Kingdom of Saudi Arabia Ministry of education Prince Sattam bin Abdulaziz University Scientific College in Aflaj





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Telegram application

N	STUDENT NAME	STUDENT ID
1	Fatimah Muhammad Al-Dosari	442850372
2	Mahra abdullah Mahdi	443850298
3	Sahar Muhammad Al-Majali	443850356
4	Amal saleh Abdulrahman Almajed	442850290

Supervised by :Dr.Muhammad Saad Asiri Year:2032,1445

Telegram application

N	STUDENT NAME	Task
1	Fatimah Muhammad Al-Dosari	Feasibility Study & Project Proposal
2	Mahra abdullah Mahdi	Project Requirements Activity diagram
3	Sahar Muhammad Al-Majali	Use Case Modelin Sequence Diagrams
4	Amal saleh Abdulrahman Almajed	References Class Diagram+presentation

1. Feasibility Study & Project Proposal:

1) Introduction:

In today's digital age, instant messaging apps have become an integral part of our daily lives, and this project proposes to integrate a voice assistant into the popular Telegram app. The aim is to provide users with a more versatile and efficient messaging experience, and it also supports voice and video calling, allowing them to interact with Telegram using voice commands.

2) Problems: what the problems did the app solve?

- -Accessibility: Some users, including those with disabilities, may struggle with traditional typing, and a voice assistant can make the app more accessible to a broader audience.
- **-Efficiency**: Messaging often involves time-consuming typing, which can be inefficient. The voice assistant will expedite the process, making communication faster.

3) Background: About Telegram Company.

Launched by Pavel and Nikolai in 2013, Telegram has gained recognition for its strong focus on security and privacy. It also features end-to-end encryption and has a user base of over 500 million; Telegram's commitment to user privacy and its open source nature have made it a popular platform, especially in regions where privacy concerns are prominent.

4) Proposed Solution:

- **-Voice Commands:** Users can initiate chats, send messages, make calls, and perform various actions within Telegram using voice commands.
- **-Enhanced Accessibility:** This integration will make Telegram more accessible to individuals with disabilities who may find typing challenging.

5) Work Plan: Project Phases and Milestones:

-Research and Feasibility Study:

Analyze user feedback and preferences related to voice assistants.

-Development:

Design the user interface for voice assistant integration.

-Beta Testing and User Feedback:

Launch a beta version to gather user feedback.

-App Integration and Optimization:

Integrate the voice assistant seamlessly into the Telegram app.

-Launch and Marketing:

Officially release the voice assistant-integrated Telegram app.

Develop marketing campaigns to promote the enhanced app

2. Project Requirements:

• Functional Requirements:

- 1. **Voice Command Integration:** Users should be able to initiate actions, such as sending messages or making calls, through voice commands within the Telegram application.
- **2. Speech Recognition:** The system must accurately recognize and transcribe spoken words into text for processing.

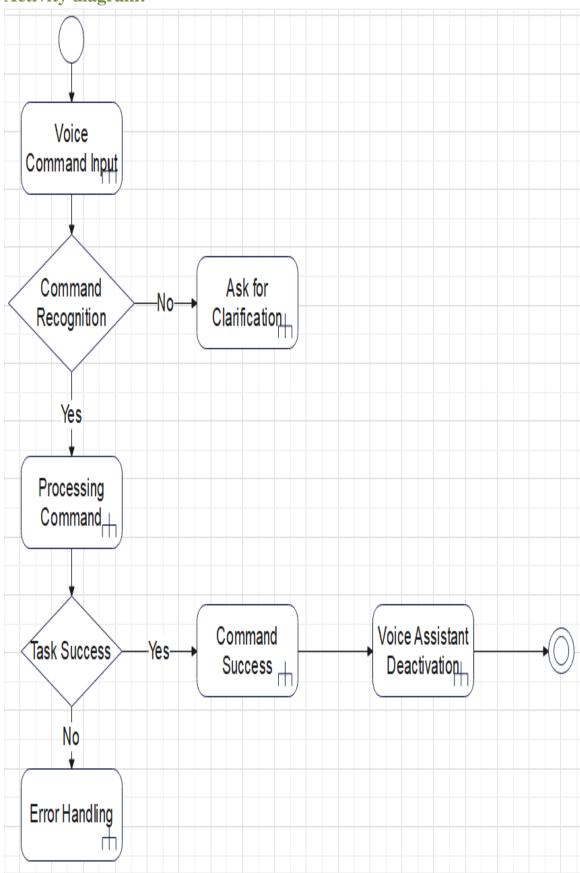
- 3. Natural Language Processing (NLP): The voice assistant should employ NLP algorithms to understand and respond to user queries and requests more intuitively.
- 4. **Multi-Language Support:** The voice assistant should support multiple languages to accommodate Telegram's diverse global user base
- 5. **Contextual Assistance:** The voice assistant should provide context-aware suggestions and responses based on the ongoing conversation or user interactions.
- 6. **User Customization**: Users should have the ability to customize voice assistant settings, including language preferences, voice styles, and privacy settings.
- 7. **Accessibility Features**: The voice assistant should include features that enhance accessibility for users with disabilities, such as voice commands for navigation and communication.
- 8. **Feedback Mechanism**: Implement a feedback system allowing users to report issues, provide suggestions, and rate their experience with the voice assistant.

