Mechanism

Screenshot of code demonstrating the CRUD methods that will interact with the database.

*Create*

|  |
| --- |
| *< increase size if necessary >* |

*Read*

|  |
| --- |
| *< increase size if necessary >* |

*Update*

|  |
| --- |
| *< increase size if necessary >* |

*Delete*

|  |
| --- |
| *< increase size if necessary >* |

## 

## Data Migration

Screenshot of the database tables showing the client’s existing data migrated to the new system.

|  |
| --- |
|  |

## Web Application Connection

Screenshot demonstrating a connection between the application and database, this can be as a breakpoint in code and does not need to involve the web application’s user interface.

|  |
| --- |
|  |

# 

# Part 3: User Interface Integration

## User Interface - Read

Provide a screenshot of data being read from the database and rendered in the user interface.

|  |
| --- |
|  |

## User Interface - Modify

Provide screenshots demonstrating the successful completion of each of these tasks, providing a before and after screenshot of each:

Creating new data in the Database (create page + resulting list page)

|  |
| --- |
| *< increase size if necessary >* |

Modifying existing data (edit page + resulting list or details page)

|  |
| --- |
| *< increase size if necessary >* |

Deleting data (before and after of list or details page)

|  |
| --- |
| *< increase size if necessary >* |

## User Interface - Formatting

Describe the organisational requirements that relate to the formatting of data, and how these have been met in this integration project.

## Validation and Sanitisation

Describe how Validation and Sanitisation are being performed in this project, and the testing carried out to ensure that the validation and sanitisation are functional.

## 

## Testing

|  |  |
| --- | --- |
| Test Performed | Testing results |
|  |  |
| *< Add more rows where necessary >* |  |

*Replace this with the checklist created in Part 1*

|  |  |
| --- | --- |
| **Completed** | **Requirement** |
|  |  |
|  |  |
|  | *< Add more rows where necessary >* |

# 

# Part 4: Project Review

Answer the following questions in relation to your project, providing full and professional responses.

Describe at least 2 other database tools that could have been used in this project, including the pros and cons of those specific tools:

Describe how this project may have been approached or implemented differently if a NoSQL data provider was used in place of a SQL data provider:

Describe how statelessness factored into this integration project. What, if any, steps had to be taken to work with or around the statelessness of your project:

Describe the role of session management in your project, or the role it could have played in the implementation of this integration project:

Describe an issue encountered in the integration and development process, including the process used to solve the issue: