System Requirements Specification Index

For

Grade System Application

Version 1.0

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1 Business-Requirement:

1.1 Problem Statement:

The purpose of this application is to allow a teacher to not only allocate but also manage grades in any subject.

1.1.1 Grade System:

The Grade System allows you to:

1. Access home page **(must show option to add grade, search grades and show list of grades with number of pages for pagination).**
2. Should be able to add a new grade
3. It can have basic fields like Name, Score (From A, B, C, D and F) & Subject.
4. Should be able to get the list of grades **(should return data in pages and must have buttons as Asc and Desc in each column to sort list ascending or descending respectively)**.
5. Should be able to update any grade.
6. Should be able to search any grade on name basis or subject basis **(should be implemented using custom query).**

2. Template Code Structure:

2.1 Grade Controller

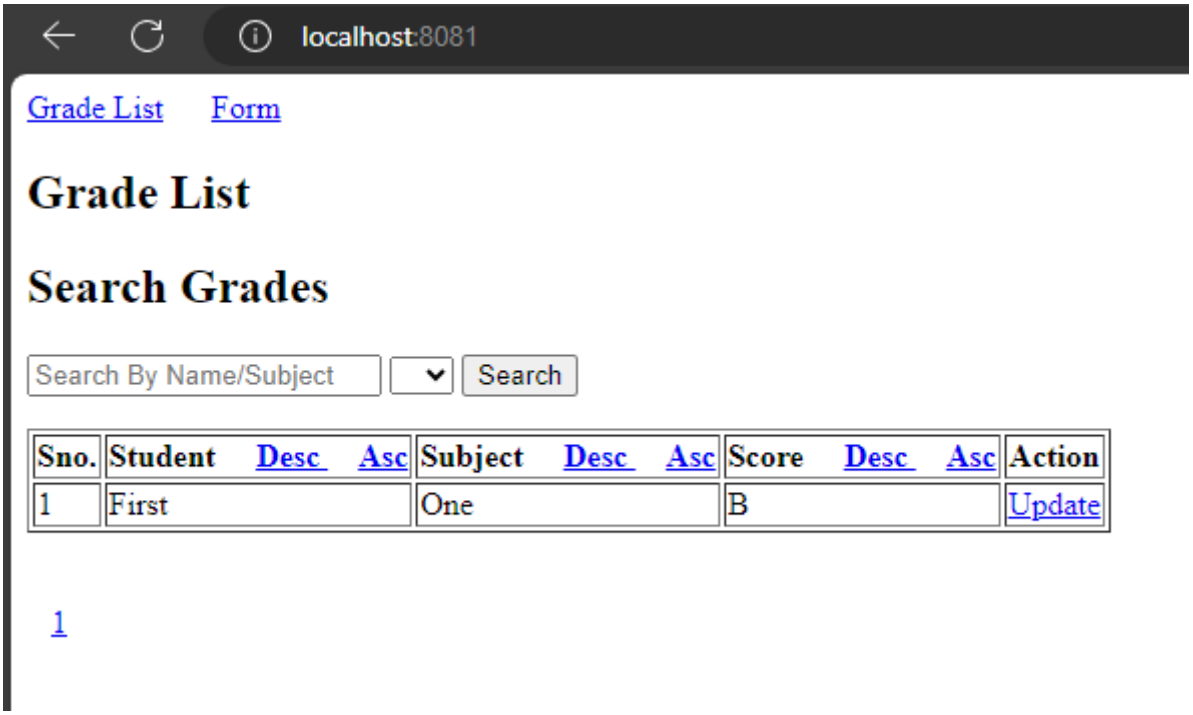
Method Exposed	Purpose
getForm()	Should return page "form" with required data.
submitForm()	Should return page "grades" after adding grade.
getGrades()	Should return page "gradeview" for all grades.

