A PROJECT REPORT
Affiliate Automation Project
Submitted by

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in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

CSE

CHANDIGARH UNIVERSITY
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MAY 2024

BONAFIDE CERTIFICATE

This is certify that the work embodied in this project entitled "**Affiliate Automation Project**" has been submitted by "**Rishikesh(20bcs9710), Madhur Joshi (20BCS9826),Nishant Godara (20BCS9761)**" the 8thth Semester for the partial fulfillment of the requirement for the degree of "**Bachelor of Engineering in Computer Science & Engineering**" discipline in "**Chandigarh University**" during the academic session January - April 2024 is a record of Bonafide piece of work, carried out by each student under my supervision and guidance in the "Department of Computer Science & Engineering", Chandigarh University.

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ACKNOWLEDGMENT

We wish to extend our heartfelt gratitude to those who have contributed to the successful completion of this report.

First and foremost, we would like to express our sincere thanks to our supervisor, **Ms. Priyanka Devi,** for her invaluable guidance, unwavering support, and insightful suggestions throughout the fabrication process and the writing of this report. Her dedication, as well as her meticulous proofreading and corrections, have been instrumental in shaping the quality of our work.

We are also deeply indebted to all the dedicated lecturers and supervisors who generously shared their expertise and provided constant encouragement, ensuring that our team remained on track to achieve our objectives.

Furthermore, we would like to express our appreciation to Chandigarh university for providing us the opportunity to work on this project.

Thank you all for your contributions, without which this report would not have been possible.

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ABSTRACT

Affiliate marketing has emerged as a popular strategy for earning commissions by promoting products or services of other individuals or companies. However, managing an affiliate program efficiently can be challenging, particularly as it scales to involve multiple affiliates, products, and platforms. This report presents the design and implementation of an Affiliate Automation Project aimed at addressing these challenges through the development of an automated system.

The project utilizes the pyTelegramBotAPI library to create a Telegram bot interface, serving as the primary interaction point for affiliates. Through this interface, affiliates can register, manage products, generate unique affiliate links, track sales, and receive commissions. The system is designed to streamline affiliate management processes, optimize performance, and enhance scalability.

Key features of the affiliate automation system include affiliate registration, product management, link generation, sales tracking, commission calculation, and payment integration. These functionalities are implemented using Python programming language, leveraging its versatility and extensive ecosystem of libraries.

The project's methodology involves a systematic approach to software development, including requirements analysis, design, implementation, testing, and deployment. Throughout the development process, emphasis is placed on user experience, security, and reliability.

The results of the project demonstrate the effectiveness of the affiliate automation system in simplifying affiliate management tasks, improving efficiency, and enhancing overall performance. The system provides affiliates with a seamless experience, enabling them to focus on promoting products while the automation handles administrative tasks.

In conclusion, the Affiliate Automation Project offers a comprehensive solution for managing affiliate programs effectively, enabling businesses to scale their affiliate marketing efforts efficiently. Future enhancements may include additional features, optimization, and integration with other marketing platforms to further extend the system's capabilities.

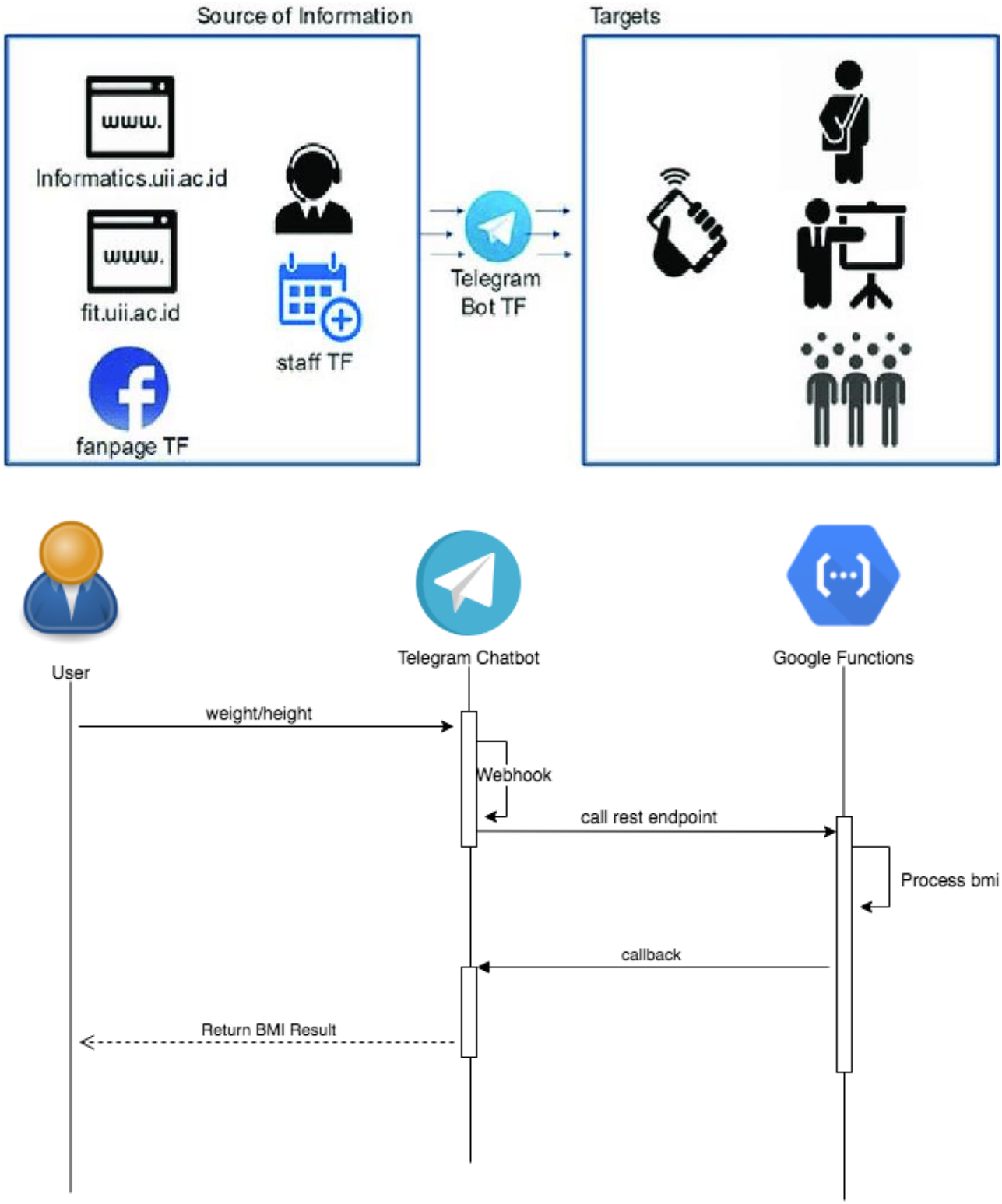
अभिसरण

एफिलिएट मार्केटिंग दूसरों के उत्पादों या सेवाओं का प्रचार करके कमीशन कमाने का एक लोकप्रिय तरीका उभर आया है। हालांकि, एफिलिएट प्रोग्राम को प्रभावी ढंग से प्रबंधित करना चुनौतीपूर्ण हो सकता है, विशेष रूप से जब यह कई एफिलिएट्स, उत्पादों और प्लेटफार्मों को सम्मिलित करता है। यह रिपोर्ट एक स्वचालित सिस्टम के विकास के माध्यम से इन चुनौतियों का समाधान प्रस्तुत करती है।

यह प्रोजेक्ट pyTelegramBotAPI लाइब्रेरी का उपयोग करता है जो एक टेलीग्राम बॉट इंटरफ़ेस को बनाने के लिए उपयुक्त है, जो एफिलिएट के लिए मुख्य प्रभाव क्षेत्र के रूप में कार्य करता है। इस इंटरफ़ेस के माध्यम से, एफिलिएट्स पंजीकृत हो सकते हैं, उत्पादों का प्रबंधन कर सकते हैं, अनुप्रयोगी एफिलिएट लिंक बना सकते हैं, बिक्री का ट्रैक कर सकते हैं और कमीशन प्राप्त कर सकते हैं। एफिलिएट ऑटोमेशन सिस्टम की मुख्य विशेषताएं शामिल हैं - एफिलिएट पंजीकरण, उत्पाद प्रबंधन, लिंक उत्पन्न करना, बिक्री का ट्रैकिंग, कमीशन की गणना, और भुगतान एकीकरण। ये सुविधाएँ पायथन प्रोग्रामिंग भाषा का उपयोग करके लागू की जाती हैं, जिसका उपयोग इस प्रोजेक्ट के अंतर्गत की गई है।

इस प्रोजेक्ट का तंत्र क्रियान्वयन एक योजनात्मक उपाय का अनुसरण करता है, जिसमें सॉफ़्टवेयर विकास की विभिन्न चरणों को शामिल किया जाता है, जैसे कि आवश्यकताओं का विश्लेषण, डिज़ाइन, कार्यान्वयन, परीक्षण, और विस्तार। प्रोजेक्ट के परिणाम प्रदर्शित करते हैं कि एफिलिएट ऑटोमेशन सिस्टम किस प्रकार एफिलिएट प्रबंधन कार्यों को सरल बनाता है, कार्यक्षमता को बढ़ाता है, और कुल प्रदर्शन को बेहतर बनाता है। प्रोजेक्ट के परिणाम प्रदर्शित करते हैं कि एफिलिएट ऑटोमेशन सिस्टम किस प्रकार एफिलिएट प्रबंधन कार्यों को सरल बनाता है, कार्यक्षमता को बढ़ाता है, और कुल प्रदर्शन को बेहतर बनाता है।समापन के रूप में, एफिलिएट ऑटोमेशन प्रोजेक्ट एफिलिएट प्रोग्रामों को प्रभावी ढंग से प्रबंधित करने का एक समग्र समाधान प्रदान करता है, जिससे व्यापार को अपनी एफिलिएट मार्केटिंग प्रयासों को कार्यक्षम ढंग से स्केल करने की क्षमता प्राप्त होती है।

GRAPHICAL ABSTRACT



ABBREVIATIONS

Sr. No.	Abbreviations	Full forms
1	API	Application Programming Interface
2	Bot	Robot
3	HTTP	Hypertext Transfer Protocol
4	OS	Operating System
5	URL	Uniform Resource Locator
6	SDK	Software Development Kit
7	CSV	Comma-Separated Values
8	SQL	Structured Query Language
9	UI	User Interface
10	UX	User Experience
11	HTML	Hypertext Markup Language
12	CSS	Cascading Style Sheets
13	JSON	JavaScript Object Notation
14	SSL	Secure Sockets Layer
15	TLS	Transport Layer Security

CHAPTER 1
INTRODUCTION

The Affiliate marketing has emerged as a powerful strategy for businesses to expand their reach and increase sales by leveraging the promotional efforts of affiliates. In this model, affiliates earn commissions for driving traffic and sales to the merchant's products or services through their marketing efforts. While affiliate marketing offers significant potential for revenue generation, managing an affiliate program efficiently can be complex and time-consuming, especially as it scales to accommodate a growing number of affiliates and products across various platforms.

1.1 Domain Introduction

In the realm of the Telegram chatbot project you're crafting, the concept of a domain doesn't directly apply. Here's why:

- **Domains and Websites:** Traditionally, domains refer to website addresses (like google.com) that point to specific locations on the internet. Your chatbot, however, will likely reside within the Telegram platform itself, not requiring a separate website or domain. **Focus on Functionality:** The core functionality of your chatbot is within the Telegram app. Users will interact with it directly through Telegram, not by navigating to a domain. However, there could be an indirect connection to domains if you choose to integrate affiliate links:

- **Affiliate Links and Domains:** Affiliate links typically point to specific product pages on Amazon's website (e.g., [invalid URL removed]). These product pages reside within Amazon's domain.

