

# Testing Document

Application Name:

Application Type:

Platform Availability:

## App Description

The Digital Learning Resources Platform is a comprehensive educational tool created by our working group for school students. The platform is made to offer a wealth of reference materials covering the three main subjects of technology, math, and art to students, tutors, and administrators. The main objective of the application is to provide students with a useful tool to improve their comprehension of these topics by providing carefully selected articles on significant individuals, artwork, occasions, and ideas.

### Key Features

1. Subject Specific Content
2. User Access Levels
3. Browse Articles by various methods(filters)

## Features to be tested

- Browse Articles by category
- Browse Articles by keyword in the title

It is essential to verify the overall functionality, usability, and user satisfaction of the Digital Learning Resources Platform by testing the features that let users view articles by category and keyword in the title. These features have a direct impact on the fundamental user experience by giving administrators, tutors, and students effective ways to access essential course materials.

Students may explore subjects in an organized way with the option to browse articles by category, which makes for enhanced learning opportunities. In order to ensure that users can easily navigate through the categorized articles and that the system handles valid and invalid category selections appropriately, testing this feature is crucial. Inadequate testing in this domain may result in navigational mistakes that prevent students from accessing the necessary instructional materials, hence impeding their educational experience.

The ability to search articles by keywords in the title is essential for allowing users to conduct focused searches and find content that suits their interests. Inadequate testing could cause the system to return false positives for searches or fail to retrieve pertinent articles. Students who receive insufficient testing may find it difficult to locate particular course materials, which could cause frustration and make learning less successful.

## Test Data

Test Data is provided in SampleData.xlsx file contains 9 articles within 3 different categories:

- Technology
- Mathematics
- Biography

## Test Cases

| Scenario                     | Case                                  | Steps  | Expected Outcome  | Pass/Fail |
|------------------------------|---------------------------------------|--|---|-----------|
| Logging In                   | Have Account Made                     | Enter correct username and password                        | Should successfully be logged in and be able to access testing                          | Pass      |
| Signing Up                   | Have Valid Data for User and Password | Create a username and password to make an account          | Should successfully have created an account which works when trying the Logging In test | Pass      |
| Browse All Articles          | Enter Valid Keyword                   | Enter "Articles" in the URL to be shown all articles in DB | All articles should be displayed  | Pass      |
| Browse Article by Subject    | Enter Valid Subject                   | Enter valid subject to URL to browse specified subject     | Articles in the specified subject should be displayed                                   | Pass      |
| Browse Article by Credential | Enter Invalid Credential              | Enter an incorrect credential                              | An empty array should be displayed when entering a credential wrong                     | Pass      |
| Browse Article by Category   | Enter category with lower case        | Category should be written as lower case                   | An empty array should be shown as when categories are not written in upper              | Pass      |

|  |   |  |  |      |
|--|---|--|--|------|
|  |   |  | case an error occurs   |      |
| Browse Article by Title                  | Enter Valid Title   | Choose title from existing articles  | Articles with the title specified should be shown  | Pass |
| Browse Article by ID                     | Enter Valid ID  | Copy and paste an ID from an article to get proper output  | A message saying that the article exists should be displayed                                       | Pass |
| Create Article                           | Enter Valid Data  | Enter appropriate information according to each field  | The article should be successfully created with the inputted information when creating the article | Pass |
| Update Article by ID                     | Enter Valid ID  | Use the corresponding ID with the article you want to change and enter changes to the article fields | Article should be successfully updated with new information  | Pass |
| Delete Article by ID                     | Enter Valid ID  | Use the corresponding ID with the article you wish to delete   | The article should no longer be able to be seen in the DB nor searchable through above tests       | Pass |
| <b>Additional Tests outside of scope</b> |   |  |  |      |
| Concurrency Test                         | Multiple users are searching for same category at the same time | Execute 2 same category searches at the same time  |  |      |
| Performance Test                         | Test larger database with more entries                          | Create 1000 – 10000 entries and perform search   |  |      |

Performance testing and concurrency are important factors. The system may experience problems with concurrent user loads if these features are not thoroughly tested, which could result in poor performance or even data inconsistencies. It is critical to have timely and accurate access to

instructional materials, particularly on educational platforms where users depend on conducting focused searches in order to learn effectively.

Test Sign Off