• Non Functional Requirements:

- 1. Accuracy and Reliability: The voice assistant must have a high degree of accuracy in recognizing speech and providing relevant responses. It should be reliable, minimizing errors and misunderstandings.
- 2. **Performance and Scalability:** The system should be capable of handling a substantial user load without significant degradation in performance. It should be responsive and scalable to accommodate increasing usage
- 3. **Security and Privacy:** User data and interactions must be secured. The voice assistant should adhere to strong security measures, including data encryption and privacy protections.
- 4. **Usability and User Experience:** The user interface and interaction with the voice assistant should be user-friendly, ensuring a positive and intuitive experience for users of all skill levels.

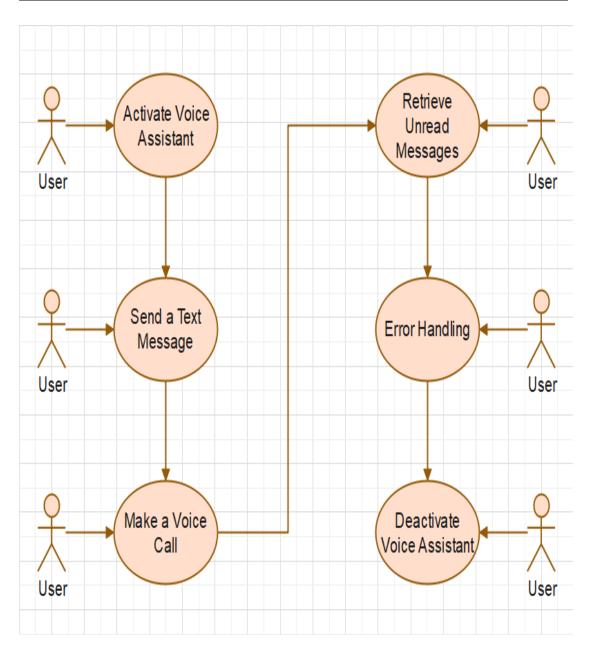
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3. Activity diagram:

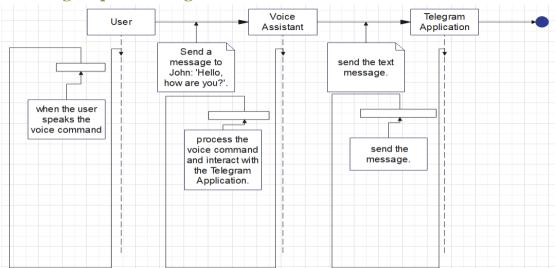


4. Project Use Case Modeling:

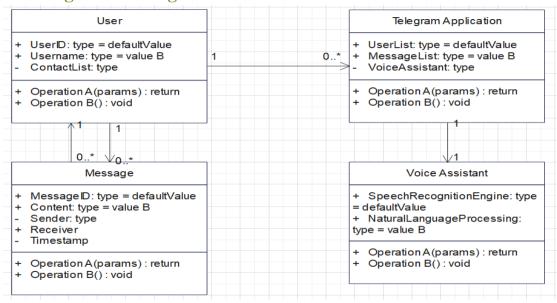
Actor	Roles
User1	Activate Voice Assistant Send a Text Message Make a Voice Call
User 2	Retrieve Un read Messages Error Handling Deactivate Voice Assistant



5. Creating Sequence Diagrams

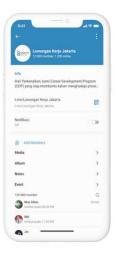


6. Creating a Class Diagram:









References

- **1.** Nielsen Norman Group: UX Training, Consulting, & Research (nngroup.com)
- 2. <u>UMLet Free UML Tools for fast UML diagrams</u>
- **3.** Home | Usability.gov

