**TELEGRAM BOT THAT PROVIDES STUDENTS WITH ACADEMIC RELATED INFORMATION IN COMPUTER SCIENCE DEPARTMENT**

***BY***

***ASMA’U LAMI MUSA***

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***KADUNA***

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**Abstract**

*One of the most helpful features in mobile devices is the messenger. It becomes the main tool to communicate with each other, share information, and interact. The Internet of Things (IoT) has influenced human life where internet connectivity extends from human to human to human-to-machine or machine-to-machine. In this research field, technology and concepts allow humans to communicate with machines for a specific purpose. This research aimed to integrate between application service of the telegram sender with the proposed system, to develop an application based on the telegram bot, and to aid students with information regarding the department such as their course offered, course credit load, lecturers and their courses, etc. The proposed system is made able to provide convenience to the user, besides the telegram bot provides the user interaction with the usual interface used by people every day on their smartphones. This research work will be a mobile-based application and will be implemented on telegram using the python request library, BotFather API, while Django(python) will serve as the backend these are the modern languages used in developing the system*

**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background of The Study**

At the beginning of a new session, the department receives many admitted students and to convert this admission into enrolments, swift communication is crucial. Students may have questions ranging from courses offered, course credit load, lecturers and their courses. Students comes to computer science department without knowing the courses and lecturers and will need assistance to settle down in the school. With so many on-going registrations, the department can find it difficult to respond to every student even after orientation.

Apart from prospective students, returning students need to get certain information about recent development in the department.

The need for department inquiry system arises due to various reasons that include: the in-existence nature of departmental website, an outsider would not know where to search for a particular piece of information, difficult for the person outside college’s domain to extract information.

Telegram bots provides solution to this problem by providing all the important information they need to get comfortable in school. It also helps students navigate through the usual interface used by people every day on their smartphones. A telegram bot is an artificially intelligent software application used to conduct an automated online chat conversation with a user in natural language (human language such as English) via text.

Telegram bot recognize the user input as well as by using pattern matching, access information to provide a predefined acknowledgment. It is implemented using pattern comparing, in which the order of the sentence is recognized and a saved response pattern is acclimatize to the exclusive variables of the sentence. They cannot register and respond to complex questions, and are unable to perform compound activities. (M. Dahiya, 2017). Over duration of interactions, Telegram bots gather enormous data that provides helpful information about common concerns students face to make significant changes to its operation.

This proposed telegram bot is developed using a mobile-based application and implemented on telegram using the python request library, BotFather API, while Django(python)will serve as backend these are the modern language used in developing the system. The platform makes it easy to design and integrate a conversational user, the telegram bot uses a GUI (Graphic User Interface) integrated into a web app to provide answers to user’s query.

**1.2 Problem Statement**

In the lead up of starting a new academic year, applicants are buzzing with a lot of questions and it’s undoubtedly a busy time for departments responding to an influx of questions requiring fast responses. In past years, students and parents had to visit the college to enquire about details and other information about the college that is a lengthy and time-consuming process. This is also a hectic and resource wasting process for the departmental offices. To save time, energy and resources this can now be done over the internet with telegram bots.

**1.3 Motivation**

I was motivated that a departmental bot would solve some of the major problem especially the issues highlighted in the problem statement

**1.4 Aim and Objectives of the Study**

To develop an application based on telegram bot, that aids students with academic related information and requests regarding the department.

**OBJECTIVES**

The objectives of this project are:

1. User data set will be generated from their registered telegram accounts.
2. To develop a responsive GUI which replies users will be implement to stimulate a real person conversing.
3. To implement vital testing in ensuring the efficacy of the research work

**1.5 Methodology**

This research work will be a mobile-based application and will be implemented on a relational database system (SQLite). The student telegram Bot will be developed using the python request library, BotFather API, while Django(python) will serve as backend these are the modern language used in developing the system.

**1.6 Summarized Literature Review**

Design of Telegram Bots for Campus Information Sharing. A recent study by Setiaji, H., & Paputungan, I. V. (2018). This study provides a Telegram bot concept to enhance campus information exchange. Webhooks are the communication technique employed. Webhooks can provide zero latency and handle numerous requests concurrently during Telegram bot conversation. This type of bot provides information in response to specified requests. The Telegram bot prototype demonstrates that, while Webhooks may give needed information, Webhooks configuration is more complicated and time-consuming.

