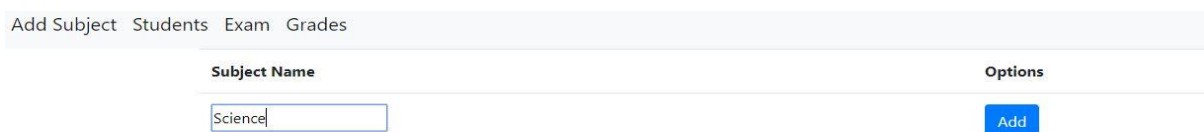# REPORT FOR BRIGHTFLAG CODING TEST

The Requirement of the coding test was not specified clearly so I assumed somethings and designed the Database, Classes, Functions and Methods as per my convenience. So I created two tables from my side which are Studsub and Grades for Maintaining the Referential Integrity between Data of two table By Enforcing a Linking between these tables.

I added some of the files as well GradeService, GradeDomain In order to assign grades to each subject student take for exam and wrote Service to handle the List and Wrote Controller as well the main.js.

 I created four tabs which Include

- **ADD SUBJECT**: Functionality of Adding a new Subject in the List and Appending that Subject Name into the Array list of Subjects Which could be assigned to a particular student.
    A STUDENT CAN BE ASSIGNED TO MULTIPLE SUBJECTS.
- **STUDENTS**: Functionality for Assigning a Student a New Subject for which student can take Exam.
    A STUDENT CAN TAKE MULTIPLE EXAMS.
- **EXAM**: Where a student can take multiple exam and can be marked for the grades students has achieved.
    A STUDENT CAN BE MARKED FOR GRADES FOR EACH OF THE EXAM HE TAKE OR HE/SHE IS ASSIGNED TO.
- **GRADES** : Show the Student Name, Subject which is assigned to and Grades Which He/she Took.

SCREENSHOTS

Figure 1 Adding a Subject which will be Added in the List for Assigning it to the students.

Add Subject   Students   Exam   Grades

Student ID	First Name	Last Name	Subjects
1	Mary	Smith	▢ ▾ Add
2	Jose	Rodriguez	▢ ▾ Add
3	Himanshu	Deswal	▢ ▾ Add

Classics
Math
English
Spanish
Databases
Science

Figure 2 Student is Being Assigned to a new Subject which is added in the previous figure.

Add Subject   Students   Exam   Grades

Student ID	Student Name	Subject	Grade	Options
1	Mary Smith	▢ ▾	▢	Add
2	Jose Rodriguez	▢ ▾	▢	Add
3	Himanshu Deswal	▢ ▾	▢	Add

Math
Databases
Science

Figure 3 Subject For which student was assigned previously now added to the list for which He/she can take Exam.

Add Subject   Students   Exam   Grades

Student ID	Student Name	Subject	Grade	Options
1	Mary Smith	▢ ▾	▢	Add
2	Jose Rodriguez	▢ ▾	▢	Add
3	Himanshu Deswal	Science ▾	85 ▴▾	Add

Figure 4 Subject for which He took exam and the Grades achieved by him.

Himanshudeswal196@gmail.com

Add Subject   Students   Exam   Grades

Student Name	Subject	Grade
Himanshu Deswal	Science	85

Figure 5 Show the name of Student Subject he took exam for and the marks achieved by him in that particular exam.

NOTE:

I have Learnt A lot from this Assignment and I tried to do what I understood from the requirements, but still if there is something which is missing and needed to be done and somehow slipped through my knowledge of understanding the requirements, I could do it and add that particular functionality which 3-4 hours of receiving the message or assignment.

The Requirements were very unclear so I did what I could make out of all the requirement provide.

I wrote a test case as well for checking the Assigning of new subject to a student .

```java
@Autowired
SubjectRepository subjectRepo;

@Autowired
StudentRepository studentRepo;

@Test
public void testSubjectAdded() throws Exception {

    //Test Case for Adding Assigning subject to a student.

    subjectRepo.setStudentWithStudent(4, 3);

    List<Subject> listOfSubjects = studentRepo.getStudentsSubject(3);

    assertNotNull(listOfSubjects);
    assertTrue(listOfSubjects.stream().anyMatch(object ->
object.getSubjectID() == 4));
}
```

THANK YOU