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 |
| **Browse Article by category** | Select Valid Category | Choose the correct category from existing collection (e.g. “art”) |  |  |
|  |  | Execute function (findArticleByCategoryName) with selected category | All articles under category “art” should be returned. Make sure that all “art” articles are returned |  |
|  | Select Invalid Category | Choose category that doesn’t exists (e.g. “tv-series”) |  |  |
|  |  | Execute function (findArticleByCategoryName) with selected category | System should throw an error message saying “Category not found by the name of tv-series" |  |
|  | Case Sensitivity | Choose existing category, but use short version of it (e.g. “tech” instead of “technology”) |  |  |
|  |  | Execute function (findArticleByCategoryName) with selected category | (Case Sensitive -> error?) |  |
| **Browse articles by keyword** | Valid Keyword | Choose keyword from existing title 9e.g. “Leonardo”) |  |  |
|  |  | Execute function (findArticleByTitle) with selected keyword | All articles where “Leonardo” keyword exists in the title should be returned. Make sure that all relevant articles are returned |  |
|  | Invalid Keyword | Choose keyword which doesn’t exist in any title (e.g. “User”) |  |  |
|  |  | Execute function (findArticleByTitle) with selected keyword | System should throw an error message saying “No article found by the name of User” |  |
|  | Partial or multiple keyword matches | Choose keyword which will match multiple titles (e.g. “Jobs”) |  |  |
|  |  | Execute function (findArticleByTitle) with selected keyword | In the current state system would only find one article with such name, but we need to add another one with matching “Jobs” keyword to fully test this case. **The expected result is that all articles with matching keywords in the titles should be found by the system.** |  |
| **CRUD Functions** |  |  |  |  |
|  | Create Article | Login as Tutor |  |  |
|  |  | Create new article and assign it to the correct category | New article should be successfully added with chosen category |  |
|  | Update Article | Login as Tutor |  |  |
|  |  | Update article name/description and change the category | Article should be updated with new name/description and category |  |
|  | Delete Article | Login as Tutor |  |  |
|  |  | Delete one of the articles | System should confirm the successful deletion of the article |  |
|  |  | Check that article is deleted from the system |  |  |
| **Additional Tests outside of scope** |  |  |  |  |
| Concurrence 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.