

Problem : Design a course registration platform

Thing(Object)/Entity:

Information(Data)/(State):

Services(Behaviors)/Actions

Thing:

Student:

Data:name, id, registeredCourse(collection of course)

Behaviors: addToRegisteredCourse,

removeFromRegisteredCourse

Course:

Data:name, courseid, prerequisite, belongTerms,

availableSpace, courseInfo

Behaviors: isOpen()

CourseSearchService:

Data:

Behaviors: search{searchByCourseId(), searchByName()}

CourseRegisterService:

Data:

Behaviors:registerCourse()

LoginToPlatformAuthService

Sequence of invoking behaviors on objects:

Student student

Course course

CourseSearchService searchService

CourseRegisterService registerService

student.LoginToPlatformAuthService -> platform: authorize

if (authorize is true):

searchService.searchByCourseId() -> courseId: course

if (course.isOpen() && course.availableSpace() >= 1)

if (student.finishedCourse()->

course.prerequisite)

registerService.registerCourse() ->

student.id, course.id

course.availableSpace -= 1

student.addToRegisteredCourse() ->

course

else

student.canNotRegister()-> course

if (student.wantCancelClass)

student.findRegisteredClass -> courseId:

wantToCancelledCourse

student.removeFromRegisteredCourse ->

wantToCancelledCourse

wantToCancelledCourse.availableSpace++

```
else
    student.canNotRegisterAllCourses()
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