

# Algebraic specification for MSOFT project

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Types:

User

Course

Functions:

Enroll(u:User, c:Course)

unEnroll(u:user, c:Course)

getNumberOfUsers(c:Course) -> int

getLoginInfo(u:User) -> String

inEnrolled(u:user, c:Course)-> Boolean

createCourse(u:User)

isTeacher(u:User) -> Boolean

publishCourse(u:user, c:Course)

isCreator(u:user, c:Course) -> Boolean

archiveCourse(c:Course)

deleteCourse(c:Course)

commentOnCourse(u:User, c:Course)

leaveAReview(u:user, c:Course)

hasFinishedCourse(u:User, c:Course)

Axioms:

A1: unenroll(enroll(u:user, c:Course), c) = c

Preconditions:

Enroll(u:User, c:Course) requires !isEnrolled(u) && isLoggedIn(u) && getNumberOfUsers(c) < 25 && !isCreator(u)

unEnroll(u:user, c:Course) requires isEnrolled(u) && isLoggedIn(u)

createCourse(u:User) requires isLoggedIn(u) && isTeacher(u)

isCreator(u:user, c:Course) -> Boolean requires isLoggedIn(u)

publishCourse(u:user, c:Course) requires isCreator(u, c)

archiveCourse(c:Course) requires isCreator(u, c)

deleteCourse(c:Course) requires isCreator(u, c)

commentOnCourse(u:User, c:Course) requires isLoggedIn(u)

hasFinishedCourse(u:User, c:Course) requires isLoggedIn(u)

leaveAReview(u:user, c:Course) requires hasFinishedCourse(u:User, c:Course)