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| The Question Bank Project |
| CS12320 |

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# Introduction

This project has involved building a program that allows teachers to create banks of questions, and students to take quizzes on the questions. I have created a text-based command line interface which allows the user to carry out the 10 functional requirements.

I have also implemented additional functionality, allowing ….

This document details the development and testing of the program and evaluates how successfully it meets the requirements.

## Use Case Diagram

A diagram of a question

Description automatically generated

# Design

# Testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Requirement | Description | Inputs | Expected outputs | Pass/Fail | Comments |
|  | FR1 | Create empty question bank | Enter question bank identifier “CS12320:0004” | “New question bank added”, “New question bank saved” | Pass |  |
|  | FR2a | Add new single choice questions to a question bank | Enter question bank identifier, question, options, and the index of the correct answer. | Show the question and output “New question saved” | Pass |  |
|  | FR2b | Add new fill the blanks questions to a question bank | Enter question bank identifier, question and the missing text. | “New question saved” | Pass |  |
|  | FR3 | List questions from an existing question bank | Enter question bank identifier | Show all questions in the question bank |  |  |
|  | FR3 | Remove questions from a question bank |  |  |  |  |
|  | FR4 | Delete an empty question bank |  |  |  |  |
|  | FR6a | Take a quiz by listing question banks |  |  |  |  |
|  | FR6b | Take a specific quiz using question bank identifier |  |  |  |  |
|  | FR7 | End quiz and show statistics |  |  |  |  |
|  | FR8 | Display quiz questions in a random order |  |  |  |  |
|  | FR9 | Allow the student to navigate between questions in a quiz |  |  |  |  |
|  | FR10 | Display single choice questions in an appropriate format and allow student to choose an answer |  |  |  |  |
|  | FR10 | Display fill-the-blanks questions in an appropriate format and allow the student to input missing words or phrases |  |  |  |  |
|  | NFR2 | Display the menu and allow the user to select an option though a text-based interface |  |  |  |  |
|  |  | Validate the question bank identifier inputted by the user |  |  |  |  |
|  |  | Save an empty question bank to the database |  |  |  |  |
|  |  | Get a module’s question banks from the database |  |  |  |  |
|  |  | Add a question bank to a module |  |  |  |  |
|  |  | Remove a question bank from a module |  |  |  |  |
|  |  | Write a new question to the database |  |  |  |  |
|  |  | Convert object into a String |  |  |  |  |
|  |  | Set the value of the correct answer index |  |  |  |  |
|  |  | Set question type |  |  |  |  |
|  |  | Quit the application |  |  |  |  |

## Screenshots

Test 1

A black background with white text

Description automatically generated

Test 2

A screenshot of a computer program

Description automatically generated

Test 3

A computer screen with white text

Description automatically generated

Test 4

Test 5

Test 6

Test 7

Test 8

Test 9

Test 10

Test 11

Test 12

Test 13

Test 14

A computer screen shot of a black screen

Description automatically generated

Test 15

Test 16

Test 17

Test 18

Test 19

Test 20

Test 21

Test 22

Test 23

Test 24

Test 25

Test 26

Test 27

A black background with white text

Description automatically generated

A computer screen shot of a black background

Description automatically generated

# Evaluation