Overall, the emphasis in your project lies on building a user-friendly chatbot experience within Telegram, not on acquiring or managing a domain.

1.2 Identification of client & need

Client & Need Identification

Client:

While the specific client for this project might not be predefined, we can identify potential client profiles:

- **Individuals:** People who value convenience and a conversational approach to product discovery on Amazon. They might be busy individuals who appreciate personalized recommendations and informative product descriptions without sifting through vast product listings.
- **Small Businesses/Content Creators:** Entities looking to provide their audience with a value-added service. The chatbot could integrate with their existing Telegram presence, offering product recommendations relevant to their content.

Need:

The core need the chatbot addresses is streamlining product discovery on Amazon. It caters to users who:

- **Find traditional product searches on Amazon overwhelming:** The sheer volume of products can be daunting, and finding the right fit can be time-consuming.
- **Desire personalized recommendations:** Generic product listings may not cater to individual preferences. The chatbot can personalize recommendations based on user queries and potentially past interactions (if privacy practices allow).
- **Seek informative summaries:** Users might not have the time or patience to read detailed product descriptions. The chatbot can provide concise yet informative summaries.

Overall, the client needs a user-friendly tool that simplifies product discovery on Amazon, and the chatbot fulfills that need.

1.3 Problem Identification

Problem Identification for Telegram Chatbot (Amazon Affiliate)

Here's a breakdown of the key problems your Telegram chatbot aims to solve for users seeking products on Amazon:

- **Information Overload:** Amazon boasts a massive product catalog, making it challenging for users to navigate and find the specific items they need. Traditional search methods can be overwhelming, leading to frustration and wasted time.
- **Lack of Personalized Recommendations:** Standard Amazon search results prioritize keyword matches, not necessarily user preferences or past purchases. This can result in irrelevant suggestions that don't align with user needs.
- **Difficulty Understanding Product Details:** Product descriptions on Amazon can be lengthy and technical, making it difficult for users to grasp key features and benefits quickly.

These problems can lead to:

- **Inefficient Shopping Experiences:** Users waste time sifting through irrelevant products, leading to purchase delays or missed opportunities.
- **Unsatisfactory Purchases:** Choosing the wrong product due to inadequate information can result in buyer's remorse and potential returns.
- **Low User Engagement:** A frustrating product search experience can discourage users from returning to Amazon or exploring its full product range.

Your Telegram chatbot addresses these issues by:

Leveraging NLP (Natural Language Processing): Understanding user queries in a natural, conversational way allows the chatbot to pinpoint their needs and recommend relevant products.

- **Providing Personalized Recommendations:** The chatbot can tailor suggestions based on user input and potentially past interactions (with user consent and privacy considerations).

- **Offering Informative Summaries:** Concise descriptions highlight key product features and benefits, helping users make informed decisions quickly.

In essence, your chatbot acts as a bridge between users and Amazon's vast product catalog, simplifying the discovery process and enhancing user satisfaction.

1.4 Problem Overview

Problem Overview: Difficulty Finding the Right Products on Amazon

1.4.1 Current Situation: Information Overload: Amazon's massive product catalog overwhelms users, making it difficult to find specific items. Keyword-based searches often yield irrelevant results.

- **Lack of Personalization:** Standard search results prioritize keyword matches, not user preferences or buying habits, leading to generic recommendations.
- **Inaccessible Product Information:** Lengthy and technical product descriptions make it challenging for users to grasp key features and benefits quickly.

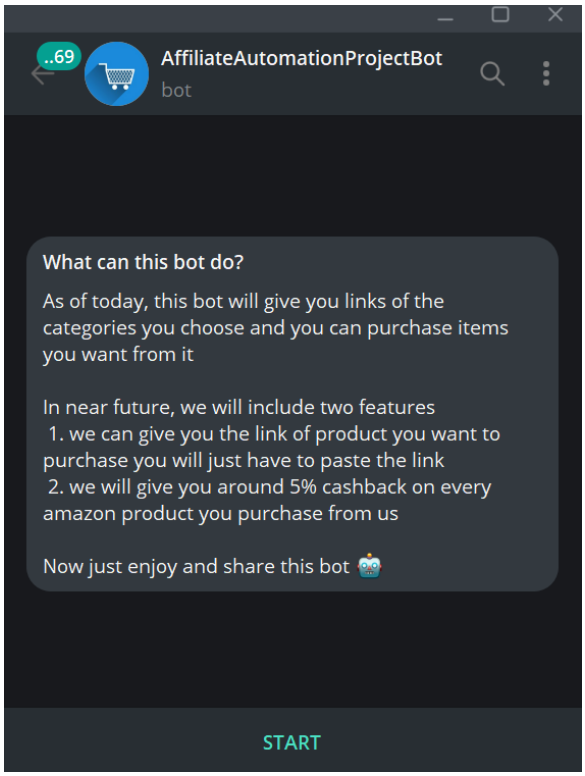


Fig 1.1 Bot start and intro.

1.4.2 Consequences:

- **Inefficient Shopping Experiences:** Users waste time sifting through irrelevant products, leading to purchase delays or missed opportunities.
- **Unsatisfactory Purchases:** Choosing the wrong product due to inadequate information can result in buyer's remorse and potential returns.
- **Low User Engagement:** A frustrating search experience discourages users from returning to Amazon or exploring its full product range.

Overall Problem:

There's a significant gap between users' desire to find the right products on Amazon and their ability to do so efficiently due to information overload, lack of personalization, and unclear product information.

This problem creates a frustrating shopping experience and hinders user satisfaction with Amazon.

1.5 Task Identification

Task Identification for Telegram Chatbot (Amazon Affiliate)

Here's a breakdown of the key tasks your Telegram chatbot will perform to address the identified problems:

1.5.1 User Query Understanding:

- Leverage Natural Language Processing (NLP) to comprehend user queries in a natural, conversational way.
- Identify keywords and phrases that indicate the type of product the user is looking for.
- Understand user intent, considering factors like budget, desired features, and brand preferences (if mentioned).

1.5.2 Product Search & Recommendation:

- Access Amazon's product catalog using their API (within guidelines).
- Search for products that align with the user's query and identified needs.
- Prioritize relevant products based on various factors (e.g., keyword match, product ratings, user reviews, potential purchase history if privacy-compliant).
- Consider filtering options based on user preferences communicated during the conversation.

1.5.3 Informative Product Summaries:

- Generate concise summaries of recommended products, highlighting key feature, benefits.
- Avoid copying product descriptions from Amazon (adhere to Amazon's content guidelines).
- Focus on providing clear and actionable information to help users make informed decisions.

1.5.4 Optional: Affiliate Link Integration (Adhere to Amazon's Affiliate Program Policies):

- With user consent and strictly following Amazon's Affiliate Program regulations, integrate masked affiliate links into product recommendations.
- These links should seamlessly direct users to Amazon's website while preserving your affiliate credentials.

Overall, the chatbot's tasks are designed to bridge the gap between users and Amazon by facilitating a user-friendly, personalized, and informative product discovery experience.

1.6 Hardware Specification

The concept of hardware specifications isn't directly relevant to your Telegram chatbot project because it's a software application. Here's why:

- **Software-Based:** Telegram chatbots run within the Telegram app itself, not on dedicated hardware. The hardware requirements are on the user's side, who needs a smartphone or computer with the Telegram app installed.

- **Cloud-Based Processing:** Chatbot functionalities like NLP and product search likely occur on Telegram's servers or those of the cloud services you might use for development. You, as the developer, wouldn't typically need to worry about specific hardware components.

  However, there are some indirect hardware considerations:

- **User Devices:** Your chatbot should function well on a variety of user devices with different processing power and memory. You might need to optimize the chatbot's code for efficiency to ensure smooth operation across various devices.

- **Development Tools:** During the development phase, you'll likely use a computer with sufficient processing power, memory, and internet connectivity to run development tools and test the chatbot effectively.

Overall, the focus for your project should be on software development, specifically:

- **Programming Languages:** Choosing languages like Python or Node.js that are well-suited for chatbot development.
- **NLP Libraries:** Integrating NLP libraries to understand user queries.
- **APIs:** Utilizing Telegram's Bot API to build the core chatbot functionality and potentially Amazon's Product Advertising API (if following their guidelines) for product search.

By focusing on these software aspects, you can create a functional and user-friendly Telegram chatbot for product discovery on Amazon.

CHAPTER 2

LITERATURE SURVEY

2.1 Existing System

Existing Systems for Amazon Product Discovery

While your Telegram chatbot offers a unique approach, there are existing systems users might leverage for product discovery on Amazon:

2.1.1 Amazon Search:

- The most basic option, allowing users to search for products using keywords or browse product categories.
- Advantages: Widely accessible, vast product catalog coverage.
- Disadvantages: Can be overwhelming with information overload, generic search results might not align with user needs, requires significant user effort to filter and refine searches.

2.1.2 Amazon Recommendation Engine:

- Amazon personalizes product recommendations based on user browsing history, past purchases, and similar user behavior.
- Advantages: Can offer relevant suggestions based on user preferences.
- Disadvantages: Limited to users with established Amazon accounts and purchase history, might not capture specific needs not reflected in past behavior.

2.1.3 Third-Party Product Research Tools (Not Affiliated with Amazon):

- Paid or freemium software tools that provide in-depth product research on Amazon for sellers or individuals seeking specific product information.
- Advantages: Offer features like keyword research, competitor analysis, sales estimates (for paid tools), can be helpful for identifying profitable products (for sellers).

- Disadvantages: Not designed for general product discovery by everyday users, can be complex and require some technical knowledge, often come with subscription fees (paid tools).

Here's how your Telegram chatbot can differentiate itself from these existing systems:

- **Conversational Interface:** Provides a more natural and interactive way to discover products, mimicking real-life conversations.
- **Personalized Recommendations:** Can tailor suggestions to user queries and potentially past interactions (with user consent) for a more targeted experience.
- **Informative Summaries:** Offers concise and user-friendly summaries of recommended products, streamlining the decision-making process.
- **Optional Affiliate Integration (Following Amazon's Guidelines):** Can potentially generate revenue for you while directing users to Amazon for purchase (with user consent).

By leveraging these unique features, your Telegram chatbot can carve out a niche within the existing Amazon product discovery landscape.

2.2 Proposed System

Proposed System: Telegram Chatbot for Amazon Product Discovery (Affiliate Option)

This proposed system outlines a Telegram chatbot designed to streamline product discovery on Amazon, potentially incorporating an optional affiliate revenue stream (adhering strictly to Amazon's Affiliate Program guidelines).

System Components:

- **User Interface:** A conversational interface within the Telegram app where users interact with the chatbot through text messages.

- **Natural Language Processing (NLP) Engine:** Processes user queries to understand their intent, desired product features, and potential budget constraints.
- **Product Search Module:** Utilizes Telegram's Bot API and potentially Amazon's Product Advertising API (if following their guidelines) to search Amazon's vast product catalog for relevant items.
- **Recommendation Engine:** Filters and prioritizes search results based on user query, NLP analysis, and potentially past interactions (with user consent and privacy considerations).
- **Product Summary Generator:** Creates concise and informative summaries of recommended products, highlighting key features and benefits without replicating Amazon's product descriptions.
- **Optional Affiliate Link Integration (Following Amazon's Guidelines):** With user consent and strict adherence to Amazon's regulations, masked affiliate links can be seamlessly integrated into product recommendations. Clicking these links directs users to Amazon while preserving your affiliate credentials (potential revenue generation).

