**A Project Report**

**On**

**Telegram Bot integrated with Unversity**

*Submitted in partial fulfillment of the*

*requirement for the award of the degree of*

**BACHELOR OF TECHNOLOGY**



Computer Science and Engineering

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**GALGOTIAS UNIVERSITY, GREATER NOIDA**

**INDIA**

**July, 2024**

## CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project, entitled **"Telegram Bot integrated with University"** in partial fulfillment of the requirements for the award of the B.Tech. (Computer Science and Engineering) submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, under the supervision of Prof. K a l a i k o v a n  M , Department of Computer Science and Engineering, of School of Computing Science and Engineering , Galgotias University, Greater Noida.

The matter presented in the project has not been submitted by us for the award of any other degree of this or any other places.

Sweta Kumari(21SCSE1011689)

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Mr Kalaikovan M

Assistant Professor

# CERTIFICATE

This is to certify that Project Report entitled "**Telegram Bot integrated with University**" which is submitted by Sweta Kumari(21SCSE1011689) in partial fulfillment of the requirement for the award of degree B. Tech. in School of Computing Science and Engineering Department of Computer Science and Engineering Galgotias University, Greater Noida, India is a record of the candidate own work carried out by him/them under my supervision. The matter embodied in this thesis is original and has not been submitted for the award of any other degree.

**Signature of Examiner(s)**                                **Signature of Supervisor(s)**

**Signature of Program Chair**                              **Signature of Dean**

Date:

Place: Greater Noida

# ACKNOWLEDGEMENT

*It gives us a great sense of pleasure to present the report of the B. Tech Project undertaken during B. Tech. Final Year. We owe special debt of gratitude to Reviewer MR Kalaikovan M , Department of Computer Science & Engineering,* Galgotias University, Greater Noida, India *for his constant support and guidance throughout the course of our work. His sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only his cognizant efforts that our endeavors have seen light of the day.*

*We also take the opportunity to acknowledge the contribution of Professor (Dr.) ................, Head, Department of Computer Science & Engineering,* Galgotias University, Greater Noida, India *for his full support and assistance during the development of the project.*

*We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.*

*Signature:*

*Name    :*

*Roll No.:*

*Date    :*

# ABSTRACT

In today's rapidly evolving educational field face the challenge of efficiently managing various aspects of education, from communication and information to student and staff management. This will presents the concept of leveraging Telegram, a popular messaging platform, to create a Telegram bot that integrates seamlessly with an iCloud EMS (Education Management System) or any other sites of institute that needs a single platform in order to be accessed from one place. The bot act as a "CENTERALIZED HUB' for institution.

The proposed solution aims to enhance the overall educational experience by facilitating communication, data retrieval, and administrative tasks within the educational institution.

This abstract introduces application of Telegram bot technology combined with iCloud-based Education Management System (EMS) along with some other sites of institution to streamline educational processes. By leveraging the Telegram platform, known for its user-friendly interface and extensive reach, to create a Telegram bot that bridges the gap between the educational institution and students, parents, and staff.

The integration with iCloud make easy the real-time access to educational resources, schedules, assignments, ebooks, and more. This innovative enhances communication and collaboration within educational institutions, improving overall efficiency and the quality of the education delivery. This highlights the key features, advantages, and potential use cases of this Telegram bot integrated with University offering an innovative solution for the education sector.

The goal is to streamline communication and enhance the overall efficiency of educational institutions by using the capabilities of Telegram platform.

The integration of a Telegram bot integrated with University site offers numerous benefits, such as: Instant Communication, Academic Information Access, Administrative Efficiencies, Homework and Assignment Submission, Attendance Monitoring, Feedback, Internal Assignments, group communication, elibrary, ebooks and Support.

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# CHAPTER 1

# INTRODUCTION

In today's digital age, universities are increasingly integrating technology to enhance the academic experience for students.This project report presents the development and implementation of a University Telegram Bot designed to streamline access to essential resources and systems. The bot integrates key university platforms, including the iCloud Education Management System (EMS), Learning Management System (LMS), eLibrary, and student community groups. By providing a unified interface, the bot aims to simplify communication, improve resource accessibility, and faster a connected campus environment. This report details the project's objectives, development process, technical architecture, and the impact on the university community. Our new Telegram bot – your one-stop solution for seamless integration with University. This Telegram bot is designed to make online interaction with institute bit easier and  organized. Imagine having quick access to iCloud EMS, LMS, eLibrary, Student Travelling resources, and staying connected with institute group, all in one place – that's exactly what this telegram bot is going to provide.Our bot ensures that managing your iCloud EMS account is not only convenient but also efficient. Whether you need to check schedules, assignments, or important announcements, the bot is here to assist you in a user-friendly manner.

