You have been employed by QA! Your first task is to create an application for QA to manage student and course registration and scheduling.

There’s minimal information from QA but the scenario should be familiar.

**Focus**

* Creating a console application
* Creating and using classes, abstract classes and interfaces
* OO principles such as inheritance
* Creating and using generic ArrayList
* Creating class diagrams

**The scenario**

* QA employs many trainers
* QA runs many streams of courses
  + There are different types of Streams such as Java, C#, Networking, Security
  + Each stream has different requirements and characteristics.
* Each student is registered on a single stream
* QA's Registration method/class assigns students to streams
  + It's up to the developer (you) to implement this using a class
* QA runs many courses for each stream.
* Each course has a duration and schedule.
* QA's Course scheduler method/class assigns students and trainers to a course run.
  + It's up to the developer (you) to implement this using a class
* Trainers cannot run more than one course at the same time.
* Students should not attend the same course more than once.

**Your tasks**

* Identify classes that you need.
* Design a class diagram.
* Write code to create streams, courses, students and trainers.
* Register a few students to each stream.
* Create a few course runs for each streams.
* Assign trainers to course runs.
* Test your program by creating instances of the classes
  + Use your own test data such as student, course name etc.
* Print a report of course runs and their details such as the students and trainers scheduled for each course.