System Workflow:

1. **User initiates conversation:** The user sends a text message to the chatbot on Telegram expressing their desire to find a product.
2. **NLP analysis:** The chatbot utilizes the NLP engine to comprehend the user's query, extracting keywords and understanding their intent.
3. **Product search:** The product search module leverages APIs to search Amazon's catalog for products that match the user's needs.
4. **Recommendation generation:** Based on search results, NLP analysis, and potentially past interactions (with user consent), the recommendation engine prioritizes relevant products.
5. **Product summary generation:** Concise summaries are created for the top recommended products, highlighting key features and benefits.
6. **User interaction:** The chatbot presents the user with product summaries and might offer additional options for filtering or refinement.
7. **Optional affiliate link integration:** If the user expresses interest in a product and consents

to affiliate links (following Amazon's guidelines), a masked affiliate link can be provided, directing them to Amazon for purchase (potential revenue generation).

Benefits:

- **Enhanced User Experience:** Offers a user-friendly and conversational way to discover products on Amazon.
- **Personalized Recommendations:** Tailors suggestions to user needs, providing a more relevant experience.
- **Streamlined Product Discovery:** NLP capabilities assist users in finding the right products efficiently.
- **Optional Revenue Generation (With User Consent and Adherence to Amazon's Guidelines):** Affiliate links can potentially generate revenue for the chatbot owner.

Ethical Considerations:

- **Transparency:** Users should be informed about the chatbot's affiliation with Amazon's Affiliate Program (if applicable).
- **User Privacy:** The chatbot's design should prioritize user privacy, ensuring that user data is collected and handled responsibly.
- **Compliance:** Strict adherence to Amazon's Affiliate Program guidelines is paramount throughout development and deployment.

By focusing on user experience, personalization, and ethical considerations, this proposed Telegram chatbot can become a valuable tool for product discovery on Amazon, potentially generating affiliate revenue (with user consent and following Amazon's regulations).

2.3 Literature Review

2.3.1 Literature Review: Chatbots for Product Discovery

While chatbots are a relatively new technology, their application in product discovery is gaining traction. Here's a review of relevant literature to understand the current landscape and potential areas of exploration for your Telegram chatbot project:

2.3.2 Personalization and User Experience:

- **"A Survey on Conversational Recommender Systems" (2020) by Ma et al.** emphasizes the importance of personalization in chatbots for product discovery. They explore how chatbots can leverage user preferences, purchase history, and conversational context to deliver relevant recommendations.
- **"Enhancing User Experience with Chatbots in E-commerce" (2019) by Chattarapathi et al.** highlights how chatbots can improve user experience by providing a more natural and interactive way to discover products compared to traditional search interfaces.

These studies suggest that your Telegram chatbot should prioritize understanding user needs and tailoring recommendations accordingly. This can be achieved through effective NLP techniques and potentially incorporating past interaction data (with user consent and privacy considerations).

2.3.3 Natural Language Processing (NLP) for Chatbots:

- **"Natural Language Processing Techniques for Chatbots in E-commerce" (2020) by Singh and Singh** explores how NLP empowers chatbots to comprehend user queries accurately. They discuss techniques like intent recognition and entity extraction, crucial for understanding user intent and product preferences.
- **"Building Chatbots with Natural Language Processing" (2018) by Jurčíček et al.** provides a practical guide to NLP implementation in chatbots. They delve into building dialogue systems and using NLP libraries, which can be valuable resources for developing your Telegram chatbot.

These studies highlight the importance of robust NLP capabilities for your chatbot. By effectively processing user queries, the chatbot can identify relevant products for recommendation. Explore NLP libraries and techniques suitable for your chosen development platform (e.g., Python libraries like

NLTK or spaCy).

2.3.4 Ethical Considerations and User Trust:

- **"The Ethics of Chatbots" (2018) by Whittaker et al.** discusses ethical considerations surrounding chatbots, including transparency, user privacy, and data security. They emphasize the importance of disclosing the chatbot's purpose and limitations to users.
- **"Building Trust with Chatbots" (2019) by Liu et al.** explores how chatbots can build trust with users through transparency, clear communication, and avoiding deceptive practices.

These studies underscore the importance of ethical considerations in your Telegram chatbot design. Be transparent about the chatbot's affiliation with Amazon's Affiliate Program (if applicable) and prioritize user privacy. Ensure user data is collected and handled responsibly, adhering to data protection regulations.

2.3.5 Integration with Existing E-commerce Platforms:

- **"A Literature Review on Chatbots for E-commerce Applications" (2019) by Pranata et al.** discusses how chatbots can integrate with existing e-commerce platforms like Amazon. They explore the potential for chatbots to leverage product APIs and user data (with consent) to personalize recommendations.

This study aligns with your Telegram chatbot's purpose. Explore the feasibility of integrating with Amazon's Product Advertising API (if following their guidelines) to access product information and potentially personalize recommendations based on user purchase history (with user consent and privacy considerations).

2.3.6 The Landscape of Chatbot Development:

- **"A Survey on the State-of-the-Art of Chatbots" (2020) by Vougiakou et al.** provides a comprehensive overview of chatbot development, including various chatbot architectures, NLP techniques, and evaluation methods.

This study offers a broader context for chatbot development. As you move beyond the literature review stage, consider exploring different chatbot architectures (e.g., rule-based vs. machine learning) and how they might suit your Telegram chatbot's functionalities.

By understanding these key areas from existing research, you can develop a Telegram chatbot that effectively addresses user needs for personalized product discovery on Amazon, while prioritizing user experience, ethical considerations, and potential revenue generation through affiliate links (following Amazon's guidelines).

Additional Considerations:

3. Explore research on the specific application of chatbots in the Telegram platform, if available.
4. Consider user behavior studies related to product discovery on Amazon to tailor your chatbot's approach.
5. Stay updated on the latest advancements in NLP and chatbot development to continuously enhance your chatbot's capabilities.

5.1. Advantages and Disadvantages

Advantages of Your Telegram Chatbot for Amazon Product Discovery (Affiliate Option)

- **Enhanced User Experience:** Offers a user-friendly and conversational way to discover products, mimicking real-life interactions and simplifying the search process compared to traditional keyword-based searches.
- **Personalized Recommendations:** Leverages NLP to understand user needs and tailor product suggestions, potentially incorporating past interactions (with user consent) for a more relevant experience.
- **Streamlined Product Discovery:** NLP capabilities assist users in finding the right products efficiently by understanding their intent and filtering vast product catalogs.
- **Informative Summaries:** Provides concise and user-friendly summaries of recommended

products, highlighting key features and benefits without overwhelming users with lengthy descriptions.

- **Optional Revenue Generation (With User Consent and Adherence to Amazon's Guidelines):** Affiliate links, if implemented following Amazon's regulations, can potentially generate revenue for the chatbot owner when users make purchases through the links.

Disadvantages of Your Telegram Chatbot for Amazon Product Discovery (Affiliate Option)

- **Limited Scope:** Focuses on Amazon products, potentially restricting user options compared to searching across multiple retailers.
- **Reliance on NLP Accuracy:** Effectiveness hinges on the accuracy of NLP techniques in understanding user queries and intent. Misinterpretations could lead to irrelevant recommendations.
- **Privacy Concerns:** Data collection practices need to be transparent and user privacy must be prioritized. Users might be wary of sharing information with a chatbot.
- **Potential Bias (Mitigated with Careful Design):** Recommendation algorithms, even with strong NLP, can inherit biases from training data. Careful design and consideration of fairness in the recommendation process are crucial.
- **Affiliate Link Transparency:** Users should be clearly informed about affiliate links and their purpose (potential revenue generation) to maintain trust.

Overall, the advantages outweigh the disadvantages for users seeking a convenient and personalized product discovery experience on Amazon. However, addressing the potential drawbacks through transparent design, ethical data practices, and ongoing NLP improvement can ensure a trustworthy and valuable user experience.

5.2. Problem Definition

Refined Problem Definition: Difficulty Finding the Right Products on Amazon Due to Information Overload and Lack of Personalization

Current Situation:

- **Amazon's vast product catalog**: Users are overwhelmed by the sheer number of products, making it difficult to find specific items. Keyword-based searches often yield irrelevant results.
- **Limited personalization**: Standard search results prioritize keyword matches, not user preferences or buying habits. This leads to generic recommendations that may not align with user needs.
- **Inaccessible product information**: Lengthy and technical product descriptions make it challenging for users to grasp key features and benefits quickly.

Consequences:

- **Inefficient Shopping Experiences**: Users waste time sifting through irrelevant products, leading to purchase delays or missed opportunities. Frustration with searching can lead to abandoning purchases altogether.
- **Unsatisfactory Purchases**: Choosing the wrong product due to inadequate information can result in buyer's remorse and potential returns. This can negatively impact user satisfaction with Amazon.
- **Low User Engagement**: A frustrating search experience discourages users from returning to Amazon or exploring its full product range. This limits potential sales for Amazon and reduces user engagement with the platform.

Problem Statement:

There's a significant gap between users' desire to find the right products on Amazon and their ability to do so efficiently. This gap exists due to information overload, lack of personalization in search

results, and unclear product information. These factors combine to create a frustrating shopping experience that hinders user satisfaction and reduces potential sales for Amazon.

This problem definition emphasizes the negative impact on both users and Amazon, providing a stronger justification for your Telegram chatbot solution.

CHAPTER 3

DESIGN FLOW/PROCESS

3.1 Concept Generation

Concept Generation: Telegram Chatbot for Personalized Amazon Product Discovery (Affiliate Option)

Here are some concept ideas to enhance your Telegram chatbot for personalized product discovery on Amazon, with the potential for affiliate revenue generation (adhering to Amazon's Affiliate Program guidelines):

3.1.a: Personalized Shopping Assistant

- **Core Function:** The chatbot acts as a virtual shopping assistant, guiding users through the product discovery process on Amazon.
- **User Interaction:** Users initiate a conversation by specifying their desired product category or a general need (e.g., "I'm looking for a new running shoe").
- **NLP and Recommendation:** The chatbot leverages NLP to understand user preferences (budget, brand interests, desired features) and recommends relevant products using Amazon's search engine (or potentially their Product Advertising API if following guidelines).
- **Dynamic Filtering:** The chatbot offers options to filter recommendations based on user feedback (e.g., price range, color preferences).
- **Informative Summaries:** Concise summaries highlight key features and benefits, allowing

users to make informed decisions quickly.

- **Optional Affiliate Integration (Following Amazon's Guidelines):** With user consent, masked affiliate links can be seamlessly integrated, directing users to Amazon for purchase (potential revenue generation).

3.1.b : Conversational Product Guru

- **Core Function:** The chatbot acts as a conversational product guru, engaging users in a dialogue to understand their specific needs.
- **User Interaction:** Users describe the product they're looking for in natural language, potentially mentioning desired features or functionalities.
- **NLP and Knowledge Base:** The chatbot utilizes NLP to comprehend user intent and consults a curated knowledge base containing information about popular Amazon products.
- **Comparative Analysis:** If relevant, the chatbot can provide a comparative analysis of different product options based on user-specified criteria.
- **Recommendation with Explanation:** The chatbot recommends the most suitable product, explaining why it aligns with the user's needs based on the knowledge base.
- **Optional Affiliate Integration (Following Amazon's Guidelines):** With user consent, masked affiliate links can be provided for the recommended product (potential revenue generation).

