

InnoCalendar

Use cases

Writing and Reflecting on Descriptions of the Domain

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Merged interview

Q: Could you please provide a quick background of your application and why you are looking for this solution?

A: A solution (InnoCalender) that should solve changing schedules for elective courses. The current spreadsheet in google when a schedule changes there is no notification to notify the user. The only solution currently available is a telegram bot that only have core courses. InnoCalender should allow user to select an elective course and get notification when information changes.

Q: What other tools do you prefer to track University courses?

A: I use google sheet which is not user friendly on devices with smaller screens. Current, telegram bot only support core courses only.

Q: How often do you check Elective courses schedule?

A: I check elective two times a week, this to allow me to see if there have been updates on the schedule.

Q: Firstly we prefer to use Google Calendar to plan or to notify attendees for elective course and you said that you want to use the telegram bot, right?

A: We want to use a telegram bot because as we see the problem, copying the data from the Google Docs or Google Spreadsheet to a Google calendar is not a solution because unfortunately you cannot provide the notifications if the events will be changed. It's more convenient to use Telegram because it's a main source of information here. You just can open the telegram see the bot, where's my elective course. When and where. Bot scans the elective course schedule and saves them to a database.

Q: What functionality should the bot have?

A: After starting the bot, the bot will provide the list of elective courses, user should choose one or more than one course from the list and seeing the elective course schedule.

Q: How can user see the elective course timetable ahead?

A: Bot should provide the link for the original Google sheets version of schedule.

Q: What kind of database system should we use to store the data?

A: It doesn't matter. You can choose any database system.

Q: Would you prefer a notification system so as to alert you whenever there is a change in the schedule of courses?

A: Yes. Bot should check the elective course schedule twice a day and if there are any changes, it should send the notification about this change.

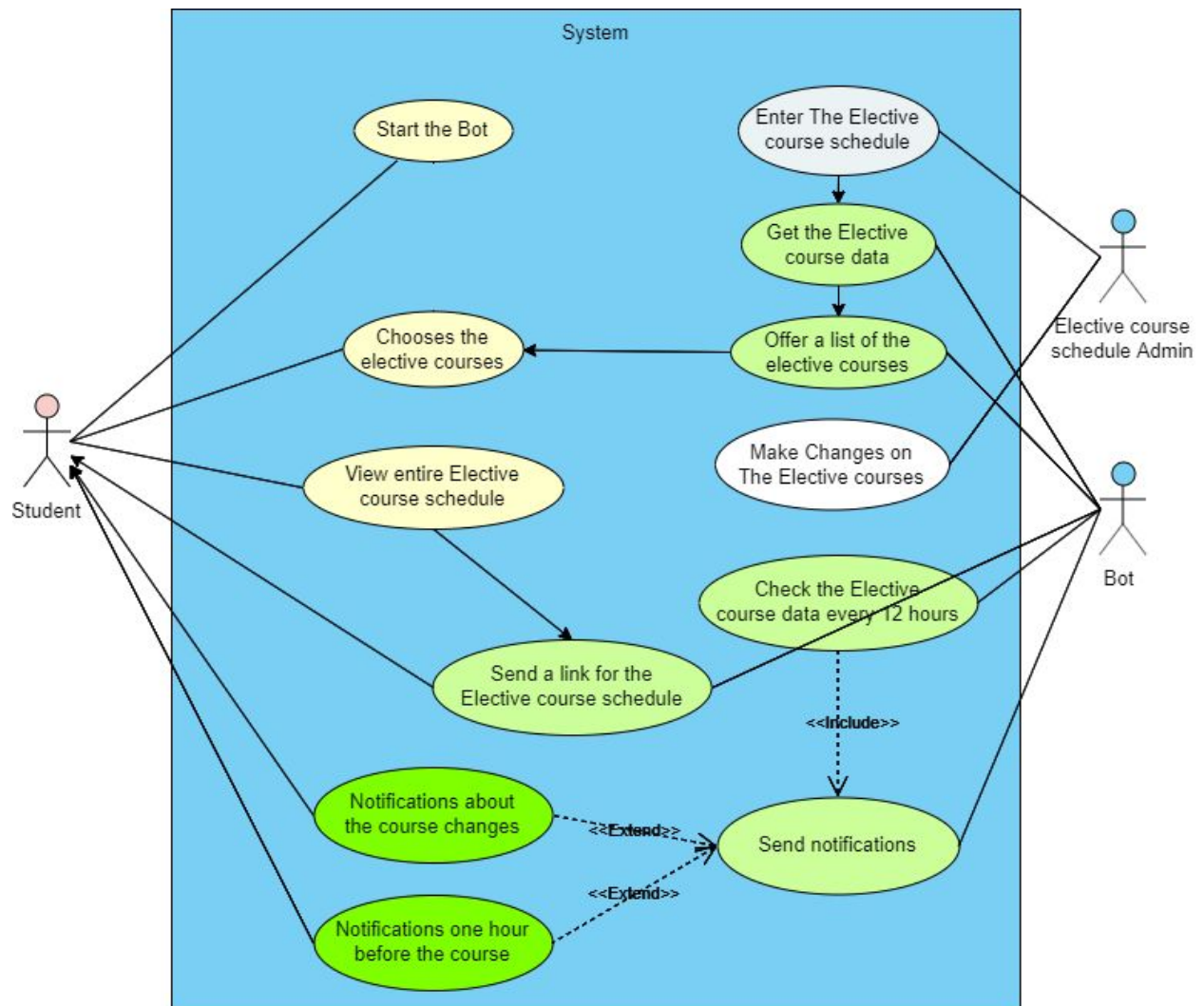
Q: When will users receive notifications before starting the lecture?

