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**PROJECT PROPOSAL FOR A DRUG STORE MOBILE
APPLICATION**

ABSTRACT

The proposed pharmacy flutter app aims to provide a convenient and efficient way for customers to order prescription medicines, over-the-counter products, and health supplies from a local pharmacy. The app will feature a user-friendly interface that allows users to search for products, view product information, and add items to their shopping cart. Customers will also be able to upload their prescription, receive notifications on order status, and track their delivery. The app will also integrate a secure payment system for transactions, enabling users to pay through various payment methods. Additionally, the app will have a section that provides health-related news and tips, as well as a pharmacy locator tool for users to find the nearest pharmacy. The pharmacy flutter app will streamline the pharmacy ordering process, enhance customer experience, and improve access to essential health products.

CHAPTER 1: INTRODUCTION

1.1 LITERATURE REVIEW

The literature review for the proposed pharmaceutical flutter app for ordering medicine aims to provide an overview of the current state of the pharmaceutical industry, specifically in the area of medication ordering and delivery. The review highlights the challenges facing the industry and explores the role of mobile apps in addressing these challenges.

The pharmaceutical industry has been expanding rapidly in recent years, with a focus on research and development, production, and distribution of medication. However, the process of ordering and delivering medication is still a challenge, and patients often face long waiting periods and difficulty in accessing medication. Additionally, pharmacies struggle to manage their inventory efficiently and provide timely and accurate service to their customers.

Mobile apps have emerged as a solution to the challenges facing the pharmaceutical industry. These apps offer a more convenient and accessible way of ordering medication, and they have the potential to improve the overall patient experience. The use of mobile apps has also been shown to improve medication adherence, leading to better health outcomes for patients.

Several mobile apps for medication ordering and delivery have been developed, such as MYDAWA, M-Tiba and My NHIF. These apps offer features such as medication catalogue, medication search and filter, medication ordering, medication delivery tracking, payment gateway integration, user profile management, and pharmacy inventory management. These features have helped to simplify the process of ordering medication and make it more accessible to patients.

However, there are still challenges to be addressed in the development and implementation of mobile apps for medication ordering and delivery. One of the key challenges is ensuring the security and privacy of user data, especially with regards to personal health information. Additionally, there are technical challenges such as ensuring compatibility with different

devices and operating systems, and ensuring that the app is user-friendly and accessible to all users.

In summary, the literature review highlights the challenges facing the pharmaceutical industry in the area of medication ordering and delivery, and explores the potential of mobile apps to address these challenges. The review identifies the features of existing mobile apps in this space and the challenges that need to be addressed in the development and implementation of new apps.

1.2 PROBLEM STATEMENT

The problem statement for the proposed pharmaceutical flutter app for ordering medicine aims to identify the challenges facing patients and pharmacies in the process of medication ordering and delivery, and how a mobile app can address these challenges.

The current process of medication ordering and delivery can be time-consuming and cumbersome for patients. Patients often have to physically visit a pharmacy, wait in long lines, and then wait again for their medication to be prepared. This process can be particularly challenging for patients with chronic conditions who require regular medication. Additionally, pharmacies may struggle to manage their inventory efficiently, resulting in delays in medication delivery and poor customer service.

The COVID-19 pandemic has further highlighted the need for a more convenient and accessible way of ordering medication, as patients are advised to stay at home and avoid unnecessary physical contact. This has resulted in an increased demand for online medication ordering and delivery services.

Mobile apps have emerged as a solution to the challenges facing the pharmaceutical industry. However, many existing medication ordering and delivery apps have limitations in terms of functionality, user experience, and accessibility. Some apps may not have a comprehensive medication catalogue or may have limited delivery options. Other apps may be difficult to navigate or may not be compatible with all devices and operating systems.

Therefore, there is a need for a mobile app that addresses the challenges facing patients and pharmacies in the process of medication ordering and delivery. This app should be user-friendly, accessible, and secure, with features such as a comprehensive medication catalogue, medication search and filter, medication ordering, medication delivery tracking, payment gateway integration, user profile management, and pharmacy inventory management. By addressing these challenges, the proposed pharmaceutical flutter app for ordering medicine will improve the patient experience and streamline the process of medication ordering and delivery.