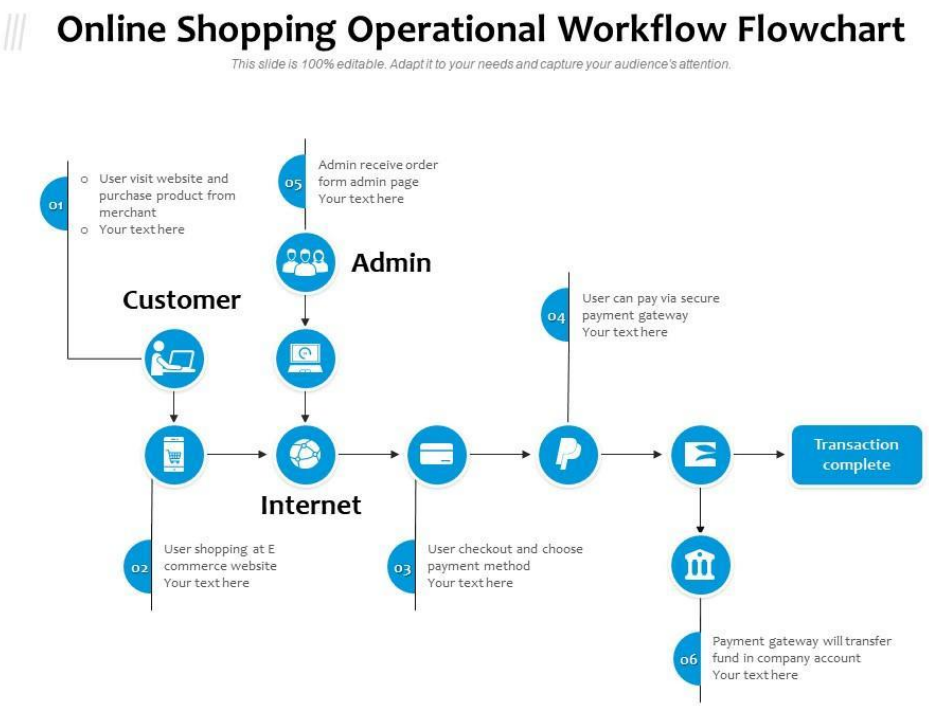


Fig3.1 shopping operational workflow chart

3.1.c: Gamified Shopping Experience

- **Core Function:** The chatbot gamifies the product discovery process, making it interactive and engaging for users.
- **User Interaction:** Users participate in a quiz-like format, answering questions about their preferences and desired product features.
- **Adaptive Recommendations:** Based on user responses, the chatbot tailors product recommendations and adjusts the difficulty of subsequent questions.
- **Points and Rewards (Optional):** The chatbot can integrate a points system where users earn points for completing the "shopping quest." These points could unlock additional features or exclusive product recommendations.
- **Affiliate Link Integration (Following Amazon's Guidelines):** After product recommendations, users can be directed to Amazon through affiliate links (with consent, for potential revenue generation).

These concepts offer a range of approaches to user interaction, catering to different preferences. They all emphasize personalization, informative product summaries, and optional affiliate link integration (adhering to Amazon's regulations).

By considering these concepts and conducting user research, you can refine your Telegram chatbot to create a truly engaging and valuable product discovery experience for users on Amazon.

3.2 Concept Evaluation & Selection of Features

Concept Evaluation & Feature Selection

Here's an analysis of the three Telegram chatbot concepts you generated, along with considerations for feature selection:

Concept 1: Personalized Shopping Assistant

Pros:

- User-friendly and familiar approach for online shopping.
- Flexible filtering allows for precise product selection.
- Straightforward integration with Amazon's search engine.

Cons:

- May lack the engaging factor compared to the other concepts.
- Relies heavily on user input for defining preferences.

Suitable Features:

- Strong NLP capabilities for accurate user query comprehension.
- Integration with Amazon's search engine (or Product Advertising API if following guidelines) for product discovery.
- Dynamic filtering options based on price, brand, features, etc.

- Concise and informative product summaries.
- Optional masked affiliate link integration (with user consent and adherence to Amazon's regulations).

Concept 2: Conversational Product Guru

Pros:

- More engaging and interactive experience compared to Concept 1.
- Potential for in-depth product knowledge and analysis.
- Can provide comparative analysis of different options.

Cons:

- Requires a vast and well-curated knowledge base of Amazon products.
- Might be more complex to develop and maintain the knowledge base.

Suitable Features:

- Advanced NLP for understanding user intent beyond keywords.
- Curated knowledge base of popular Amazon products with detailed information.
- Ability to compare product features based on user-specified criteria.
- Feature explanation capabilities to justify recommendations.
- Optional masked affiliate link integration (with user consent and adherence to Amazon’s regulations).

Concept 3: Gamified Shopping Experience

Pros:

- Highly engaging and potentially fun for users.
- Adaptive recommendations based on user responses.
- Gamification elements can motivate users to explore further.

Cons:

- Development complexity might be higher due to the gamification aspect.
- May not be suitable for all users who prefer a more straightforward approach.

Suitable Features:

- NLP for understanding user responses within the quiz format.
- Adaptive recommendation engine that adjusts based on user choices.
- Gamification elements like points, badges, or leaderboards (optional).
- Clear explanation of how the game progresses and unlocks features.
- Optional masked affiliate link integration (with user consent and adherence to Amazon's regulations).

Feature Selection: Based on the concept evaluation, consider the following features for your Telegram chatbot:

- **Core Features (Essential for all concepts):**
    - Strong NLP capabilities for understanding user queries and intent.
    - Integration with Amazon's search engine (or Product Advertising API if following guidelines) for product discovery.
    - Concise and informative product summaries.
    - Optional masked affiliate link integration (with user consent and adherence to Amazon's regulations).
- **Additional Features (Choose based on your chosen concept):**
    - **Concept 1:** Dynamic filtering options (price, brand, features).
    - **Concept 2:** Curated knowledge base of popular Amazon products with detailed information. Functionality for comparative analysis of products.
    - **Concept 3:** Gamification elements like points, badges, or leaderboards (optional). Adaptive recommendation engine that adjusts based on user choices.

Ultimately, the best concept and feature selection depend on your target audience and development resources. Consider conducting user research to gauge preferences for a user-friendly, in-depth analysis, or a gamified experience.

1. Design Constraints

Design Constraints for Your Telegram Chatbot (Amazon Affiliate)

Here's a breakdown of the key constraints to consider when designing your Telegram chatbot for personalized product discovery on Amazon, with potential affiliate revenue generation (adhering to Amazon's Affiliate Program guidelines):

Technical Constraints:

- **Telegram Bot API limitations:** Understand the functionalities and limitations of Telegram's Bot API to ensure your chatbot operates within its framework.
- **Natural Language Processing (NLP) capabilities:** Consider the level of NLP complexity achievable with your chosen development tools and resources. More advanced features might require robust libraries and processing power.
- **Integration with Amazon:** If using Amazon's Product Advertising API (if following guidelines), adhere to their API limitations and usage quotas. Explore alternative data sources if needed.

User Experience (UX) Constraints:

- **Readability and Clarity:** Design the chatbot's responses to be clear, concise, and easy to understand for users on a mobile interface.
- **Conversational Flow:** Structure the conversation flow to be intuitive and engaging, avoiding overwhelming users with too many options at once.
- **Accessibility:** Consider accessibility features for users with visual impairments or other needs.

Amazon Affiliate Program Guidelines:

- **Transparency:** Be transparent about the chatbot's affiliation with Amazon's Affiliate Program (if applicable) and how affiliate links are used.
- **User Consent:** Obtain explicit user consent before integrating affiliate links.
- **Link Presentation:** Ensure affiliate links are masked and clearly distinguishable from regular product links.
- **Data Practices:** Adhere to Amazon's regulations regarding data collection and user privacy.

Additional Constraints:

- **Development Resources:** Consider your development expertise, available time, and budget when choosing features and functionalities.
- **Target Audience:** Tailor the chatbot's design and language to resonate with your target user base.

By acknowledging these constraints, you can design a Telegram chatbot that is technically feasible, user-friendly, and compliant with Amazon's regulations.

Here are some tips for mitigating these constraints:

- **Start with a Minimum Viable Product (MVP):** Develop a core version of the chatbot with essential features and gradually add functionalities based on user feedback and resource availability.
- **Leverage Open-Source Libraries:** Utilize existing NLP libraries and tools to streamline development within your chosen programming language.
- **Prioritize User Testing:** Conduct user testing throughout the development process to identify usability issues and ensure a smooth user experience.

By following these suggestions, you can navigate the design constraints and create a valuable product discovery tool for your target audience.

4. Requirement Analysis.

Requirement Analysis for Telegram Chatbot (Amazon Affiliate)

This requirement analysis outlines the functional and non-functional requirements for your Telegram chatbot designed to facilitate personalized product discovery on Amazon, with the potential for affiliate revenue generation (adhering to Amazon's Affiliate Program guidelines).

Functional Requirements:

- **User Interface:**
    - Users can interact with the chatbot through text messages within the Telegram app.
    - The chatbot should provide clear instructions and prompts to guide users through the product discovery process.
- **Natural Language Processing (NLP):**
    - The chatbot should understand user queries and intent related to product discovery on Amazon. This includes identifying keywords, desired features, and potential budget constraints.
- **Product Search & Recommendation:**
    - The chatbot should leverage APIs (Telegram Bot API and potentially Amazon's Product Advertising API if following guidelines) to search for relevant products on Amazon based on user input and NLP analysis.
    - The chatbot should prioritize product recommendations based on factors like user query, product relevance, ratings, and potentially past interactions (with user consent and privacy considerations).
- **Product Summaries:**
    - The chatbot should generate concise and informative summaries of the recommended products, highlighting key features and benefits.
- **Optional Affiliate Link Integration (Following Amazon's Guidelines):**
    - With user consent, the chatbot should seamlessly integrate masked affiliate links into

product recommendations. Clicking these links should direct users to Amazon for purchase (potential revenue generation).

Non-Functional Requirements:

- **Performance:**
    - The chatbot should respond to user queries promptly within a reasonable timeframe.
    - The chatbot should operate efficiently without overloading Telegram's servers.
- **Scalability:**
    - The chatbot should be designed to handle an increasing number of users as the project grows.
- **Security:**
    - The chatbot should handle user data securely, adhering to data privacy regulations.
- **Usability:**
    - The chatbot interface should be user-friendly and intuitive for users with varying levels of technical experience. The conversation flow should be clear and easy to follow.
- **Accessibility:**
    - The chatbot should be accessible to users with disabilities, considering features like screen readers or text magnification.
- **Transparency:**
    - The chatbot should be transparent about its purpose, its affiliation with Amazon's Affiliate Program (if applicable), and how it uses user data.

Additional Considerations:

- **Error Handling:** The chatbot should gracefully handle user input errors or situations where no relevant product recommendations are found.
- **Multilingual Support (Optional):** Consider future expansion by incorporating multilingual capabilities if your target audience extends beyond English speakers.

This requirement analysis provides a comprehensive overview of the essential functionalities and qualities your Telegram chatbot should possess. By prioritizing these requirements throughout the development process, you can ensure your chatbot delivers a valuable and user-friendly product discovery experience for your target audience.

5. Functional Requirements & Non-Functional Requirements

Functional Requirements (FRs) define what the chatbot must do to achieve its core purpose:

- **User Interface:** Allow users to interact through text messages within Telegram. Provide clear instructions and prompts.
- **Natural Language Processing (NLP):** Understand user queries and intent related to product discovery on Amazon (keywords, desired features, budget).
- **Product Search & Recommendation:** Search for relevant products on Amazon using APIs (Telegram Bot API, potentially Amazon's Product Advertising API if following guidelines). Prioritize recommendations based on user input, NLP analysis, product relevance, ratings, and potentially past interactions (with user consent and privacy considerations).
- **Product Summaries:** Generate concise and informative summaries highlighting key features and benefits of recommended products.
- **Optional Affiliate Link Integration (Following Amazon's Guidelines):** With user consent, seamlessly integrate masked affiliate links into product recommendations for potential revenue generation (clicking redirects users to Amazon).

