Design Sequence Diagram of Project 2

The diagram contains the following participants: Simulation, DataIOHandler, PersonGenerator, Advisor.

Simulation → DataIOHandler: readSimulationParameters()
DataIOHandler --> Simulation: parameters
Simulation → DataIOHandler: readCourseFiles()
DataIOHandler → Course: <<create>>
Course → CourseSection: <<create>>
DataIOHandler --> Simulation: courses
Simulation → PersonGenerator: createRandomAdvisors(amount)
PersonGenerator → Advisor: <<create>>
PersonGenerator --> Simulation: advisors
Simulation → ManagementSystem: <<create>>

loop [Simulation Loop]

alt [Semester == 'Fall']

Simulation → PersonGenerator: createRandomStudents(advisors, currentYear, amount)
PersonGenerator → Student: <<create>>
Student → Transcript: <<create>>
PersonGenerator --> Simulation: students

Simulation → ManagementSystem: registerNewStudents(newStudents)
Simulation → ManagementSystem: startRegistration()

loop [For Every Student]

Advisor → ManagementSystem: registration(managementSystem)
ManagementSystem → Advisor: getCatalog(student)
Advisor → CourseRegistration: <<create>>
CourseRegistration --> Advisor: courseRegistration
ManagementSystem → DataIOHandler: getAvailableCourseSections(blacklist)
DataIOHandler --> ManagementSystem: courseSections
ManagementSystem → Advisor: checkRegistration(courseRegistration)
Advisor → Advisor: checkRegistration(courseRegistration)
CourseRegistration → Advisor: completeRegistration()
CourseRegistration → CourseSection: addStudent(student)
CourseRegistration → CourseRegistration: completeRegistration(semester)
ManagementSystem → CourseRegistration: completeRegistration(semester)

Simulation → ManagementSystem: endSemester()

loop [For Every Course]

ManagementSystem → CourseSection: generateExamScores()
CourseSection → ManagementSystem: updateCourseNote(course, note)
ManagementSystem → CourseSection: clear()
CourseSection → Course: clear()

loop [For Every Student]

ManagementSystem → Student: updateGPA()
Student → Transcript: updateGPA()

Simulation → DataIOHandler: saveStudentFiles(stduents)