3. Resources AVAILABLE:

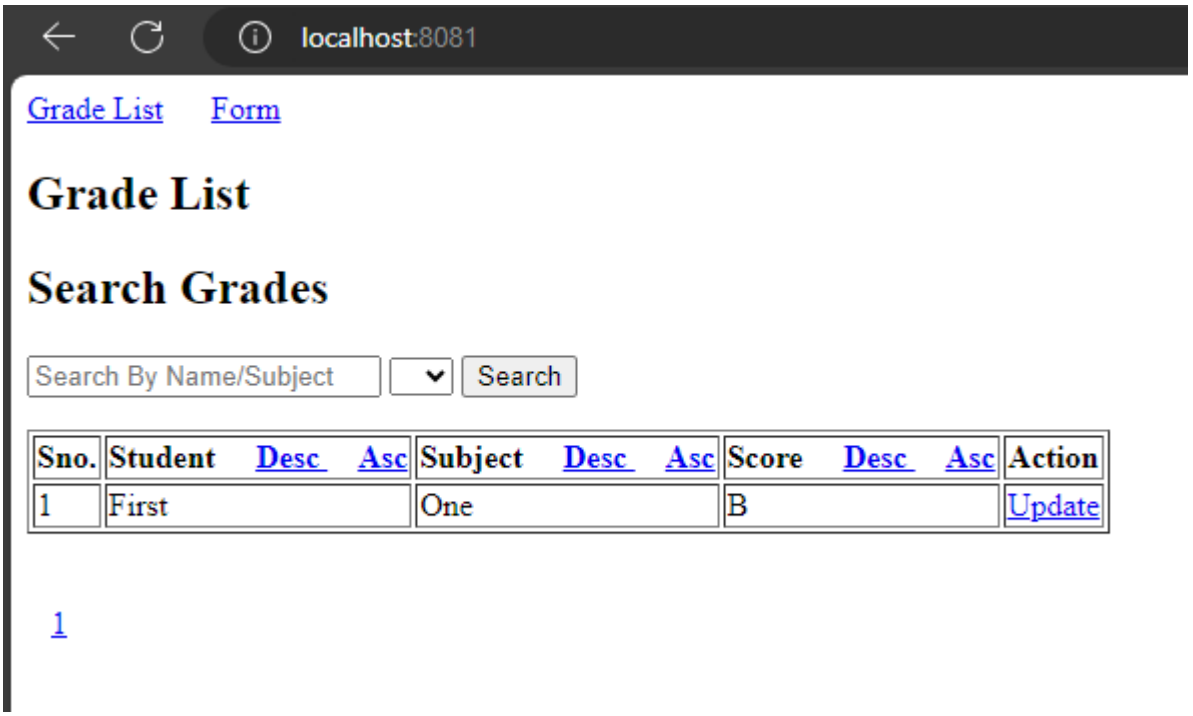
Description	View Pages Name	Remarks
Common UI		
Home Page	gradeview	Contains homepage which has form to add grade and a page to show list of all grades with option to edit it.
Grades	gradeview	
Add/Update a grade	form-add	