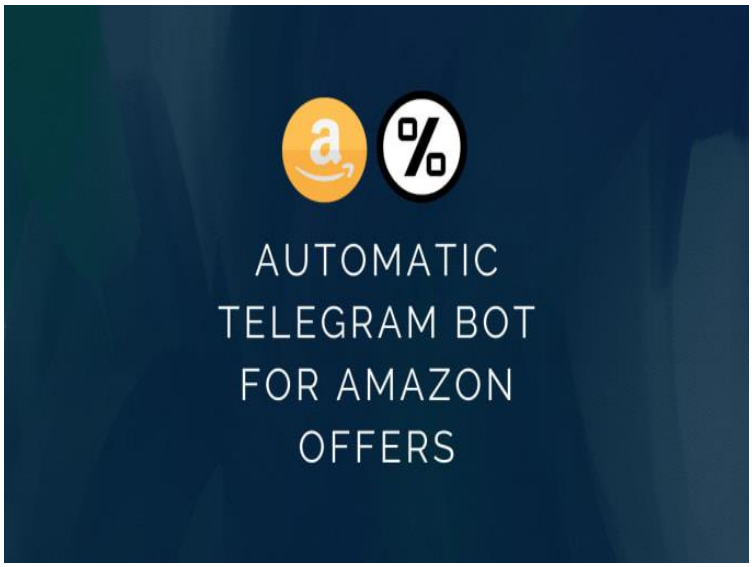


Fig: 2.1 Automatic Telegrambot for amazon offers

Non-Functional Requirements (NFRs) define the overall qualities and characteristics of the chatbot:

- **Performance:** Respond to user queries promptly and operate efficiently without overloading Telegram's servers.
- **Scalability:** Designed to handle increasing user numbers as the project grows.
- **Security:** Securely handle user data following data privacy regulations.
- **Usability:** User-friendly interface with intuitive conversation flow, suitable for varying technical experience levels.
- **Accessibility:** Accessible to users with disabilities (e.g., screen readers, text magnification).
- **Transparency:** Be transparent about purpose, affiliation with Amazon's Affiliate Program (if applicable), and data usage.

Additional Considerations:

- **Error Handling:** Gracefully handle user input errors or situations with no relevant product recommendations.
- **Multilingual Support (Optional):** Consider incorporating multiple languages for a wider audience in the future.

This breakdown clarifies the distinction between what the chatbot needs to do (FRs) and how it should perform those actions (NFRs). By understanding both types of requirements, you can create a well-rounded and effective Telegram chatbot for product discovery on Amazon.

CHAPTER 4

RESULTS ANALYSIS AND VALIDATION

4.1 Implementation of design

Here's a possible implementation plan for your Telegram chatbot for personalized product discovery on Amazon (with optional affiliate revenue generation adhering to Amazon's Affiliate Program guidelines):

4.1.1 Development Environment Setup:

- Choose a programming language suitable for chatbot development (e.g., Python).
- Select libraries for NLP (e.g., NLTK, spaCy) and API integrations (Telegram Bot API, potentially Amazon's Product Advertising API if following guidelines).
- Set up a development environment on your computer with the necessary tools and libraries installed.

4.1.2. Core Functionalities:

- **User Interface:** Develop the Telegram bot using Telegram's Bot API to enable text-based interaction within the Telegram app. Design clear prompts and messages to guide users through the product discovery process.
- **Natural Language Processing (NLP):** Integrate chosen NLP libraries to process user queries. Focus on tasks like intent recognition (understanding what the user wants) and entity extraction (identifying keywords like product category, desired features, or budget).
- **Product Search & Recommendation:** Utilize Telegram's Bot API to interact with Telegram servers. If following Amazon's guidelines, explore integrating Amazon's Product Advertising API to search for relevant products based on user input and NLP analysis. Develop a

recommendation engine that prioritizes results based on relevance, ratings, and potentially past interactions (with user consent and privacy considerations).

4.1.3. Information Display and User Interaction:

- **Product Summaries:** Design a system to generate concise and informative summaries of the recommended products. Highlight key features and benefits extracted from product descriptions or user reviews.
- **Conversation Flow:** Structure the conversation flow to be intuitive and engaging. Provide users with options to refine their search (e.g., filter by brand, price range) or ask clarifying questions.

4.1.4. Optional Affiliate Integration (Following Amazon's Guidelines):

- Implement a system to integrate masked affiliate links with user consent. When a user expresses interest in a product, provide an option to view it on Amazon through your affiliate link (potential revenue generation). Ensure transparency about affiliate links and compliance with Amazon's regulations.

4.1.5. Testing and Deployment:

- Conduct thorough testing to ensure the chatbot functions as intended. This includes NLP accuracy, product search functionality, and overall conversation flow.
- Deploy the chatbot on Telegram following their guidelines. Consider a limited rollout initially to gather user feedback and make adjustments before wider deployment.

Additional Considerations:

- **Error Handling:** Implement mechanisms to gracefully handle user input errors or situations where no relevant product recommendations are found. Provide informative messages to users in such cases.
- **Data Storage and Security (if applicable):** If storing user data for past interaction analysis (with consent), prioritize secure storage practices adhering to data privacy regulations.

- **Scalability:** Design the system to handle increasing user traffic as the chatbot gains popularity. Consider cloud-based solutions for scalability if needed.

Remember:

- Throughout development, prioritize user privacy and adhere to Amazon's Affiliate Program guidelines (if applicable).
- Continuously monitor user feedback and iterate on the chatbot's functionalities to improve its effectiveness and user experience.

By following these steps and addressing the considerations, you can develop a functional and user-friendly Telegram chatbot that empowers users with a personalized product discovery experience on Amazon.

4.2 Design Goals

Based on the exploration so far, here are the key design goals for your Telegram chatbot focused on personalized product discovery on Amazon (with optional affiliate revenue generation adhering to Amazon's Affiliate Program guidelines):

User-Centered Goals:

- **Enhance User Experience:** Provide a user-friendly and intuitive conversation interface for product discovery on Amazon, surpassing the limitations of traditional keyword-based searches.
- **Personalized Recommendations:** Leverage NLP to understand user needs and tailor product suggestions to their preferences, potentially incorporating past interactions (with user consent and privacy considerations).
- **Streamlined Discovery Process:** Assist users in efficiently finding the right products on Amazon by effectively filtering vast product catalogs through NLP capabilities.
- **Informative Product Summaries:** Offer concise summaries highlighting key features and

benefits of recommended products, saving users time spent sifting through lengthy descriptions.

System Goals:

- **Accurate NLP Processing:** Ensure the chatbot accurately understands user queries and intent through robust NLP techniques.
- **Effective Product Search & Recommendation:** Utilize APIs (Telegram Bot API and potentially Amazon's Product Advertising API if following guidelines) to deliver relevant product recommendations based on user input and NLP analysis.
- **Optional Transparent Affiliate Integration (Following Amazon's Guidelines):** With user consent, seamlessly integrate masked affiliate links into product recommendations, potentially generating revenue when users make purchases through those links.

Overall Goal:

- **Create a valuable tool for users seeking a personalized and efficient product discovery experience on Amazon, while adhering to ethical considerations and offering an optional path for affiliate revenue generation (following Amazon's regulations).**

These design goals prioritize user experience by offering a conversational, personalized, and streamlined approach to product discovery. They also set clear objectives for the system's functionalities, including NLP accuracy, product search effectiveness, and transparent affiliate link integration (if applicable). Remember to continuously evaluate these goals as you develop and refine your Telegram chatbot.

CONCLUSION AND FUTURE WORK

1. Conclusion

Conclusion: A Personalized Product Discovery Journey on Telegram

Through this exploration, we've established a roadmap for developing your Telegram chatbot, empowering users with a personalized product discovery experience on Amazon.

- **Problem Addressed:** The difficulty users face in finding the right products on Amazon due to information overload and lack of personalization.

- **Solution Proposed:** A Telegram chatbot that leverages NLP to understand user needs and recommend relevant products through a conversational interface. Optionally, affiliate links can be integrated with user consent to potentially generate revenue while adhering to Amazon's regulations.

- **Key Considerations:**

    - **User Experience:** Prioritize a user-friendly and intuitive conversation flow with clear instructions and informative product summaries.
    - **NLP Accuracy:** Ensure the chatbot accurately understands user queries and intent through effective NLP techniques.
    - **Personalization:** Tailor product recommendations to user preferences using NLP analysis and potentially past interactions (with user consent and privacy

considerations).

- **Transparency:** Be transparent about the chatbot's purpose, its affiliation with Amazon's Affiliate Program (if applicable), and how it uses user data.
- **Ethical Considerations:** Adhere to data privacy regulations and prioritize user trust.

- **Next Steps:**

  - Choose development tools and libraries based on your programming language preference.
  - Design the conversation flow and user interface for a smooth interaction within Telegram.
  - Implement core functionalities like NLP processing, product search using APIs, and informative product summaries.
  - Integrate optional affiliate links with user consent and ensure compliance with Amazon's guidelines (if applicable).
  - Conduct thorough testing and iterate based on user feedback to continuously improve the chatbot's effectiveness.

By following these steps and keeping the design goals in mind, you can create a valuable tool that enhances user experience on Amazon while offering a personalized and efficient product discovery journey. Remember, the success of your chatbot hinges on its ability to understand user needs, deliver accurate recommendations, and prioritize user privacy.

2. Future work

Future Work for Your Telegram Chatbot for Product Discovery

Here are some exciting possibilities to explore for future development of your Telegram chatbot for personalized product discovery on Amazon:

Enhanced Personalization:

- **Incorporate User Reviews:** Analyze user reviews on Amazon to identify common likes and dislikes for recommended products, potentially influencing future recommendations.
- **Integrate Recommendation Systems:** Explore advanced recommendation systems that consider a wider range of factors like user demographics, purchase history, and browsing behavior (with user consent) to provide even more tailored suggestions.
- **Collaborative Filtering:** Implement collaborative filtering techniques where the chatbot recommends products based on what similar users have purchased (with user consent and anonymized data).

Advanced Features:

- **Multilingual Support:** Expand the chatbot's capabilities to support multiple languages, reaching a wider user base across the globe.
- **Voice Assistant Integration:** Integrate the chatbot with voice assistant platforms like Google Assistant or Amazon Alexa to enable voice-based product discovery.
- **Visual Product Exploration:** Consider incorporating visual elements like carousels or image search functionalities to enhance user engagement.

Further Exploration:

- **Sentiment Analysis:** Explore integrating sentiment analysis to understand user sentiment during conversations. This can help identify user satisfaction with recommendations and areas for improvement.
- **Explainable AI:** Implement functionalities where the chatbot explains the reasoning behind its product recommendations, fostering user trust and transparency.
- **Proactive Product Suggestions:** Explore using the chatbot to proactively suggest products to users based on their browsing behavior or upcoming events (with user consent and privacy

considerations).

Remember: As you implement these future advancements, prioritize ethical considerations, user privacy, and responsible data collection practices.

By continuously innovating and incorporating these potential features, you can transform your Telegram chatbot into a leading platform for personalized user-centric product discovery on Amazon.