1.3 JUSTIFICATION

The justification for the proposed pharmaceutical flutter app for ordering medicine aims to provide a rationale for why the app is necessary and how it will benefit patients and pharmacies.

Firstly, the proposed app will provide a more convenient and accessible way for patients to order medication. Patients will no longer have to physically visit a pharmacy, wait in long lines, and then wait again for their medication to be prepared. Instead, they can use the app to browse a comprehensive medication catalogue, place an order, and have their medication delivered to their doorstep. This will save time and effort for patients, especially those with chronic conditions who require regular medication.

Secondly, the proposed app will improve the patient experience by providing features such as medication search and filter, medication delivery tracking, and user profile management. Patients will be able to easily find the medication they need, track their medication delivery in real-time, and manage their user profile and medication history. This will make the process of medication ordering and delivery more transparent and efficient, leading to higher patient satisfaction.

Thirdly, the proposed app will benefit pharmacies by helping them to manage their inventory more efficiently. The app will provide features such as pharmacy inventory management, which will enable pharmacies to track their stock levels and restock medication as needed. This will help to prevent stockouts and delays in medication delivery, resulting in better customer service and increased revenue for pharmacies.

Fourthly, the proposed app will address the need for online medication ordering and delivery services, which has become more important during the COVID-19 pandemic. The app will provide a safe and secure way for patients to order medication from the comfort of their own homes, without having to physically visit a pharmacy. This will help to reduce the risk of transmission of COVID-19 and other infectious diseases.

In summary, the proposed pharmaceutical flutter app for ordering medicine is necessary to address the challenges facing patients and pharmacies in the process of medication ordering and delivery. The app will provide a more convenient and accessible way for patients to order medication, improve the patient experience, benefit pharmacies by helping them to manage their inventory more efficiently, and address the need for online medication ordering and delivery services during the COVID-19 pandemic.

1.4 RESEARCH QUESTIONS

The research questions for the proposed pharmaceutical flutter app for ordering medicine aim to guide the research process and provide a framework for investigating the feasibility and effectiveness of the app. The research questions are as follows:

1. What are the current challenges facing patients and pharmacies in the process of medication ordering and delivery?
This research question aims to identify the specific challenges facing patients and pharmacies in the medication ordering and delivery process, such as long wait times, inventory management issues, and poor customer service.
2. How can a pharmaceutical flutter app for ordering medicine address these challenges?
This research question aims to explore the features and functionality that should be included in the app to address the challenges identified in the first research question, such as a comprehensive medication catalogue, medication search and filter, medication ordering, medication delivery tracking, payment gateway integration, user profile management, and pharmacy inventory management.
3. What is the feasibility of developing a pharmaceutical flutter app for ordering medicine?
This research question aims to assess the technical and financial feasibility of developing the app, such as the availability of resources, the cost of development, and the compatibility of the app with different devices and operating systems.
4. How will the proposed app impact the patient experience and pharmacy operations?
This research question aims to evaluate the effectiveness of the app in improving the patient experience and streamlining pharmacy operations, such as reducing wait times, improving medication delivery, and increasing revenue for pharmacies.
5. What are the security and privacy considerations that should be taken into account when developing a pharmaceutical flutter app for ordering medicine?
This research question aims to identify the potential security and privacy risks associated with developing a medication ordering and delivery app and explore ways to mitigate these risks, such as using secure payment gateways, implementing user authentication and authorization, and complying with data protection regulations.

By answering these research questions, the proposed pharmaceutical flutter app for ordering medicine can be developed and evaluated in a systematic and evidence-based manner, leading to a more effective and efficient medication ordering and delivery process for patients and pharmacies.

