

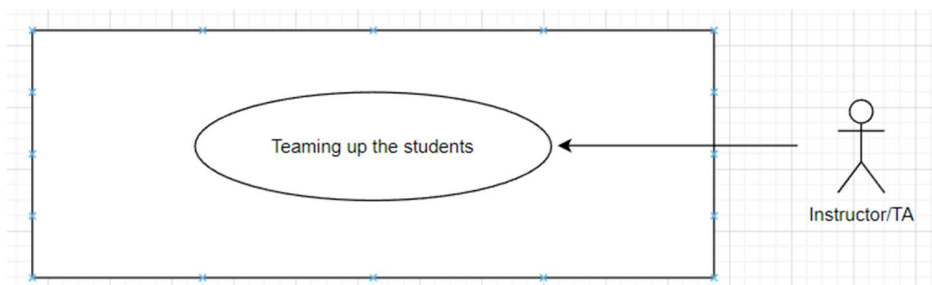
Use Case Specification: Task (INPUT or PROCESS or OUTPUT)

Use Case: Teaming up the students

Brief Description

This use case describes how the instructors or teaching assistants enter student information and group them into different teams.

Use-case Diagram



Basic Flow

1. The use case begins when the Instructor actor chooses to select the course name/code and project he wants to team up the students for.

{Select Course}

2. The system displays the interface for choosing the course and the project.
3. The Instructor selects the course he is responsible for.
4. While the Instructor has an activity to perform

- 4.1. If the CREATE activity is selected

{Begin creation of new project assignment}

- 4.1.1. The Instructor enters the new project information (Project name, Team size, number of students).

- 4.1.2. The system creates the instance of the new project in the database.

{Input Student Data}

4.1.3 The Instructor enters the student data of all students who are going to do the project by providing a csv file.

4.1.4. The system read the student data and notifies the instructor that the data is successfully inputted.

{Run ATU engine}

4.1.5. The system groups the students into different team under the predefined criteria (Algorithm) and project constraints (e.g. Team size).

4.1.6. The system shows the team information and a statistic chart for the Instructor to view.

4.2 If the REVIEW activity is selected

{Select Project Assignment}

4.2.1. The Instructor selects an existing project assignment to review its teaming up result.

{Display Output}

4.2.2. The system shows the detailed output of the ATU on that project. All team's detail information includes team no., students' name, students' energy levels. In addition, a 2D chart of distribution of student's energy % will be shown.

5. The use case ends.

Alternative Flows

A1: No Section of Course Selected

At {Begin creation of new project assignment} or {Display Output} if the Instructor has not selected any sections of courses

1. The system notifies the Instructor that this function is currently not available.
2. The flow of events is resumed at {Select Course}.

A2: No Section of Project Selected

At {Display Output} if the Instructor has not selected any sections of project assignments

1. The system notifies the Instructor that this function is currently not available.
2. The flow of events is resumed at {Select Project Assignment}.

A3: Invalid input of project information

At {Input Student Data} if the project name, team size, number of students is invalid

1. The system informs the instructor that the project information is invalid.
2. The flow of events is resumed at {Begin creation of new project assignment}.

A4: Invalid input of student data

At {Run ATU engine} if there is any invalid field in student data

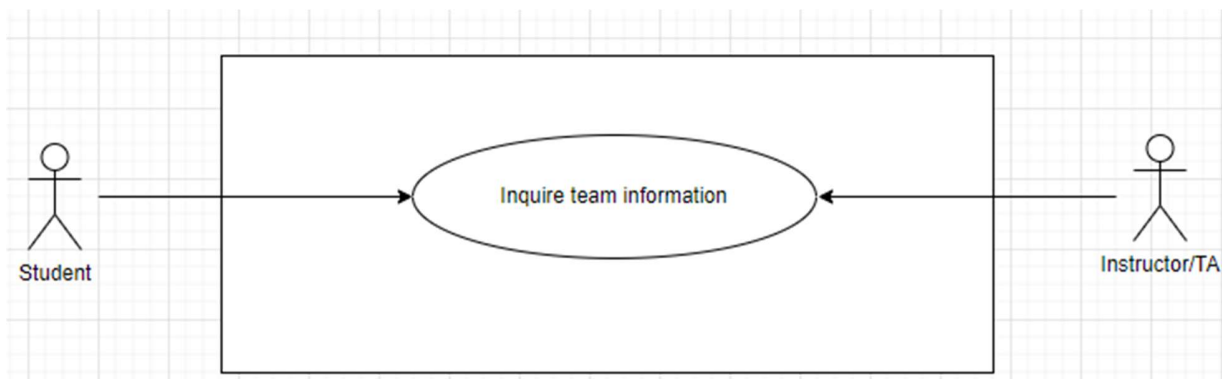
1. The system informs the instructor that the student data is invalid
2. The flow of events is resumed at {Input Student Data}.

Use Case: Inquire team information

Brief Description

This use case describes how students or instructors (or TAs) inquire about their arranged team information.

Use Case Diagram



Basic Flow

1. This use case begins when the Student or Instructor actor inquires about the team information.
2. While the Student/Instructor has an activity to perform
 - {Select Activity}
 - 2.1 If the INQUERY activity is selected
 - {Select course and project}
 - 2.1.1. The system displays the interface for selecting which courses and projects are available.
 - 2.1.2. The Student/Instructor selects the course name/code and project he wants to check the result of teaming up.
 - {Enter Information}
 - 2.1.3. The system displays the interface for Student/Instructor inputting student ID or student name.

2.1.4. The Student/Instructor inputs the ID or name of the student he wants to inquire about.

{Display Team Information}

2.1.5. The system creates and shows a table with the team information for the given ID.

3. The use case ends.

Alternative Flows

A1: No Section Selected

At {Enter information} if the Student/Instructor has not selected any sections of courses or project assignment.

1. The system notifies the Student/Instructor that this function is currently not available.
2. The flow of events is resumed at {Select course and project}.

A2: Invalid Input

At {Display Team Information} if the entered ID or student name is invalid (Student ID should be unique)

1. The system informs the Student/Instructor that the student ID or name inputted is invalid.
2. The flow of events is resumed at {Enter Information}.

A3: Cancel Activity

At any point between {Select course and project} and {Display Team Information}

1. The Student/Instructor can cancel the activity.
2. The flow of events is resumed at {Select Activity}.