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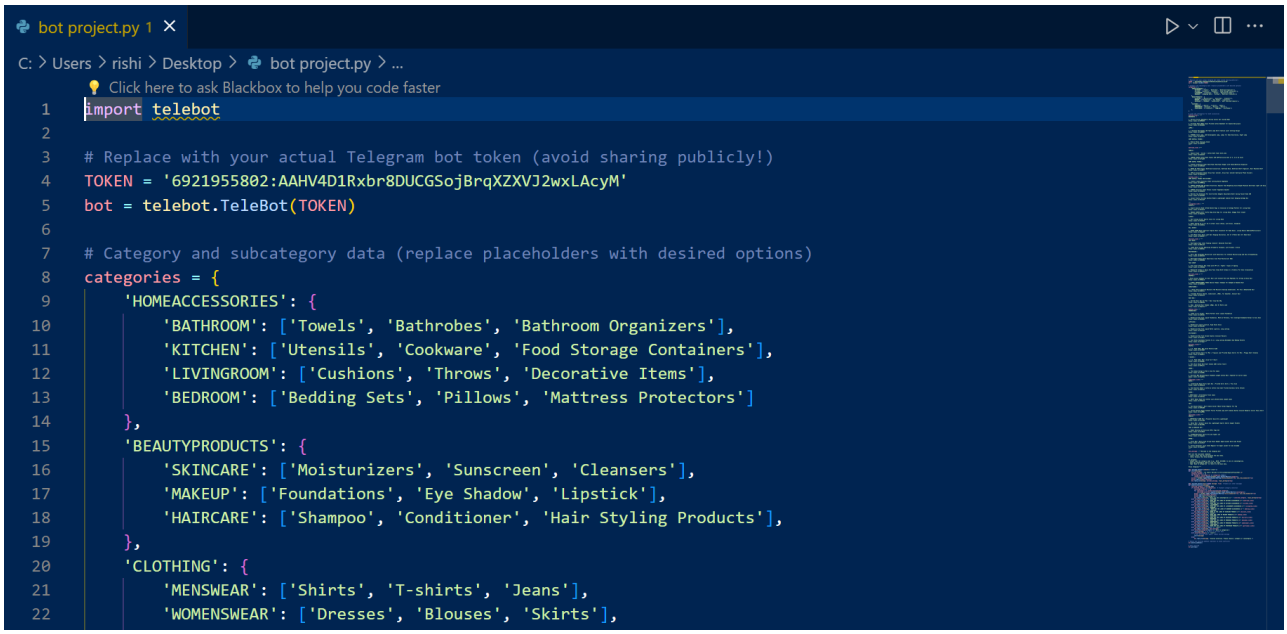
APPENDIX

1. Figures



```
bot project.py 1
C: > Users > rishi > Desktop > bot project.py > ...
Click here to ask Blackbox to help you code faster
import telebot

# Replace with your actual Telegram bot token (avoid sharing publicly!)
TOKEN = '6921955802:AAHV4D1Rxbr8DUCGSojBrqXZXVJ2wxLAcyM'
bot = telebot.TeleBot(TOKEN)

# Category and subcategory data (replace placeholders with desired options)
categories = {
    'HOMEACCESSORIES': {
        'BATHROOM': ['Towels', 'Bathrobes', 'Bathroom Organizers'],
        'KITCHEN': ['Utensils', 'Cookware', 'Food Storage Containers'],
        'LIVINGROOM': ['Cushions', 'Throws', 'Decorative Items'],
        'BEDROOM': ['Bedding Sets', 'Pillows', 'Mattress Protectors']
    },
    'BEAUTYPRODUCTS': {
        'SKINCARE': ['Moisturizers', 'Sunscreen', 'Cleansers'],
        'MAKEUP': ['Foundations', 'Eye Shadow', 'Lipstick'],
        'HAIRCARE': ['Shampoo', 'Conditioner', 'Hair Styling Products'],
    },
    'CLOTHING': {
        'MENSWEAR': ['Shirts', 'T-shirts', 'Jeans'],
        'WOMENSWEAR': ['Dresses', 'Blouses', 'Skirts'],
```

```
# Links and information for bath accessories
bedroom_links = """
BEDSHEETS :-

1. Percale Floral Bedsheet & Pillow Covers Set (Clared Red)
https://amzn.to/3W9WzKO

2. Krishnam Home 300TC Glace Printed Cotton Bedsheet for Double Bed purple
https://amzn.to/3W2DD0A

LAMPS:-

1. G Gojeeva New Wooden LED Table Lamp With Creative Laser Cutting Design
https://amzn.to/4a0Nt6F

2. NYRWANA Table Lamp, LED Rechargeable Lamp, Lamps for Home Decoration, Night Lamp
https://amzn.to/3W7hJt3

SOME USEFULL THINGS:-

1. Mobile Phone Charging Stand
https://amzn.to/3w0iBF9
"""
```

1. Program Code :

```
import telebot

# Replace with your actual Telegram bot token (avoid sharing
publicly!)
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        'BEDROOM': ['Bedding Sets', 'Pillows', 'Mattress Protectors']
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        'MAKEUP': ['Foundations', 'Eye Shadow', 'Lipstick'],
        'HAIRCARE': ['Shampoo', 'Conditioner', 'Hair Styling
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    },
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        'WOMENSWEAR': ['Dresses', 'Blouses', 'Skirts'],
        'SPORTSWEAR': ['Tracksuits', 'Leggings', 'Activewear']
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```

```
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https://amzn.to/4a0Nt6F

2. NYRWANA Table Lamp, LED Rechargeable Lamp, Lamps for Home
Decoration, Night Lamp
https://amzn.to/3W7hJt3

SOME USEFULL THINGS:-

1. Mobile Phone Charging Stand
https://amzn.to/3w0iBF9
"""

bathroom_links ="""

TOWELS:-

1. Amazon Brand - Solimo - Cotton Bath Towel dark grey
https://amzn.to/3wb16C5

2. COMFORT WEAVE Cotton Bath Towels 250 GSM Multicolor(Set of 5, 31 X
62 Inch)
https://amzn.to/3w7wpO8

SOME USEFUL THINGS:-

1. Plantex Aluminium Towel Rack/Towel Rod/Towel Hanger with
Hooks/Bathroom Organizer
https://amzn.to/4aHXcQ6

2. HOUSE OF VIPA Plastic Bathroom Accessories, Bathroom Rack,
Bathroom Shelf Organizer, Wall Mounted Shelf
```

```
https://amzn.to/3Jy807r

3. 20Pack Disposable Shower Drain Hair Catcher, Drain Hair Catcher
Waterproof Mesh Stickers
https://amzn.to/3U9wIA0"""

kitchen_links = """
SOME USEFULL THINGS FOR KITCHEN:-

1. Clazkit Large Stainless Steel Cutting Board Vegetable
https://amzn.to/49MMXJg

2. FEMINA FASHION HUB Portable Electronic Digital Food Weighting
Scale Weight Machine With Back light LCD Display
https://amzn.to/49T5t2M

3. GANESH Stainless Steel Potato Crusher Vegetable Smasher
https://amzn.to/4aXQCVm

4. Maloren Tap Extension For Sink Kitchen Gadgets Adjustable Water
Saving Faucet Home 360
https://amzn.to/4b4eEOA

5. wolpin Plastic Kitchen Dustbin Modern Lightweight Cabinet Door
Hanging Garbage Bin
https://amzn.to/49Jz4eP

"""
livingroom_links = """
CARPETS:-

1. Export Quality Hand Tufted Woolen Rugs in Classical & Vintage
Pattern for Living Room
https://amzn.to/3UnwXsG

3. MUEZZA CARPETS_Soft Fluffy Shag Area Rugs for Living Room, Shaggy
Floor Carpet
https://amzn.to/3Upqf5p

CLOCKS:-

1. Non Ticking Silent Quartz Clock for Living Room
```

```
https://amzn.to/44eWlUU

2. Kadio Analog 24.5 cm X 24.5 cm Wall Clock (Brown, with Glass,
Standard)
https://amzn.to/3xO8R1y

WALL DECOR:-

1. RIZIK STORE Metal Abstract Figures Wall Sculpture For Home Decor,
Living Room & Bedroom(Multicolour)
https://amzn.to/3Upqj59

2. Gold Metal Wall Decor Leaf Wall Hanging Decoration, Set of 3 Metal
Wall Art Home Decor
https://amzn.to/4b0GJ9r"""

skincare_links = """
FACE WASH:-

1. Neutrogena Deep Clean Foaming Cleanser- Advanced Face Wash
https://amzn.to/3W4Lj2k

2. Lakme Blush & Glow Hydrating Strawberry Facewash, with Vitamin C
Serum
https://amzn.to/3W89Jbs

MOISTURIZER:-

1. Dot & Key Ceramides Moisturizer with Hyaluronic for Intense
Moisturizing and Skin Strengthening
https://amzn.to/3U4VLV6

2. Neutrogena Hydro Boost Hyaluronic Acid Face Moisturizer 50ml
https://amzn.to/3W89QUq

FACE CREAM

1. Olay Total Effects Day Cream with SPF 15 | Fights 7 Signs of
Ageing
https://amzn.to/3vR5d6p
```

```
2. Mamaearth Vitamin C Daily Glow Face Cream With Vitamin C &
Turmeric For Skin Illumination
https://amzn.to/3Q9SS42"""

haircare_links = """
SHAMPOO:-

1.Plum Coconut Shampoo for Dull Hair with Coconut Milk and Peptides
for Strong & Shiny Hair
https://amzn.to/49EUwl6

2.L'OREAL PROFESSIONNEL PARIS Absolut Repair Shampoo For Damaged &
Weakend Hair
https://amzn.to/4b6PgId

CONDITIONER:-

1. L'Oreal Paris Hyaluron Moisture 72H Moisture Sealing Conditioner,
For Dry & Dehydrated Hair
https://amzn.to/49Gh7xz

2. Tresemme Keratin Smooth, Conditioner, 190ml, for Smoother, Shinier
Hair
https://amzn.to/4b3kzn3

HAIR WAX:-

1. Set Wet Hair Wax For Men - Hair Clay Wax 60g
https://amzn.to/4dgMzWq

2. Dapr. Advanced Hair Pomade (100g), Wet Or Matte Look
https://amzn.to/3UpuYnx"""

makeup_links= """
FOUNDATION:-

1. Lakme 9 to 5 Primer + Matte Perfect Cover Liquid Foundation
https://amzn.to/4aHIJUn

2. Maybelline New York Liquid Foundation, Matte & Poreless, Full
Coverage Blendable Normal to Oily Skin
https://amzn.to/3U5MoEs
```

```
LIPSTICKS:-

1. Maybelline Liquid Lipstick, High Shine Gloss
https://amzn.to/3JwLuMc

2. Maybelline New York Liquid Matte Lipstick, Long Lasting
https://amzn.to/446cb3Y

EYE MACKUP:-

1. Maybelline New York Volume Express Colossal Mascara
https://amzn.to/3Js8HiI

2. Just Herbs Eyeshadow Palette 9 in 1 Long Lasting Blendable Eye
Makeup Palette
https://amzn.to/3JtXgac"""

menswear_links="""
SHIRTS:-

1. U.S. POLO ASSN. Men Solid Pattern BLUE
https://amzn.to/44f99KP

2. Leriya Fashion Shirt for Men | Tropical Leaf Printed Rayon Shirts
for Men | Preppy Short Sleeves
https://amzn.to/3WpRNcv

T-SHIRTS:-

1. U.S. POLO ASSN. Men's Slim Fit T-Shirt
https://amzn.to/49EUHNi

2. Nora Nico Round Neck Half Sleeve 100% Cotton Tshirt
https://amzn.to/49Pu1tc

JEANS:-

1. The Indian Garage Co Men's Slim Fit Jeans
https://amzn.to/3vZ5KDi
```

```
2. Billford Men Relaxed Waist Standard Length Cotton Men's Tapered
Fit Carrot Jeans
https://amzn.to/3JpGXeu
"""
womenswear_links= """
KURTA:-

1. LetsDressUp Rayon Kurti Upto 8XL | Printed Kurti Kurti | Plus Size
https://amzn.to/4b4eoz6

2. Yash Gallery Women's Cotton & Cotton Slub Ikat Printed Anarkali
Kurta (Black)
https://amzn.to/4aGntyx

JEANS:-

1.INKD Women's Stretchable Flare Jeans
https://amzn.to/3xKxFau

2. KOTTY Women High Rise Cotton Lycra Blend Ankle Length Jeans
https://amzn.to/446ewvS

TOP:-

1. Van Heusen Women's Half Sleeve Solid V-Neck Formal Regular Fit Top
https://amzn.to/3U9xQDK

2. Leriya Fashion Rayon Vibrant Floral Printed Long Cuff Sleeves
Button Closure Mandarin Collar Fancy Shirt
https://amzn.to/3JpMKB1
"""
sportswear_links= """
SHORTS:-

1.COMFORTABLY DUMB Men's Polyester Quick Dry Lightweight
https://amzn.to/3Jo1iB8

2. CBlue Men's Outdoor Quick Dry Lightweight Sports Shorts Zipper
Pockets
https://amzn.to/3Qc4V0y

YOGA & EXERCISE SET:-
```

```
1. Women Running and Exercise GYM & Yoga Set
https://amzn.to/3JsN3ek

2. RiCREATION Women Sports Bra and Tights set
https://amzn.to/3Jqpanx

UPPER:-

1. Glito Men's White Side Stripe Black Bomber Upper/Jacket With Side
Pocket
https://amzn.to/3JnV6sV

2. forbro Polyester Lycra blend Regular Fit Upper Jacket for men
branded
https://amzn.to/3JqpfaP
"""

help_message = """Welcome to the shopping bot!