1.5 RESEARCH OBJECTIVES

The research objectives for the proposed pharmaceutical flutter app for ordering medicine are specific and measurable goals that aim to address the research questions and guide the research process. The research objectives are as follows:

1. To identify the specific challenges facing patients and pharmacies in the process of medication ordering and delivery. This objective aims to conduct a thorough review of the literature and gather data from patients and pharmacies to identify the challenges they face in the medication ordering and delivery process. This objective will help inform the features and functionality of the app.
2. To design and develop a pharmaceutical flutter app for ordering medicine that addresses the challenges identified in the first research objective. This objective aims to use the findings from the first research objective to design and develop a pharmaceutical flutter app for ordering medicine that addresses the challenges identified. The app will include features such as a comprehensive medication catalogue, medication search and filter, medication ordering, medication delivery tracking, payment gateway integration, user profile management, and pharmacy inventory management.
3. To evaluate the feasibility of developing a pharmaceutical flutter app for ordering medicine. This objective aims to assess the technical and financial feasibility of developing the app by conducting a cost-benefit analysis, evaluating the availability of resources, and testing the compatibility of the app with different devices and operating systems.
4. To evaluate the effectiveness of the app in improving the patient experience and streamlining pharmacy operations. This objective aims to evaluate the effectiveness of the app in improving the patient experience and streamlining pharmacy operations by conducting user testing and gathering feedback from patients and pharmacies. The evaluation will focus on metrics such as wait times, medication delivery, and revenue for pharmacies.
5. To identify and address security and privacy risks associated with developing a pharmaceutical flutter app for ordering medicine. This objective aims to identify potential security and privacy risks associated with developing a medication ordering and delivery app and develop strategies to mitigate these risks, such as using secure payment gateways, implementing user authentication and authorization, and complying with data protection regulations.

By achieving these research objectives, the proposed pharmaceutical flutter app for ordering medicine will be developed and evaluated in a systematic and evidence-based manner, leading to a more effective and efficient medication ordering and delivery process for patients and pharmacies.

CHAPTER 2: PROPOSED SOLUTION

2.1 REQUIREMENTS ANALYSIS

The app will have the following features:

1. **User Registration and Login:**
User registration and login is a crucial feature in the proposed pharmaceutical flutter app for ordering medicine. This feature enables users, including patients, pharmacists, and delivery personnel, to create an account on the app and access its various features. During registration, users will be required to provide their personal information, such as name, address, and phone number, which will be used to facilitate medication ordering and delivery. Upon successful registration, users can log in to the app using their username and password. The registration and login process will be designed to ensure that user data is secure and protected from unauthorized access.
2. **Medication Catalogue:**
The medication catalogue is a comprehensive list of the medications available for ordering through the app. The medication catalogue will include information on medication names, dosages, indications, contraindications, side effects, and pricing. The medication catalogue will be regularly updated to ensure that it remains up-to-date with the latest medications available in the market.
3. **Medication Search and Filter:**
The medication search and filter feature will enable users to quickly and easily find the medications they need. This feature will allow users to search for medications by name, dosage, indication, or other relevant criteria. Users will also be able to filter medications by price, availability, or other relevant criteria. The medication search and filter feature will help to improve the user experience by enabling users to find the medications they need quickly and easily.
4. **Medication Ordering:**
The medication ordering feature will allow users to place an order for the medications they need. Users will be able to add medications to their cart, select a delivery method, and provide payment information. Users will also be able to review their order before submitting it. Once an order is submitted, the app will send a confirmation to the user and the pharmacy.
5. **Medication Delivery Tracking:**
The medication delivery tracking feature will allow users to track the status of their medication orders. This feature will enable users to see when their medications have been dispatched from the pharmacy, and when they are expected to arrive. The medication delivery tracking feature will help to improve the user experience by providing users with real-time updates on the status of their orders.
6. **Payment Gateway Integration:**
The payment gateway integration feature will allow users to make payments for their medication orders directly through the app. The payment gateway integration feature will only support M-PESA as the payment method. The payment gateway

integration feature will be designed to ensure that user data is secure and protected from unauthorized access.

7. User Profile Management:

The user profile management feature will allow users to manage their personal information, such as their name, address, and phone number. Users will be able to update their profile information as needed. The user profile management feature will help to improve the user experience by enabling users to keep their information up-to-date.

