Class Modeling

A characteristic of OOA is that the various steps are not easy to carry out. It is usually difficult to do class modeling the first time. The following three steps may help:

Concise Problem Definition

Example: Student goes through validation to take tests and receive grades and teacher's feedback.

Informal Strategy

Example: Student enters name and password to be validated. Student is allowed to take test for a registered course. Test is graded, and the grade is recorded. Student also may request teacher's feedback.

Formalize the Strategy

Example: **Student** enters **name** and **password** to be validated. Student is allowed to take **test** for a registered **course**. Test is graded, and the **grade** is recorded. Student also may request **teacher**'s **feedback**.

The nouns identified in Step 3 lead to **classes** and **sub-classes**.

Classes:

`Student(ID, First_Name, Last_Name, Password)`

`Course(Course#, Course_Title, Section#)`

`Teacher(ID, Frst_Name, Last_Name)`

`Grade(SID, Course#, test1, test2, midterm, final)`