Here are the available commands:
- /start: Start the bot and display the main menu.
- /help: Display this help message.

To navigate:
- Simply type the category name (e.g., BATH, KITCHEN) to see its
subcategories.
- Type the subcategory name to view its items.
- Type 'Back to Categories' to return to the main menu.

Enjoy shopping!"""

@bot.message_handler(commands=['/start'])
def start(message):
    welcome_message = "Hi there! Welcome to
AffiliateAutomationProjectBot.\n"
    category_buttons = []
    for category, subcategories in categories.items():

category_buttons.append(telebot.types.KeyboardButton(category))
    markup = telebot.types.ReplyKeyboardMarkup(resize_keyboard=True,
one_time_keyboard=True)
```

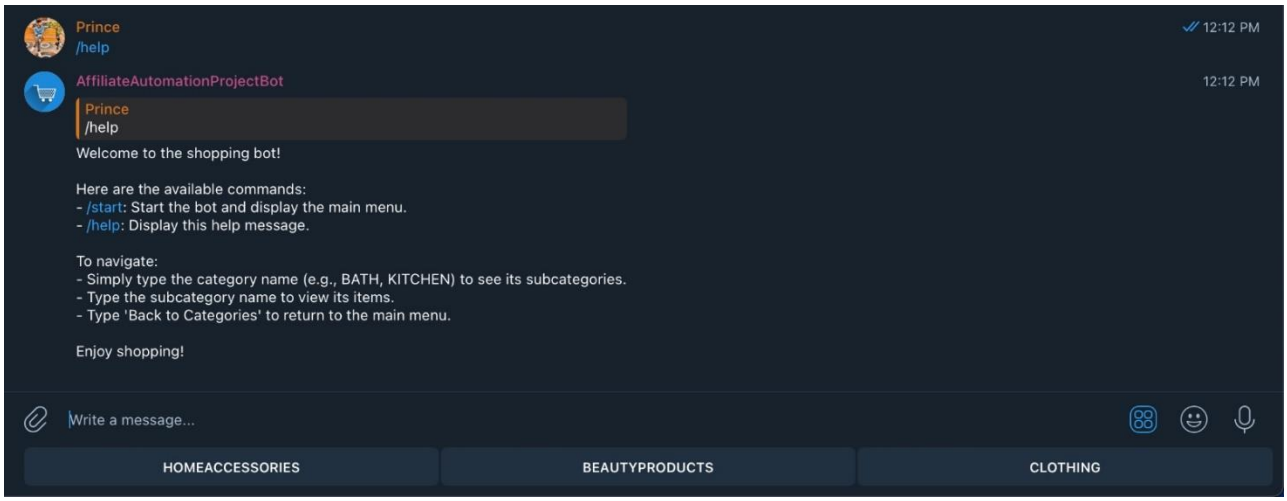
```
    markup.add(*category_buttons)
    bot.reply_to(message, welcome_message, reply_markup=markup)

@bot.message_handler(func=lambda message: True)  # Handle all other
messages
def handle_selection(message):
    selected_category = message.text
    if selected_category in categories:  # Standard category
selection
        subcategory_buttons = []
        for subcategory in categories[selected_category]:

subcategory_buttons.append(telebot.types.KeyboardButton(subcategory))
        markup =
telebot.types.ReplyKeyboardMarkup(resize_keyboard=True,
one_time_keyboard=True)
        markup.add(*subcategory_buttons)
        markup.add("Back to Categories")
        bot.reply_to(message, "Here are the subcategories in " +
selected_category, reply_markup=markup)
    elif selected_category == 'BATHROOM':
        bot.reply_to(message, "HERE ARE THE LINKS OF BATHING
ACCESSORIES:\n"+ bathroom_links)
    elif selected_category == 'KITCHEN':
        bot.reply_to(message, "HERE ARE THE LINKS OF KITCHEN
ACCESSORIES:\n"+ kitchen_links)
    elif selected_category == 'LIVINGROOM':
        bot.reply_to(message, "HERE ARE THE LINKS OF LIVINGROOM
ACCESSORIES:\n"+ livingroom_links)
    elif selected_category == 'BEDROOM':
         bot.reply_to(message, "HERE ARE THE LINKS OF BEDROOM
ACCESSORIES:\n" + bedroom_links)
    elif selected_category == 'SKINCARE':
        bot.reply_to(message, "HERE IS THE LINKS OF SKINCARE
PRODUCT:\n"+ skincare_links)
    elif selected_category == 'MAKEUP':
        bot.reply_to(message, "HERE ARE LINKS OF MACKUP PRODUCTS:\n"+
makeup_links)
    elif selected_category == 'HAIRCARE':
        bot.reply_to(message, "HERE ARE THE LINKS OF HAIRCARE
PRODUCTS:\n"+ haircare_links)
    elif selected_category == 'MENSWEAR':
```

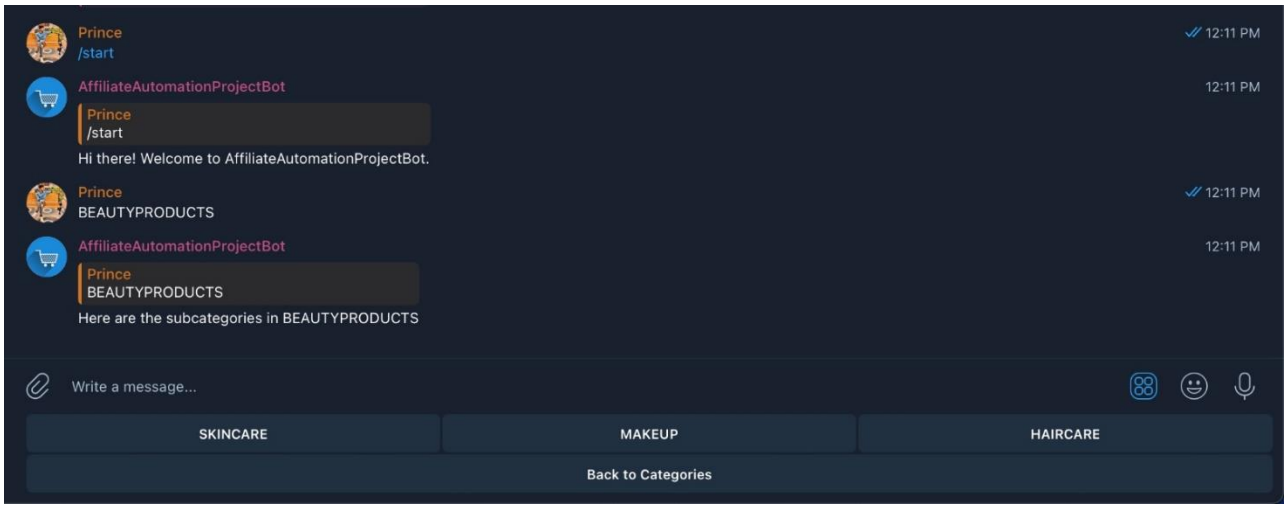
```
        bot.reply_to(message, "HERE ARE THE LINKS OF MENSWEAR
PRODUCTS:\n"+ menswear_links)
    elif selected_category == 'WOMENSWEAR':
        bot.reply_to(message, "HERE ARE THE LINKS OF MENSWEAR
PRODUCTS:\n"+ womenswear_links)
    elif selected_category == 'SPORTSWEAR':
        bot.reply_to(message, "HERE ARE THE LINKS OF SPORTWEAR
PRODUCTS:\n"+ sportswear_links)
    elif selected_category.lower() == '/help':
        bot.reply_to(message, help_message)
    elif selected_category.lower() == 'back to categories':
        start(message)  # Go back to the main menu
    elif selected_category == '/start':
        # User pressed start again, repeat welcome message
        start(message)
    else:
        bot.reply_to(message, "Invalid selection. Please choose a
category or subcategory.")