8. Pharmacy Inventory Management:

The pharmacy inventory management feature will allow pharmacies to manage their inventory of medications. Pharmacies will be able to update their inventory as needed, add new medications to the medication catalogue, and remove medications that are no longer available. The pharmacy inventory management feature will help to ensure that the medication catalogue remains up-to-date and that users can order the medications they need.

2.2 PLANNING

The planning phase of the proposed pharmaceutical flutter app for ordering medicine is a critical step that involves defining the project scope, developing a timeline, and identifying resources needed to complete the project. The following sections describe the key aspects of the planning phase.

PROJECT SCOPE:

The first step in the planning phase is to define the project scope. The project scope will define the overall objectives of the project, as well as the features and functionalities that will be included in the app. The project scope will be developed based on the findings from the requirements analysis phase and will be used to guide the development and testing of the app.

TIMELINE:

Once the project scope has been defined, the next step is to develop a timeline for the project. The timeline will include specific milestones and deliverables that must be achieved to complete the project successfully. The timeline will also identify dependencies between tasks and will be used to track progress and ensure that the project is on track.

RESOURCES:

The planning phase will also involve identifying the resources needed to complete the project. This will include identifying the team members who will be involved in the project, as well as any external resources, such as consultants or contractors, that may be needed. The planning phase will also involve identifying the technology and infrastructure needed to develop and test the app, including hardware and software.

RISK ASSESSMENT:

The planning phase will also involve a risk assessment to identify potential risks that could impact the project's success. The risk assessment will identify the likelihood of each risk occurring, as well as the potential impact of the risk on the project. Once risks have been identified, the project team will develop strategies to mitigate each risk and minimize the impact on the project.

PROJECT MANAGEMENT:

The planning phase will also involve developing a project management plan that will define how the project will be managed, including the communication plan, change management plan, and quality assurance plan. The project management plan will outline the roles and

responsibilities of each team member, as well as the processes and tools that will be used to manage the project.

BUDGET:

Finally, the planning phase will involve developing a budget for the project. The budget will include the costs associated with developing and testing the app, as well as any other costs, such as marketing and support costs. The budget will be used to track project expenses and ensure that the project remains within budget.

2.3 ARCHITECTURAL DESIGN

The architectural design of the pharmaceutical flutter app for ordering medicine is a critical step that involves designing the structure and components of the app. The following sections describe the key aspects of the architectural design phase:

SYSTEM ARCHITECTURE:

The first step in the architectural design phase is to define the system architecture. The system architecture will define the overall structure of the app, including the components, modules, and services that will be included. The system architecture will also define how these components will interact with each other to achieve the objectives of the app.

USER INTERFACE DESIGN:

Once the system architecture has been defined, the next step is to design the user interface of the app. The user interface design will define how the app will look and feel, including the layout, typography, colours, and other design elements. The user interface design will also define how users will interact with the app, including the navigation, buttons, forms, and other interactive elements.

BACKEND ARCHITECTURE:

The architectural design phase will also involve designing the backend architecture of the app. The backend architecture will define the server-side components and services that will be used to support the app, including the database, APIs, and web services. The backend architecture will also define the security and authentication mechanisms that will be used to protect user data and ensure secure communication between the app and the server.

DATA MANAGEMENT:

The architectural design phase will also involve designing the data management system of the app. The data management system will define how user data will be stored, retrieved, and updated within the app, including the database schema, data access layer, and data caching mechanisms.

INTEGRATION WITH THIRD-PARTY SERVICES:

The architectural design phase will also involve integrating the app with third-party services, such as payment gateways, delivery services, and other external systems. The integration with third-party services will be designed to ensure seamless communication and data exchange between the app and these services.

PERFORMANCE AND SCALABILITY:

Finally, the architectural design phase will involve designing the performance and scalability aspects of the app. The app will be designed to perform efficiently under various user loads, including peak usage times. The app will also be designed to scale easily, allowing for the addition of new users and features without affecting the performance of the app.

