Tutorial-4

A brief Use case Description and a Sequence Diagram for a given Use case in a Scenario .

Use case Description and Sequence Diagram

Read the following Scenario, then answer the questions below.

Registering a course at a College involves both the Registrar and the student. The undergraduate student stops by the Registrar’s office, and gives him his student Id and a desired Section number for a certain Course. The REGISTRAR immediately opens a REGISTRATION ENTRY with (Student Id and desired Section number) then seeks information from three windows [SECTION, COURSE and STUDENT] respectively to see that the SECTION is available and is not full, whether the COURSE has pre-requisites or not, and whether the student has a GPA above 2.0 and has taken all the pre-requisites, if any. If this is the case, Registration is confirmed. If any deficiency in registration exists, Registration status is pending. As a post registration condition, the maximum allowable hours for students to take, may not be surpassed.

Q.1 Give a Brief description of the Use case “register Course “.

Q.2 Draw a sequence diagram for the use case “register Course “.

A.1 : Use case Brief Description:

Table-1: Brief Use case Description

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| Use Case name: | register Course |
| Scenario: | Registering a Course at a college. |
| Triggering Event: | Undergraduate Student wants to register for a Course. |
| Brief Description: | The Registrar creates a Registration entry by entering basic information for student and then checks for any deficiency related to Registration (Section’s availability, pre-requisites fulfillment and , min GPA |
| Actors: | Registrar, Student. |
| Related Use cases: | None. |
| Stakeholders: | College Department, Instructors. |
| Pre-conditions: | Student id must exist prior to registration.  Desired Section must be available for registration and not full.  Student GPA must be >= 2.0 |
| Post Condition | Total number of Credit hours after registration < maximum allowable hours .  Registration must be confirmed. |

A.2 : the Sequence Diagram:

Five objects are involved in registering a course, those are : [REGISTRAR, REGISTRATION ENTRY, SECTION, COURSE and STUDENT].

A Registration Entry is created with the basic info of Student, and three checks are conducted before Confirming Registration:

The availability of the section and that it is not full, the requested course pre-requisites were sent, and the student has taken the list of pre-requisites.

See Figure -2, “Sequence Diagram” below.



Figure-2, Sequence Diagram for the Use Case “register Course” .