# Remove any existing webhook (optional to avoid conflicts)
bot.delete_webhook()

# Start polling
bot.polling()
```

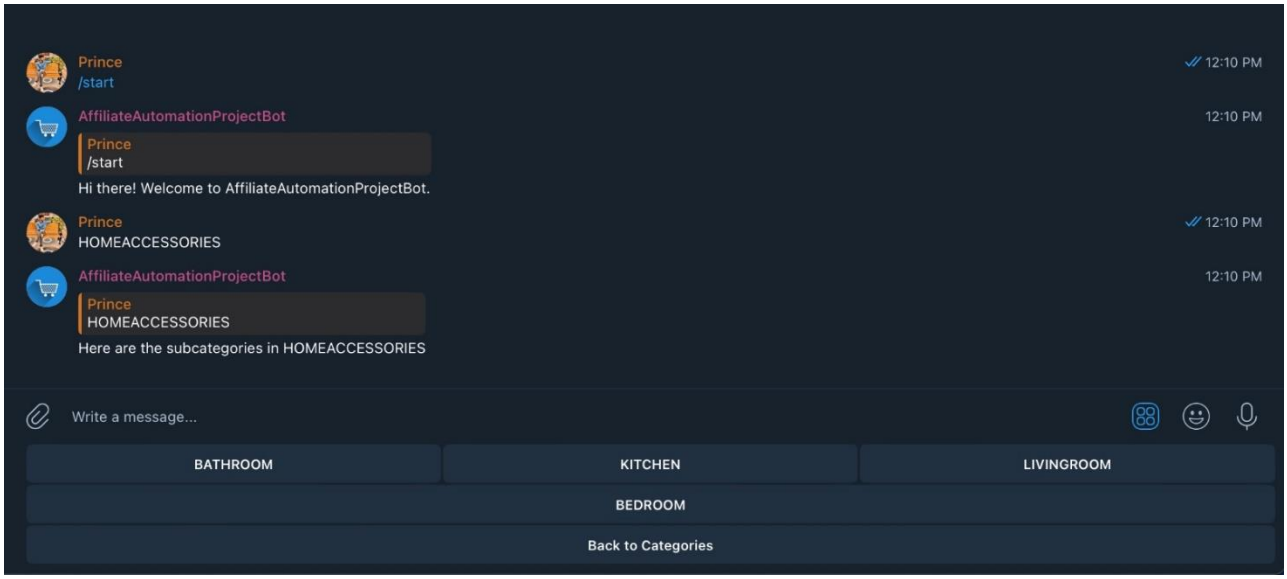
USER MANUAL

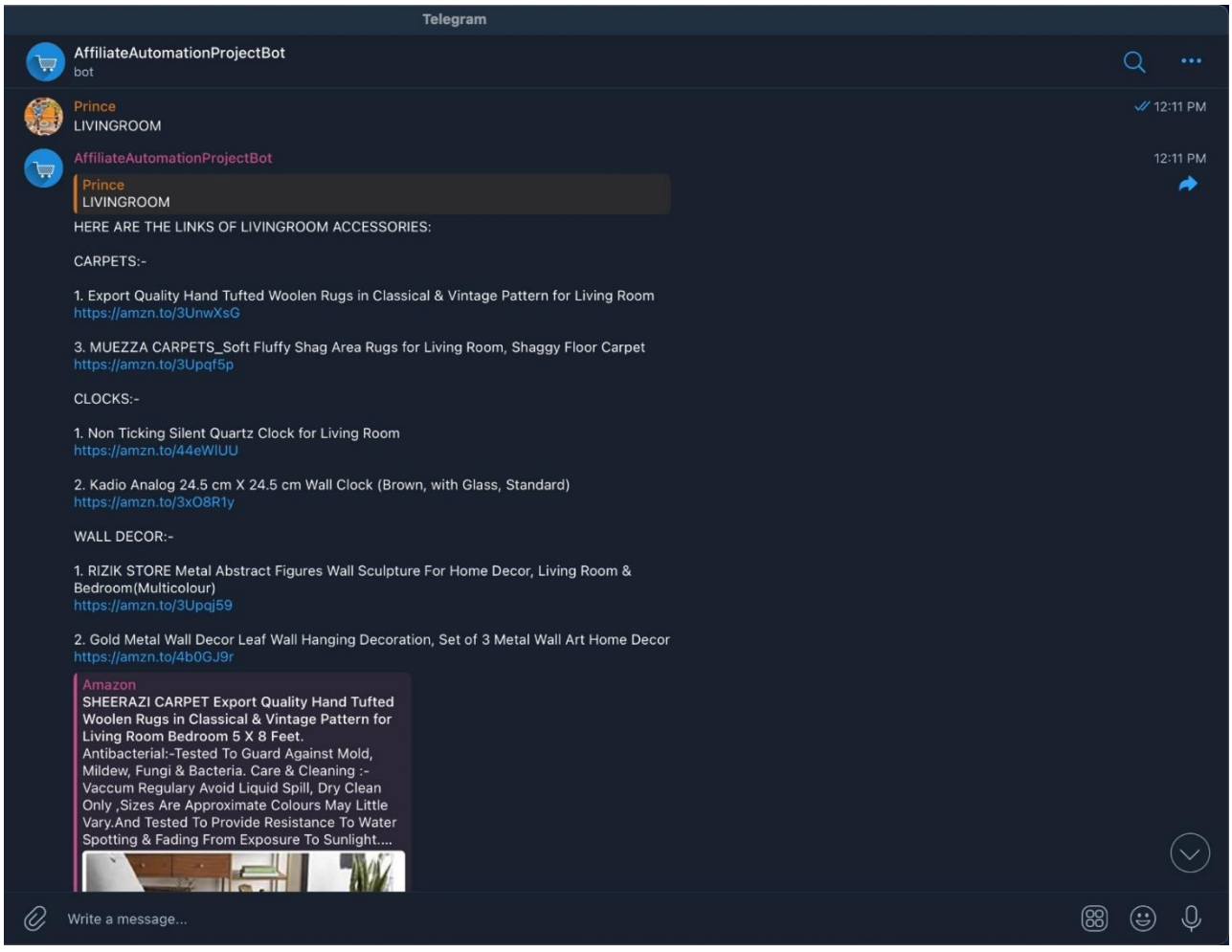
To run the HealthCure web app you need to perform the following steps as mentioned:

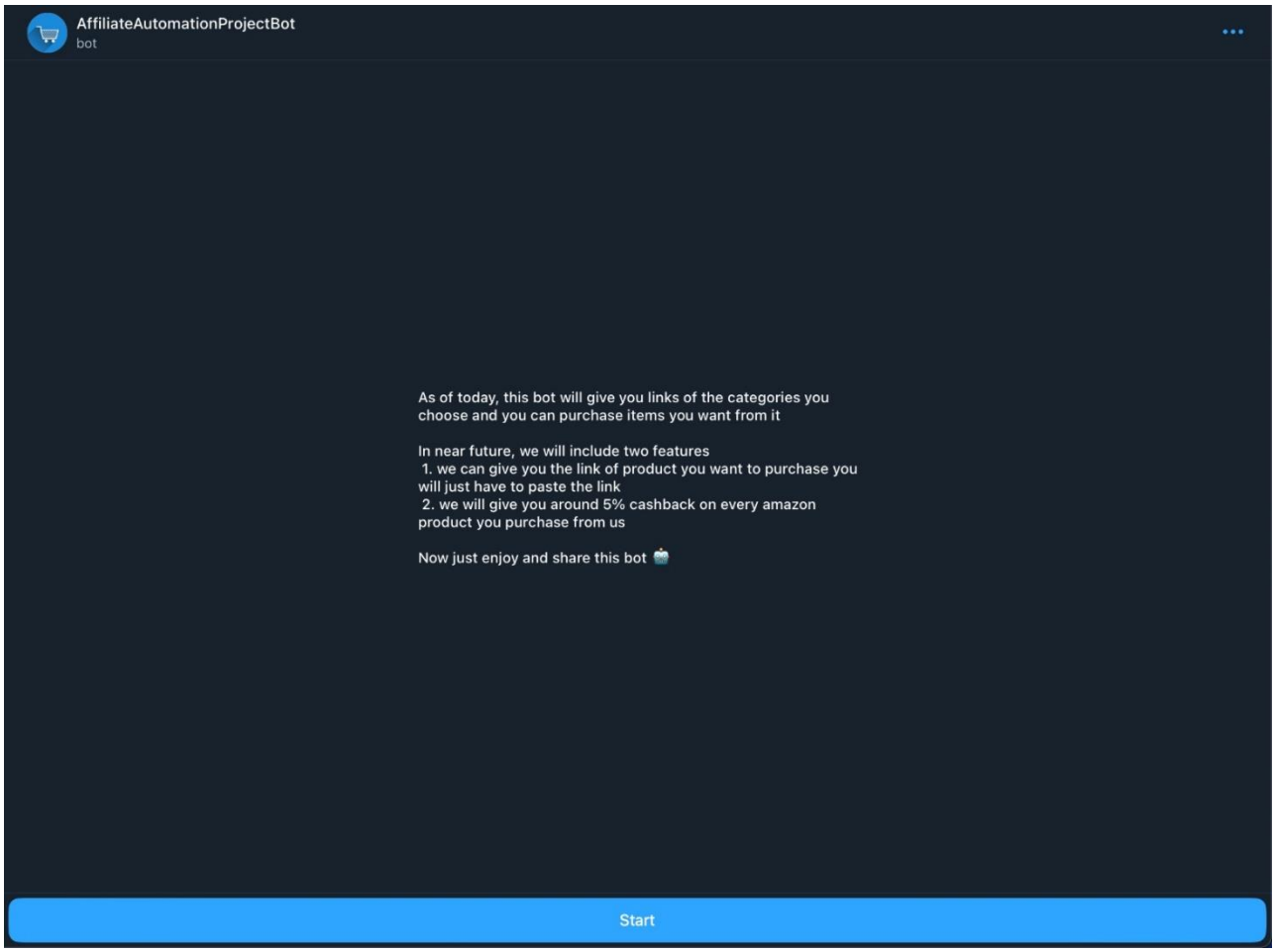
- Step 1: Open PyCharm or similar application, and open app.py and homepage.html inPyCharm.

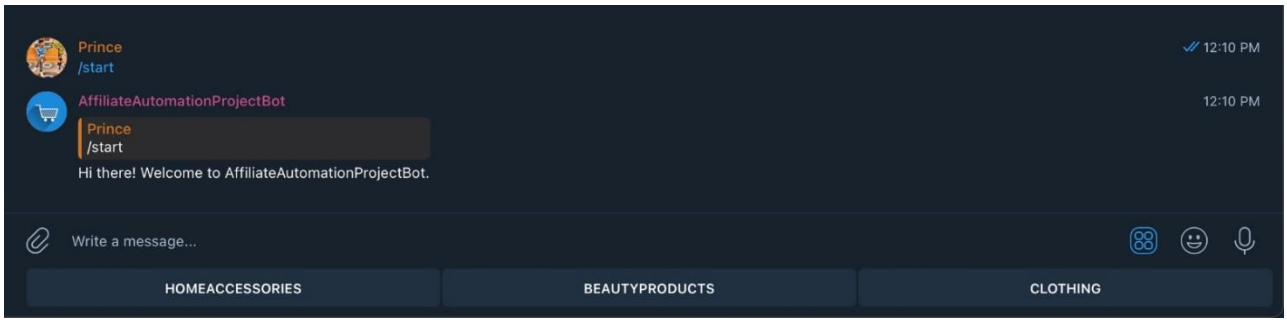





Prince
/start
12:10 PM
AffiliateAutomationProjectBot
12:10 PM
Prince
/start
Hi there! Welcome to AffiliateAutomationProjectBot.
Prince
HOMEACCESSORIES
12:10 PM
AffiliateAutomationProjectBot
12:10 PM
Prince
HOMEACCESSORIES
Here are the subcategories in HOMEACCESSORIES
Write a message...
BATHROOM
KITCHEN
LIVINGROOM
BEDROOM
Back to Categories


Telegram
AffiliateAutomationProjectBot
bot
Prince
LIVINGROOM
12:11 PM
AffiliateAutomationProjectBot
12:11 PM
Prince
LIVINGROOM
HERE ARE THE LINKS OF LIVINGROOM ACCESSORIES:
CARPETS:-
1. Export Quality Hand Tufted Woolen Rugs in Classical & Vintage Pattern for Living Room
https://amzn.to/3UnwXsG
3. MUEZZA CARPETS_Soft Fluffy Shag Area Rugs for Living Room, Shaggy Floor Carpet
https://amzn.to/3Upqf5p
CLOCKS:-
1. Non Ticking Silent Quartz Clock for Living Room
https://amzn.to/44eWlUU
2. Kadio Analog 24.5 cm X 24.5 cm Wall Clock (Brown, with Glass, Standard)
https://amzn.to/3xO8R1y
WALL DECOR:-
1. RIZIK STORE Metal Abstract Figures Wall Sculpture For Home Decor, Living Room & Bedroom(Multicolour)
https://amzn.to/3Upqj59
2. Gold Metal Wall Decor Leaf Wall Hanging Decoration, Set of 3 Metal Wall Art Home Decor
https://amzn.to/4b0GJ9r
Amazon
SHEERAZI CARPET Export Quality Hand Tufted Woolen Rugs in Classical & Vintage Pattern for Living Room Bedroom 5 X 8 Feet.
Antibacterial:-Tested To Guard Against Mold, Mildew, Fungi & Bacteria. Care & Cleaning :- Vaccum Regulary Avoid Liquid Spill, Dry Clean Only ,Sizes Are Approximate Colours May Little Vary.And Tested To Provide Resistance To Water Spotting & Fading From Exposure To Sunlight....
Write a message...


AffiliateAutomationProjectBot
bot
As of today, this bot will give you links of the categories you choose and you can purchase items you want from it
In near future, we will include two features
1. we can give you the link of product you want to purchase you will just have to paste the link
2. we will give you around 5% cashback on every amazon product you purchase from us
Now just enjoy and share this bot
Start


Prince
/start
12:10 PM
AffiliateAutomationProjectBot
12:10 PM
Prince
/start
Hi there! Welcome to AffiliateAutomationProjectBot.
Write a message...
HOMEACCESSORIES
BEAUTYPRODUCTS
CLOTHING