2.4 SOFTWARE DEVELOPMENT

The software development phase of the pharmaceutical flutter app for ordering medicine involves writing the code to implement the design specifications. This phase includes several key steps, as described below:

CODING:

The coding phase involves writing the actual code that will implement the design specifications. The code will be written using the Flutter framework, which will allow for the development of cross-platform mobile applications. The coding phase will be broken down into smaller tasks, which will be assigned to individual developers on the team. The code will be reviewed and tested by other developers to ensure that it meets the quality standards.

UNIT TESTING:

Unit testing is a critical step in the software development phase. Unit tests will be written to test individual functions and methods in the code. Unit tests will be automated and will be run frequently throughout the development process. The unit tests will help to identify bugs and errors in the code and ensure that the code meets the functional requirements.

INTEGRATION TESTING:

Integration testing involves testing how different components of the app interact with each other. Integration tests will be performed to ensure that the various components of the app are working together as expected. Integration testing will also involve testing how the app interacts with external systems, such as the payment gateway and delivery services.

QUALITY ASSURANCE:

Quality assurance is an essential part of the software development phase. Quality assurance will involve conducting comprehensive testing to ensure that the app meets the functional and non-functional requirements. Quality assurance testing will include functional testing, performance testing, security testing, and usability testing. Quality assurance testing will be conducted by a team of dedicated testers who will work closely with the development team to identify and resolve any issues.

BUG FIXING:

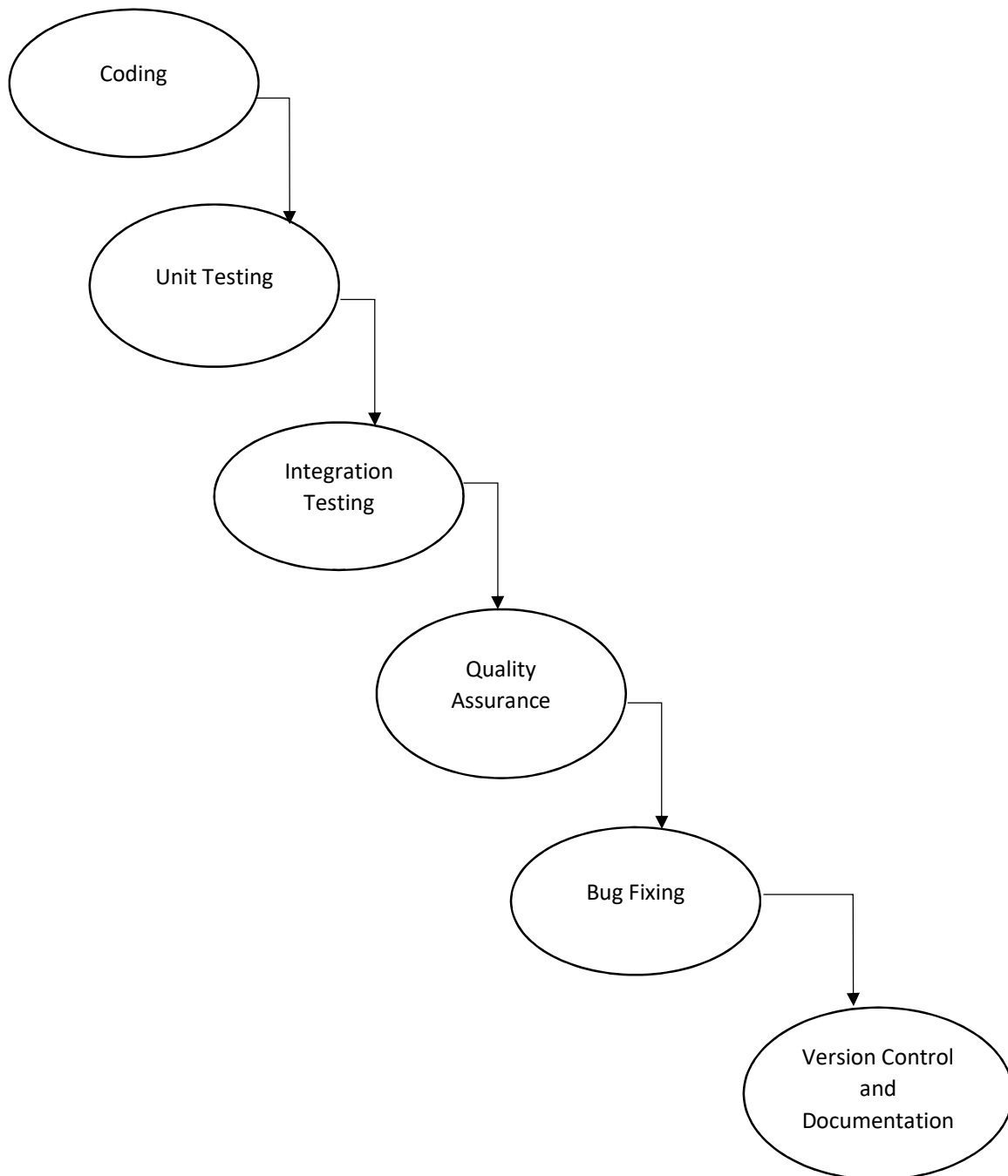
Bug fixing is an ongoing process throughout the software development phase. Any bugs or errors identified during testing will be logged and prioritized. The development team will work to resolve these bugs and ensure that the code meets the quality standards.

