Use Case Model and Description

# Learning Outcomes:

To be able to:

1. identify actors
2. identify use cases
3. write a good use case description for a given use case
4. identify relevant pre-conditions
5. identify correct post-conditions
6. incorporate alternate flows in use case description

# Use case model and description

Read the Student Attendance System Case Study in the Appendix.

1. **Identify the use cases in this system.**

Use case represents a specific goal that a user wants to achieve with the system. Use case name must have a verb in front.

One use case has been done for you.

A close up of a mans face

Description automatically generated

1. **For each use case, identify the actor(s).**

An actor can either be a human user or external system. One use case may have one or many actors.

1. **Consolidate all the use cases and actors together and draw the complete use case diagram for the Student Attendance System.**

You may want to make use of [draw.io](https://www.draw.io/) to create your use case model.

1. **Using the template below, write the use case description for ‘Enter Student Attendance’ Use Case.**

|  |  |
| --- | --- |
| Use case name: |  |
| Brief Description: |  |
| Primary Actor: |  |
| Secondary Actor: |  |
| Pre-conditions: | 1.  2. |
| Post-conditions: | 1.  2. |
| Main flow: | 1.  2.  3.  4. |
| Alternative flow(s): | 2a Scenario name 1  1.  2.  4a Scenario name 2  1.  2. |

# Appendix: Student Attendance System Case Study

A-start Global is a well-known education and training centre. Currently, the student attendance taking is done manually by the tutor. As the number of student increases, the staff found this becoming unmanageable, especially to compute the attendance rates of each student. Therefore, an online student attendance system is needed.

***Stakeholders(i.e. who will be interested in using the system)***

The users of the system include the tutor, the students & the system administrator.

***Brief Description of the proposed system***

The system shall allow all authorized users to login and to give them the appropriate access rights. All users are able to view the details of attendance records for lectures, tutorials & practicals in each module. The system must be user-friendly.

The tutor has to take attendance manually in class. After which he/she has to enter the attendance taken for the modules that they are teaching. To enter the attendance, the tutor has to specify the module, the module group, the date and the duration of the lessons. The system will then retrieve the list of students and the tutor will select the names of those absent in class to create attendance. If wrong information is selected by tutor, the records will not be retrieved and tutor has to recheck their selection. It is also possible that system is unable to retrieve the attendance list or save the absent entries entered by the tutors due to connection error. Hence tutors will have to try again at a later time.

If a student is not able to attend classes for some reason, the system allows him/her to enter the reason. If a student is sick, he/she must submit the sick leave (MC) to the admin clerk. After checking, the clerk will indicate this against the student’s submitted reason.

At any point in time during the semester, the tutor will specify the start and end dates to generate the summary attendance report for all the students in the modules in which he/she is teaching. If the start and end date entered is invalid, no computation will be performed. \*\*Otherwise the system will compute the percentage of the attendance for individual student. For those who do not meet the minimum attendance rate of 85%, the system shall email a warning letter to Students. The formula to calculate the attendance rate is (no. of hours attended) / (total no. of module hours) x 100%

On the other hand, the system administrator shall be allowed to set up the attendance policy such as minimum attendance rate to sit for exam and acceptable reasons for absence. The administrator will need to trigger the download of detailed information of students and module records from the external Information Management System (IMS) before releasing the system to the users. The system shall provide basic security for login authentications and shall allow 50 concurrent users to access the system without degrading the system performance.