With our bot, you can effortlessly manage your iCloud EMS tasks, schedules, and updates directly through Telegram. No more switching between apps, everything you need is just a chat away. Whether it's checking your timetable, receiving important announcements, or accessing your assignments,and many more. Our bot extends its capabilities to Institute Group interactions. Collaborate, communicate, and stay informed within your academic community effortlessly. We redefine the way you interact with iCloud, access educational resources, and connect with your institute community.

**Understanding the Basics: What is Telegram Bot Integration?**

Firstly, let's understand the concept of Telegram bot integration. A Telegram bot is a program designed to perform specific tasks within the Telegram messaging platform. Integration, in this context, refers to the uniting of various services to create a unified and efficient user experience.

**Unleashing the Power of iCloud EMS Integration**

you can effortlessly manage your iCloud EMS tasks, schedules, and updates directly through Telegram. Receive instant updates on class schedules, examination timetables, and important announcements directly on Telegram. Everything you need is just a message away no more searching again and again at different applications.

**Empowering Education through eLibrary Integration**

As eLibrary is also integrated to bot for better convenience.Gain access to a vast repository of digital resources, e-books, research papers, and educational materials through elibrary. Our bot streamlines the process, allowing you to search, access, and download eLibrary of our university resources right from your Telegram chat.

**Building a Connected Community: Institute Group Integration**

And that's not all – our bot also facilitates communication within your institute group for various purposes like for lost and found materials, transport convenience etc.

**The User-Friendly Interface: Navigating with Ease**

Our Telegram bot boasts an intuitive interface, ensuring that users of all backgrounds can navigate effortlessly. With straightforward commands and interactive menus, you can access information, various platforms, and interact with integrated services seamlessly.

The bot acts as a centralized hub for all your academic interactions.

In conclusion, our Telegram bot brings together the power of iCloud EMS, the convenience of eLibrary, the connectivity of your institute group, and more. It's just to simplify the efforts and  enhance digital experience.

# CHAPTER 2

# SOFTWARE REQUIREMENT SPECIFICATION

Software Requirements Specification (SRS) for Telegram Bot Integrated with iCloud EMS

**1. Introduction:**

The purpose of this is to define the software requirements for the development of a Telegram Bot integrated with iCloud EMS (Event Management System), eLibrary, and Institute Group functionalities. The bot aims to streamline communication, event management, and resource sharing within an educational institute on a single platform.

**2. System Overview:**

The Telegram Bot will serve as a central hub for students, faculty, and staff members to access information related to events, electronic library resources, and connect with the institute group.

**3. Functional Requirements:**

**3.1 Event Management System (EMS):**

*3.1.1 Event Listing:*

The bot shall provide a list of upcoming events fetched from iCloud EMS.

Users can request details of specific events.

*3.1.2 Event Registration:*

Users should be able to register for events through the bot.

The bot will confirm registrations and provide event-related updates.

*3.1.3 Event Reminders:*

The bot shall send reminders for upcoming registered events.

**3.2 eLibrary Integration:**

*3.2.1 Resource Search:*

Users can search for electronic library resources using keywords.

The bot will provide information about available resources.

*3.2.2 Resource Access:*

Users can request to access specific eLibrary resources.

The bot will facilitate resource access through direct links.

*3.2.3 Notifications:*

The bot will notify users about new library acquisitions and updates.

*3.3 Institute Group Interaction:*

*3.3.1 Group Announcements:*

Administrators can post announcements to the institute group through the bot.

Users can view and interact with group announcements.

*3.3.2 Group Chat:*

The bot will enable group chat functionality for members to communicate within the institute group.

**4. Non-Functional Requirements:**

*4.1 Performance:*

The bot should respond to user requests within a reasonable time frame.

*4.2 Security:*

User data and interactions should be securely handled and stored.