3 SUGGESTED WIREFRAMES:

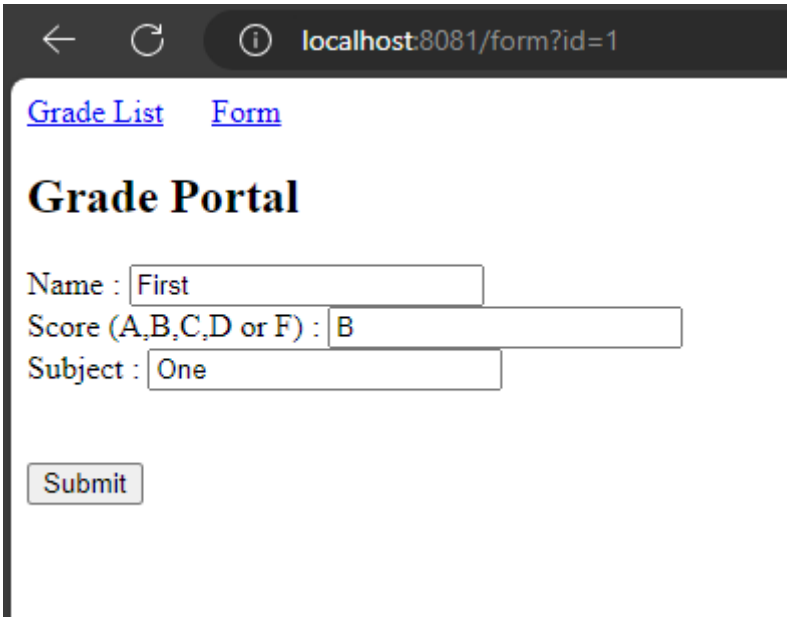
1. Homepage – Visitor Landing Page



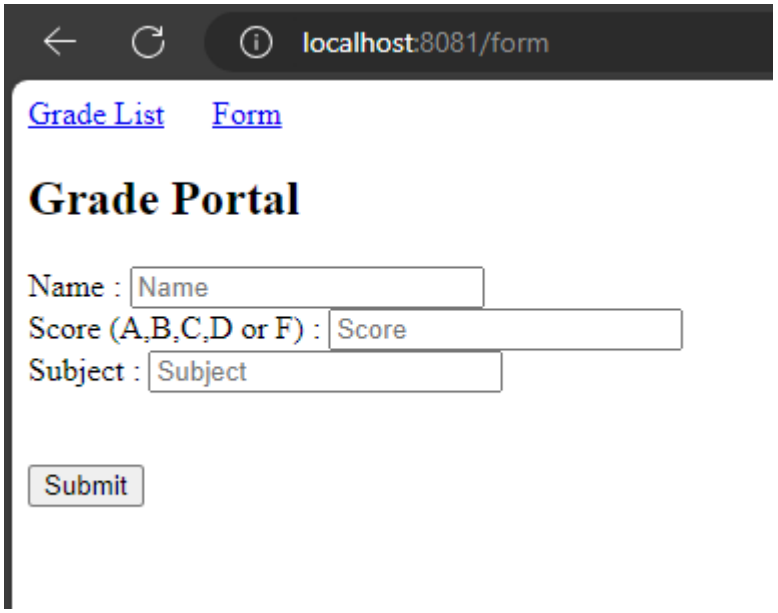
2. Show all Grades



3. Edit a Grade



4. Add a Grade



4 Business Validations

1. Id must be of type id.
2. Name value should not be blank, min 3 and max 50 characters.
3. Subject value should not be blank, min 3 and max 20 characters.
4. Score value should not be blank and must be only from A, B, C, D, E or F.

5 Considerations

The Code template already contains skeleton methods for service and controller layer. Please write your logic in it.

6 Execution Steps to Follow

1. **All actions like build, compile, running application, running test cases will be through Command Terminal.**
2. **To open the command terminal the test takers, need to go to Application menu (Three horizontal lines at left top) -> Terminal -> New Terminal**
3. **To build your project use command:**
   mvn clean package -Dmaven.test.skip
4. **To launch your application:**
   java -jar springboot-grade-system-0.0.1-SNAPSHOT.war
5. **This editor Auto Saves the code**
6. **If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.**
7. **These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.**
8. **To test any Restful application, the last option on the left panel of IDE, you can find ThunderClient, which is the lightweight equivalent of POSTMAN.**
9. **This is a web-based application, to run the application on a browser, use the internal browser in the workspace. Click on the second last option on the left panel of IDE, you can find Browser Preview, where you can launch the application.**

Note: The application will not run in the local browser

10. Default credentials for MySQL:
    a. Username: root
    b. Password: pass@word1
11. To login to mysql instance: Open new terminal and use following command:
    a. sudo systemctl enable mysql
    b. sudo systemctl start mysql

    NOTE: After typing the second sql command (sudo systemctl start mysql), you may encounter a warning message like :

    System has not been booted with systemd as init system (PID 1). Can't operate. Failed to connect to bus: Host is down

    >> Please note that this warning is expected and can be disregarded. Proceed to the next step.

    c. mysql -u root -p

    The last command will ask for password which is 'pass@word1'
12. Mandatory: Before final submission run the following command:

    mvn test
13. You need to use CTRL+Shift+B - command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.