Ahmadi, A., Setiawan, D., Suprayitno, S., & Hartoko, P. (2020) recently conducted research on Design of Academic Information System Based on Bot Telegram in Smart Campus Concept. The establishment of the Smart Campus idea is an aim for many educational institutions. Smart Campus is the notion of a smart campus to give optimum service to the entire academic community by effectively and efficiently monitoring and managing current resources. Smart Campus can also deliver relevant information to students or campus institutions at all times, including during unforeseen situations. It is recommended in this study to optimize the academic information system that is connected with the Telegram communication program. This Telegram application is free, lightweight, and multiplatform, with a somewhat extensive and better developed Bot API. Students receive real-time updates and may speak with the Telegram Bot, which is meant to offer all STTAL information. The admin can post course material to the Telegram Bot, which students can subsequently download. As a prototype, 11 commands are constructed in this study. This study was put to the test by executing all of the commands supplied. This Bot Telegram application is quite useful for study program personnel and instructors to communicate information to students, especially because utilizing it is relatively simple.

The Use of the Telegram Application as an Information-Sharing Tool by Alawadhi, S., & Dashti, M. (2021) a recent study on the use and acceptance of the Telegram application by sixth-grade Kuwaiti English language teachers as an information source and knowledge-sharing tool that allows users to easily find, store, and share useful learning information and improves their teaching-learning practices. To experimentally expose the results, a mixed method technique was used that includes data triangulation: observation, a survey, and a focus group. The findings demonstrated that the Telegram app was an effective source of textual and non-textual information, as well as an information-sharing tool that saved time, effort, and money while overcoming time and location constraints. The diverse information sets available on Telegram enabled the production of novel ideas, which boosted the efficacy of teaching approaches and expedited language acquisition. The findings of this study can help information experts collaborate with teachers to plan and design information material for Telegram that will support school curricula, enhance teaching practices, and build learners' information literacy abilities.

Rianto, R., Rahmatulloh, A., & Firmansah, T. A. (2019) recently conducted research on Telegram Bot Implementation in Academic Information Services with The Forward Chaining Method. Academic information is critical for students in helping academic activities, and every attempt has been made to improve academic services. The conventional method of Short Message Service (SMS) has been replaced by instant messaging programs that make the communication process more real-time due to the continual development of various mobile devices or smartphones. As a result, this project will attempt to employ technology in instant messaging as a way of academic service information delivery, with the expectation that academic material will be supplied more rapidly and up to date. Telegram is an instant messaging program that has several benefits over other instant messaging applications. The bot feature is the most popular and is being developed on Telegram, where a third party or user may design bot features based on user requirements. Thus, telegraph can assist in overcoming a variety of issues, such as academic information seeking issues. For this, I created a lecture information service application utilizing Telegram Bot. This information service application was created utilizing the Rational Unified Process (RUP) process architecture, the Forward Chaining technique, and the Python Telepot Framework for Telegram Bot API in order for the program to run via Telegram instant message. Facilitate communication and dissemination of academic information to professors, students, and the academic community by developing this application.

**1.7 Conclusion**

This research work is centered on the development of a telegram-based application that aids students with academic-related information and requests regarding the department through the use of a telegram bot. The telegram bot will only provide information regarding the courses offered by the department, a list of all the lecturers and their courses, courses credit load, links to lecture materials for download, and the location of all computer lecture halls as the classes are not in one location

**1.8 References**

Setiaji, H., & Paputungan, I. V. (2018). “Design of Telegram Bots for Campus Information

Sharin*g”. In IOP Conference Series: Materials Science and Engineering (Vol. 325). Institute of Physics Publishing*. <https://doi.org/10.1088/1757-899X/325/1/012005>

Ahmadi, A., Setiawan, D., Suprayitno, S., & Hartoko, P. (2020). “Design Of Academic

Information System Based On Bot Telegram In Smart Campus

Concept”. *Journal asro, 11*(03), 88. https://doi.org/10.37875/asro.v11i03.310.

Alawadhi, S., & Dashti, M. (2021). “The Use of the Telegram Application as an Information-

Sharing Tool”. *Journal of Information and Knowledge Management, 20*(2).

<https://doi.org/10.1142/S0219649221500246>

Rianto, R., Rahmatulloh, A., & Firmansah, T. A. (2019). “Telegram Bot Implementation in

Academic Information Services with The Forward Chaining Method”. *Sinkron, 3*(2), 73–

78. https://doi.org/10.33395/sinkron.v3i2.10023.

Rinke, A. (2022, June 3). *What is a Telegram Bot? Explanation with an industrial focus.* System Integration With the OPC Router. https://www.opc-router.com/what-is-a-telegram-bot/