Backend Assessment

In this assessment, you will write a script to generate a text file containing the "report card" of all students in the database.

You will be given an example input and an example output. Your program should be able to handle different inputs of various sizes. **Your program must read the csv files and iterate through them. Do not hardcode the output given these example inputs.**

Inputs

You will be given four files as an input to your program. The description of each file is written below. [Here is a compressed folder with a simple example input.](#)

courses.csv

This file contains all existing courses in the database. Each course has a unique **id**, a **name**, and a **teacher**.

students.csv

This file contains all existing students in the database. Each student has a unique **id**, and a **name**.

tests.csv

This file contains all the tests that exist for each course. The file has three columns:
- **id:** the test's unique id
- **course_id:** the course id that this test belongs to
- **weight:** how much of the student's final grade the test is worth

The sum of all the weights of all tests in a particular course should add up to 100. You are allowed to throw errors in your report card generation script if this is not the case.

marks.csv

This file contains all the mark the student received for all the tests that they have written.

The file has three columns:
- **test_id**: the test's id
- **student_id:** the student's id
- **mark:** The percentage grade the student received for the test (out of 100)

Note: Not all students are enrolled in all courses – this can be determined by the marks that they receive. All students should have completed (taken every test for) each course they are enrolled in. If there are students that have not completed a course, you can throw an error in your report card generation script.

Output

Given the example input, [here is the text file that your program should generate](). Your goal is to write a program that generates a text file with the following characteristics:

- All student report cards – the order of the students should be based on student id

Here is an example report card:

```
Student Id: 1, name: A
Total Average:      72.03%

        Course: Biology, Teacher: Mr. D
        Final Grade:      90.10%

        Course: History, Teacher:  Mrs. P
        Final Grade:      51.80%

        Course: Math, Teacher:  Mrs. C
        Final Grade:      74.20%
```

- The first line should contain the student id and the student's name
- The second line is the average of all the courses the student is enrolled in
- Below that, a listing of all courses and the student's grade in each course (this will be determined by the mark they get in each test, and how much each test is worth)
- The courses are ordered by course id

Submission Details

Please submit your code in a compressed folder (.zip, .sitx, .7z, .rar, and .gz) on the [Hatchways platform](). The max submission size is 5MB.

Please include a Readme.md that describes how to run the application. Do not submit any built folders, since the compressed folder will be too large.

If your submission is too big (although this should not be the case if you follow the steps above), and you can't figure out how to compress, you are welcome to email your solution to [hello@hatchways.io]().

Please include your name, and use the email you signed up with the Hatchways platform. Use the subject line "Backend Assessment Submission".