

The long form problem for this module is a project you'll create from scratch. As you go through the module, you will come back to this problem periodically to apply your learning at each step of data abstraction. We recommend you keep your project open in IntelliJ as you progress.

For this problem, you will be designing a program that displays student transcripts. A student transcript shows a student's name, their student ID, and the grades they've earned in all the courses they've completed.

As you work through this module and get familiar with the four steps of data abstraction (specifying, using, testing, and implementing), start to think about how you can apply them to Student Transcript. Ask yourself: How will this class be used? Which behaviours are important to test? This is your opportunity to exercise the process on a longer problem, so be sure to go in order.

Here are some examples of simple transcript representations.

Term	Course Code	Grade
2015F	BUSI 1005	3.0
2016W	ENGL 1400	2.8
2016S	PSYC 2021	3.1

Simran Thomas, 14550232: ARTS 100 – 3.2, COMP 140 – 2.7, EENG 101 – 2.9

Patrick Goldman, 28790556: CALC 200 – 2.5, LING 220 – 2.8, ENGL 251 – 3.6, CHEM 105 – 3.1

Sara Smith, 87494840: BIOL 310 – 3.1, CHEM 400 – 3.3, MATH 415 – 2.6, BIOL 303 – 2.4

For this project, we will use a Grade Point Average (GPA) to do our calculations. Grades will be on a 4.0 scale. Roughly speaking, an A+ translates to a 4.0, A to 3.7, A- to 3.5, B+ to 3.3, and so forth. You will need to calculate averages for your transcripts, but you won't need to do any conversions into letter grades.