Access to certain functionalities (e.g., event registration) may require user authentication.

*4.3 Usability***:**

The bot interface should be user-friendly and intuitive.

Help commands should be available for users to understand bot functionalities.

**5. Constraints:**

The bot's functionality depends on the availability and reliability of iCloud EMS and eLibrary APIs.

**6. Future Enhancements:**

Integration with additional services, such as course registration and grading systems.

Multilingual support for a diverse user base.

**7. Conclusion:**

This Software Requirements Specification outlines the features and capabilities of the proposed Telegram Bot integrated with iCloud EMS, eLibrary, and Institute Group. The development and implementation of this bot aim to enhance communication and engagement within the educational institute.

# CHAPTER 3

# IMPLEMENTATION AND RESULTS

## CODE:-

```python
# this is code for " iCloud EMS integrated with Telegram bot"

import telebot

Token = "6790259664:AAHBY8aL-bAhp_Bvw3FGlkB1mFyj0sqmB0E"

bot = telebot.TeleBot(Token)

# a function to handle a text message

@bot.message_handler(['start'])

def start(message):

    bot.reply_to(message, "Welcome to GU bot \n How can I /help you")

# This is decorter for help command

@bot.message_handler(['help'])

def help(message):

    bot.reply_to(message, """/start -> Greeting

    /help -> See commands list

    /icloud -> iCLoud EMS link

    /lms -> GU LMS link

    /GU_eliberay -> GU eLIBRARY link

    """)


# this is for icloud command
```

```python
@bot.message_handler(['icloud'])

def link(message):

    bot.reply_to(

        message, "https://t.me/Galgotias_University_bot/Icloudemstelebot")



# this is for GU LMS

@bot.message_handler(['lms'])

def link(message):

    bot.reply_to(message, "https://t.me/Galgotias_University_bot/GuLMS")



# this is for GU eLIBRARY

@bot.message_handler(['GU_eliberay'])

def link(message):

    bot.reply_to(message, "https://t.me/Galgotias_University_bot/Gu_eLIBRARY")



# This is a default message when cmd is invalid

@bot.message_handler()

def custom(message):

    msg = "This is invalid command"

    bot.reply_to(message, msg)



# polling used to continuously check for new updates

bot.polling()
```
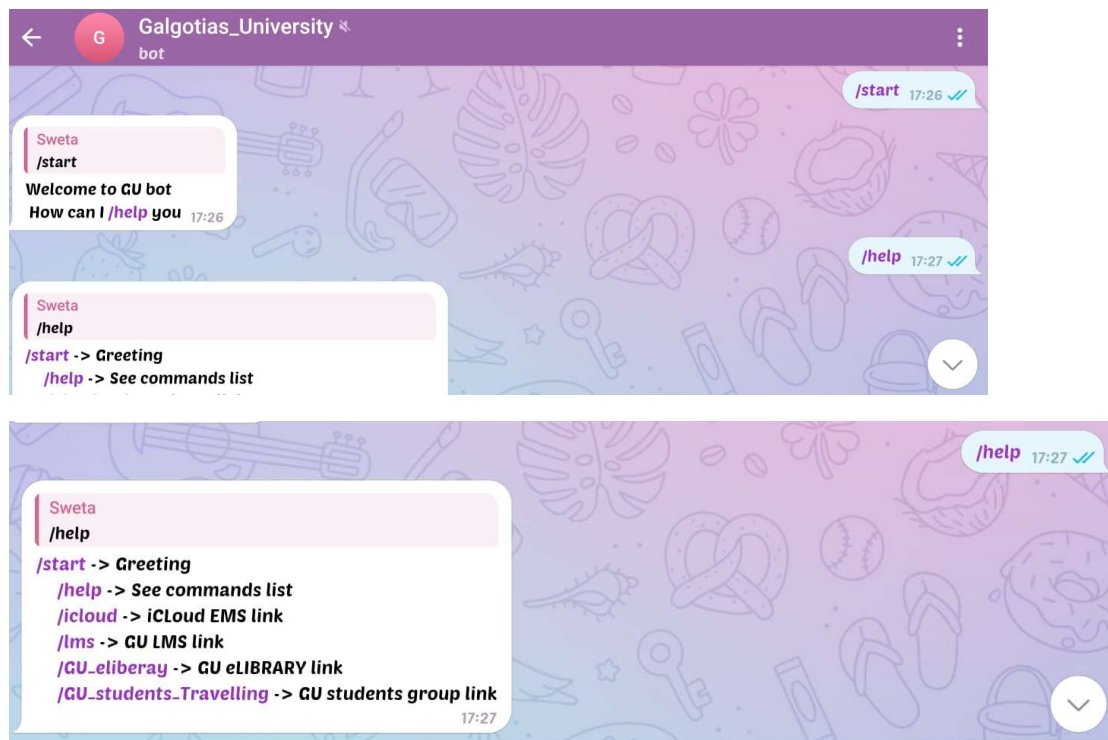
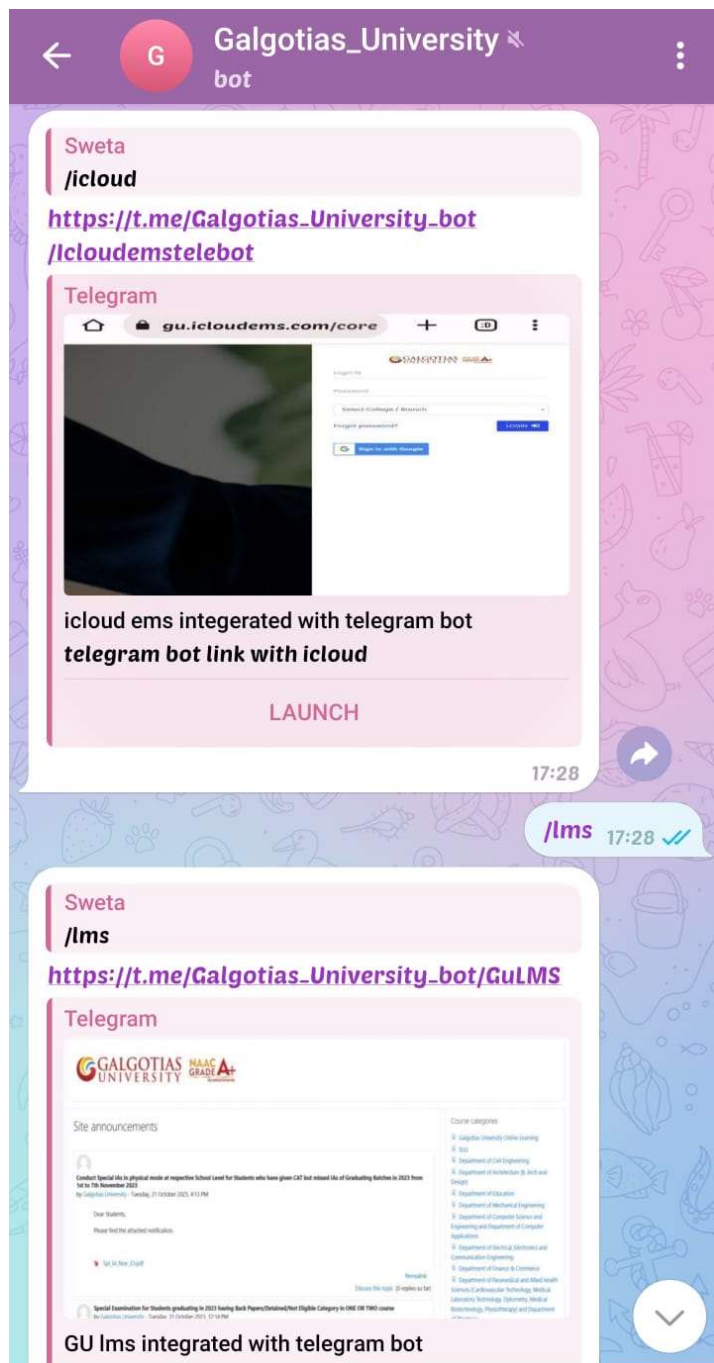Fig.1- this fig showing command start,help and lms and their responses