A: An hour before the lecture.

Q:What kind of future improvement would you like to see towards the application?

A:I think I have one proposal, the telegram bot will have a feature of creating another google document for the user of his courses, the bot will have to create another document and send it to the user, the document will only have his courses

Use case diagram



Use case scenarios

Use case name	User starts the bot
Actors	Student, Bot
Pre-conditions	The student must have a telegram account The elective course schedule should be available on Google sheets
Flow of Events	<ol style="list-style-type: none"> 1.The user (student) sends the initiating command to the Telegram bot 2.The Telegram verifies if the user sent the right command 3.The Telegram bot responds by sending a list of buttons to search for course, view entire elective course sheet, and a button to select course based on Masters or Bachelor's program, view course schedule 4. The user then replies by selecting any of the buttons
Post-conditions	The bot replies the user with a list of buttons
Alternate flows and exceptions	1.The user doesn't send the right command
Assumption	The user has a Telegram account

Use case name	The bot sends notifications when Admin makes the change on the elective course schedule on the Google Sheet
Actors	Telegram bot, Admin, Student
Pre-condition	<ul style="list-style-type: none"> • Google Sheets to be modified exist • Telegram bot must have stored elective course schedule in the database • Students must be registered for the course to be notified
Flow of Events	1. The Admin modifies record on the Google

	<p>Sheet to elective course schedule</p> <p>2. The Telegram bot at every 12 hours interval scans the elective course google sheet and compares it against the stored information in the database</p> <p>3.If the Telegram notices any change between the database and the google sheets,it sends a notification to students that registered for the course that was changed</p>
Post-conditions	Telegram bot notices the change between the google sheet and the database and sends notification
Alternate flows and exceptions	<p>1.Telegram's server is down and bots are inactive</p> <p>2.The user doesn't receive the notification because his internet connection is turned off and misses the class</p>
Assumption	<ul style="list-style-type: none"> • That Google sheet to be modified by the admin exists and this current information are stored in the database to be accessed by the bot • The student's internet connection is on or is within a range of network connectivity to receive the notification

Use case name	The bot sends notifications one hour before commencement of elective course
Actors	Telegram bot(Primary),Student
Pre-condition	Students must be registered for the course to be notified
Flow of Events	<p>1.The telegram bot scans the database every hour</p> <p>2.If after scanning the database, the bot notices that a course is scheduled to start in an hour, the telegram bot sends a notification to students that registered for that course</p>

	3.A notification with the course details, venue and time is sent to the user
Post-conditions	Notification is sent by telegram bot to user's(student) phone
Alternate flows and exceptions	1.The user doesn't receive the notification because his internet connection is turned off and misses the class 2.Telegram's server is down and bots are inactive
Assumption	1.The user will receive the notification early enough to prepare for class

Use case name	View entire elective course schedule
Actors	Student,Telegram bot
Pre-condition	Students sends the right command to initiate communication with bot
Flow of Events	1.The student clicks on the button to view all courses 2.The telegram bot then redirects the user to the google sheet containing elective course
Post-conditions	User views google sheet of entire elective course
Alternate flows and exceptions	1.The user doesn't send the right command to the telegram bot 2.The user doesn't have internet connection on his phone and telegram bot opens the link but the page fails to load
Assumption	The user has internet connection on his phone as to load the page containing google sheet

Use case name	User (student) wants to register for an elective course in order to get notifications
Actors	Student,Telegram bot
Pre-condition	Students sends the right command to initiate communication with bot Course to be registered by student exists
Flow of Events	<ol style="list-style-type: none"> 1.The student initiates communication with telegram bot 2.Telegram bot sends lists of buttons to view course, search for course. 3. When the user is provided with the intended course, the user can register for it by clicking on the register button 4.Telegram bot then inserts user(student) id and course into Google Spreadsheet for notification purposes
Post-conditions	Course is registered for successfully and users id and course details are inserted into the google spreadsheet
Alternate flows and exceptions	<ol style="list-style-type: none"> 1.The course the user wants to register for isn't found 2.Telegram bot fails to insert user record and course detail into the spreadsheet because the phone was out of network coverage
Assumption	The course intended to be registered for is found

Appendix

The elective course schedule - the time table for the elective courses managed by Admin on Google sheets.

Notification - An alert message sent by bot to the user on Telegram.

Telegram Bot - is an embedded application that run inside Telegram.

Admin - the person who make changes to the schedule on on google sheet.

Student - the person who wants to get notified and initiate commands from the bot.