Fig.2- This figure is showing the command icloud and lms and their responses
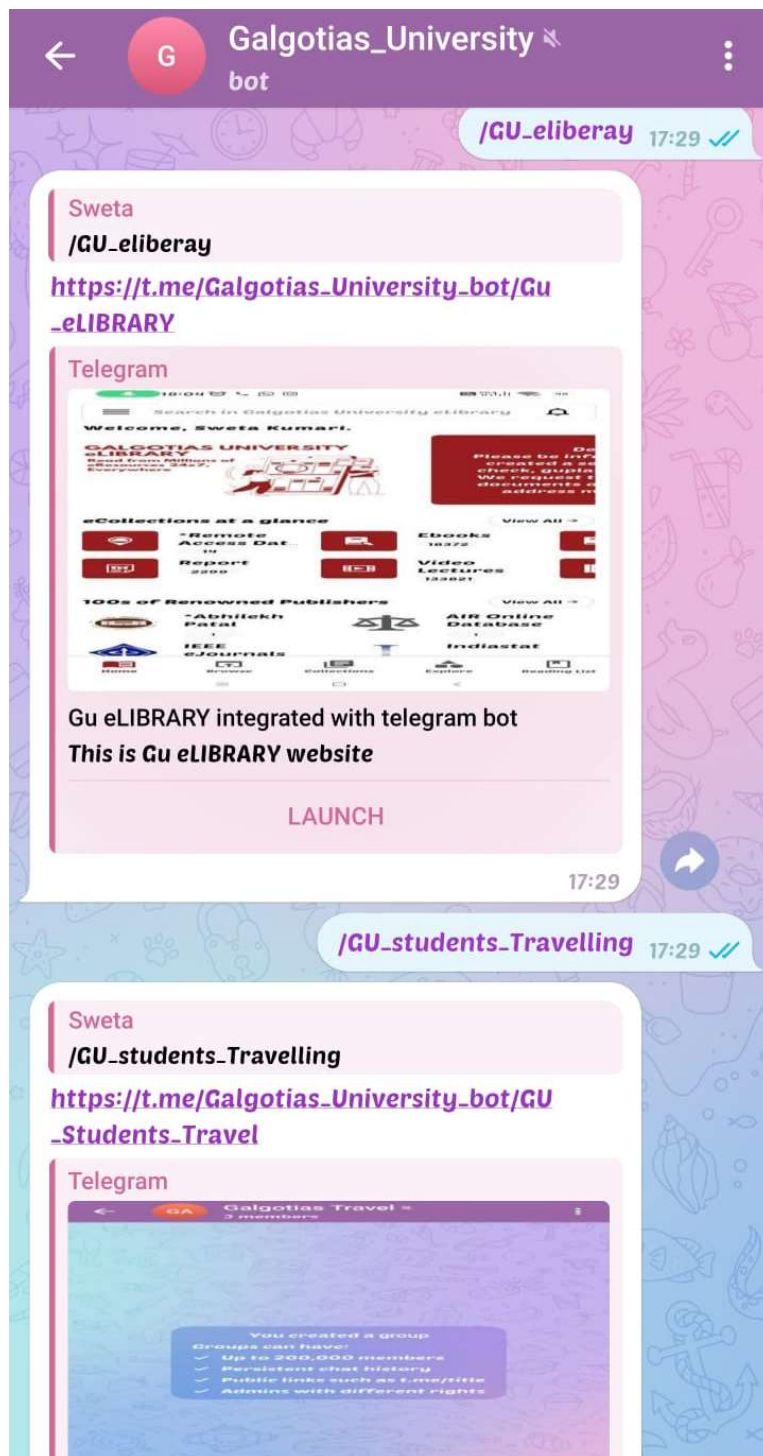
Fig.2- This figure is showing the command eLibrary and GU students group and their responses

# LIST OF TABLES

| S.No. | Commands | Their Responses |
|-------|----------|-----------------|
| 1. | Start | Give Greetings |
| 2. | Help | Give list of commands |
| 3. | Icloud | Give link of icloud EMS |
| 4. | lms | Give link of GU LMS |
| 5. | GU_elibrary | Give link of GU elibrary |
| 6. | GU_Students_Travelling | Give link of GU students group |

# CHAPTER 4

# CONCLUSION

In conclusion, the integration of a Telegram bot with iCloud EMS, eLibrary, and institute group brings forth a transformative and user-friendly experience for individuals engaged in education and collaborative learning. This innovative approach not only streamlines communication but also enhances accessibility to essential resources, fostering a dynamic and efficient learning environment.

One of the key benefits of this integrated system is the seamless interaction with iCloud EMS. The Telegram bot serves as a bridge that connects users with their iCloud EMS accounts, providing quick access to important information such as schedules, grades, and announcements. This real-time connectivity simplifies the administrative aspects of education, empowering students to stay informed and organized effortlessly.

The inclusion of an eLibrary component further enriches the learning experience. Users can conveniently access a plethora of educational resources, including digital books, research papers, and multimedia content, directly through the Telegram platform. This not only promotes a paperless and eco-friendly approach but also democratizes access to information, leveling the playing field for all students regardless of their physical location.

In the context of institute group integration, the Telegram bot emerges as a central hub for collaborative engagement. Group discussions, project coordination, and information sharing become more streamlined and interactive. The bot facilitates the exchange of ideas and resources, fostering a sense of community among members. Whether it's group announcements,

event updates, or collaborative projects, the Telegram bot serves as a catalyst for enhanced communication within the institute.

Moreover, the user-friendly nature of Telegram ensures that even individuals with limited technical expertise can navigate and benefit from these integrated features. The intuitive interface and straightforward commands make the bot accessible to a wide audience, promoting inclusivity in education.

In terms of security, the integration prioritizes the privacy and confidentiality of user data. End-to-end encryption ensures that sensitive information shared on the platform remains secure and inaccessible to unauthorized parties. This commitment to data security is crucial in maintaining the trust and confidence of users, particularly in educational settings where the protection of personal information is paramount.

As we look towards the future, the integration of a Telegram bot with iCloud EMS, eLibrary, and institute group marks a significant step towards a more interconnected and digitally empowered educational landscape. This innovative approach not only enhances efficiency but also contributes to the development of a collaborative learning ecosystem that transcends geographical boundaries. By leveraging the power of technology, education becomes more accessible, interactive, and tailored to the diverse needs of learners. The combination of iCloud EMS, eLibrary, and institute group integration on the Telegram platform exemplifies the potential of technology to revolutionize the way we approach education, making it more engaging, inclusive, and responsive to the evolving needs of the 21st century.

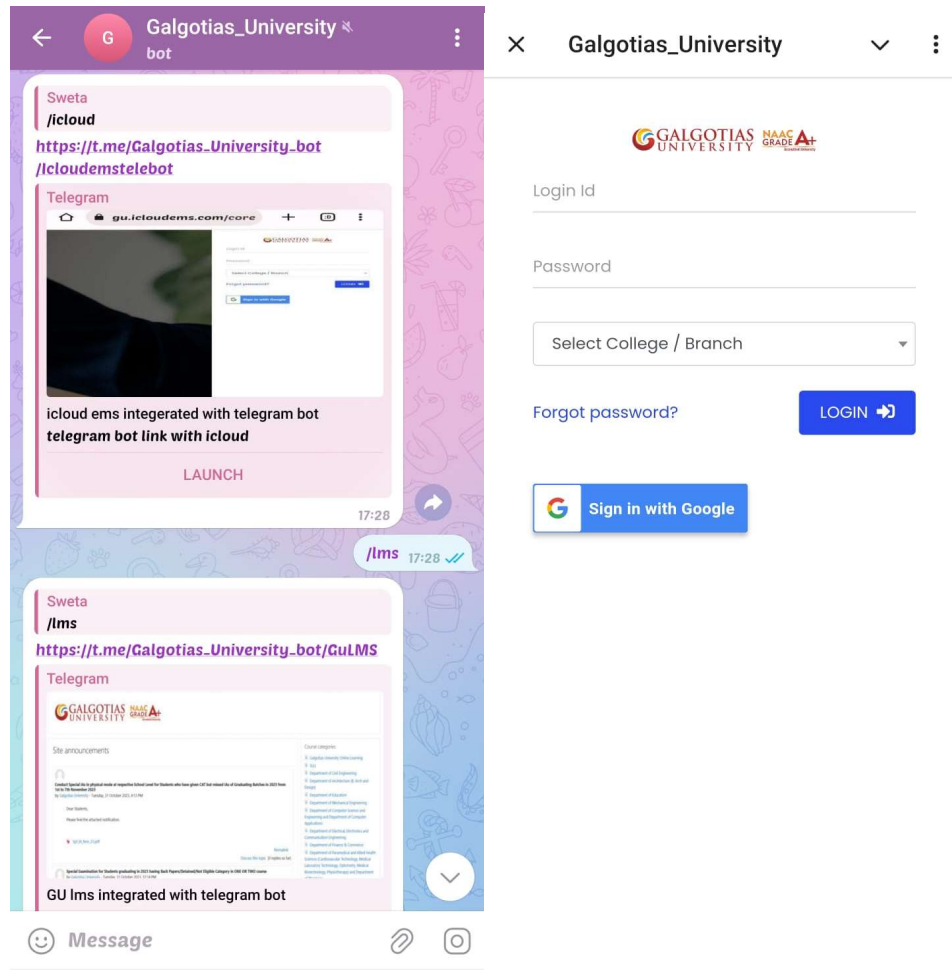# Appendix

## Some figures to show the working of project:



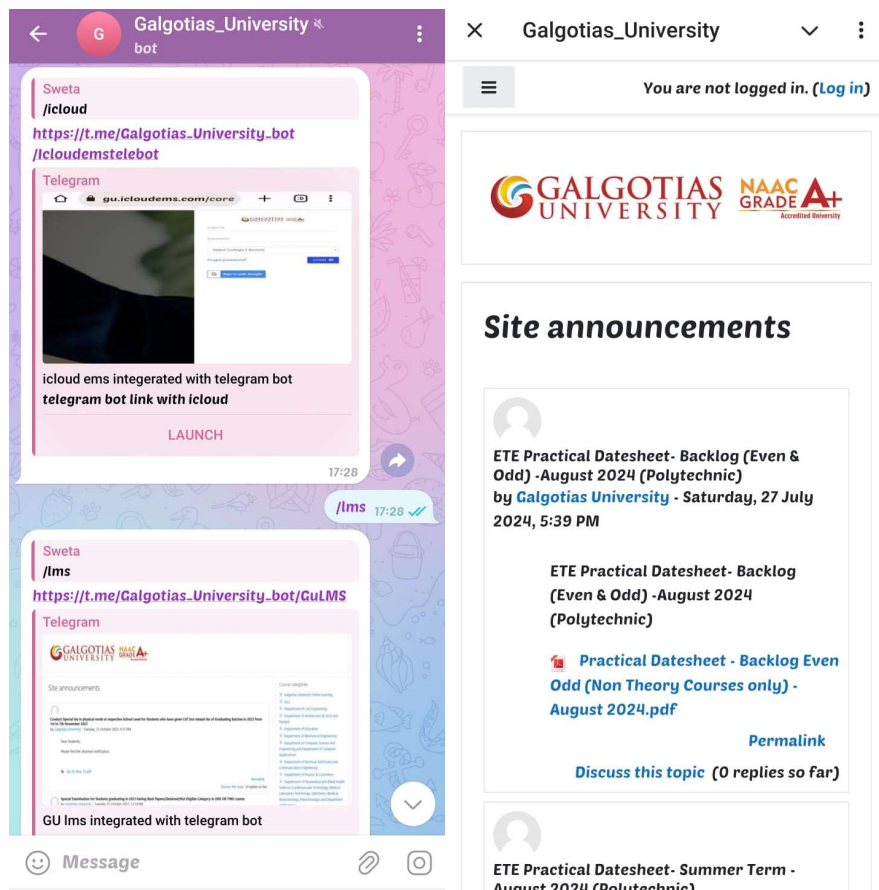Fig.3 This fig is showing the icloud webpage with the telegram bot.

Fig.3 This fig is showing the GU LMS webpage with the telegram bot.

# References

- eLibrary System Documentation. (2023). Retrieved from [https://t.me/Galgotias_University_bot/Gu_eLIBRARY]

- "Beginning iOS 13 & Swift App Development: Develop iOS Apps with Xcode 11, Swift 5, Core ML, ARKit and more" by Greg Lim

- "Mastering Telegram Bots" by Nikolay Bogdanov

- GU iCloud retrived form link "https://t.me/Galgotias_University_bot/Icloudemstelebot"

- GU LMS retrived from using link "https://t.me/Galgotias_University_bot/GuLMS"

- Using chatgpt, google