VERSION CONTROL:

Version control is an essential part of the software development phase. The development team will use a version control system, such as Git, to manage the codebase. The version control system will allow the team to track changes to the code, collaborate on the codebase, and manage different versions of the code.

DOCUMENTATION:

Documentation is a crucial part of the software development phase. The development team will document the codebase, including the functions, methods, and APIs used in the code. The team will also create user documentation, including user manuals and help files, to assist users in using the app.



2.5 TESTING

The testing phase is a critical part of the pharmaceutical flutter app development project. This phase involves thoroughly testing the app to ensure that it meets the functional and non-functional requirements. The testing phase includes several key steps, as described below:

FUNCTIONAL TESTING:

Functional testing is the process of testing the app's features to ensure that they work as intended. Functional testing will include testing the user registration and login features, medication catalogue, search and filter functions, medication ordering, payment gateway integration, user profile management, pharmacy inventory management, and medication delivery tracking. Functional testing will be performed manually and automated, and will include both positive and negative testing scenarios.

PERFORMANCE TESTING:

Performance testing is the process of testing the app's performance to ensure that it can handle a high volume of users and transactions. Performance testing will include testing the app's response time, load testing, stress testing, and scalability testing. Performance testing will be conducted using automated tools to simulate real-world usage scenarios.

SECURITY TESTING:

Security testing is the process of testing the app's security features to ensure that it is secure against various types of attacks. Security testing will include testing the app's authentication and authorization mechanisms, data encryption, input validation, and other security features. Security testing will be performed manually and automated, and will include both black-box and white-box testing.

USABILITY TESTING:

Usability testing is the process of testing the app's ease of use and user experience. Usability testing will be conducted with a sample of users who will use the app and provide feedback on the app's usability. The feedback will be used to improve the app's user interface, user experience, and overall usability.

REGRESSION TESTING:

Regression testing is the process of retesting the app's features after changes have been made to the code. Regression testing will ensure that changes to the code do not introduce new bugs or break existing features. Regression testing will be performed manually and automated and will be conducted after each new release of the app.

ACCEPTANCE TESTING:

Acceptance testing is the final stage of testing and involves testing the app with the client to ensure that it meets their requirements. Acceptance testing will be conducted in collaboration with the client, and the client will provide feedback on the app's functionality, usability, and other aspects. Any issues identified during acceptance testing will be addressed before the app is deployed.

DOCUMENTATION:

Documentation is an essential part of the testing phase. The testing team will document the testing process, including test plans, test cases, and test results. The team will also document any issues identified during testing and the steps taken to resolve them. The testing team will also create user documentation, including user manuals and help files, to assist users in using the app.

2.6 DEPLOYMENT

The deployment phase is the final stage of the pharmaceutical flutter app development project. This phase involves releasing the app to production and making it available to users. The deployment phase includes several key steps, as described below:

RELEASE MANAGEMENT:

The release management process involves planning and managing the app's release to production. The release management team will create a release plan, which includes the release date, release notes, and any other relevant information. The release management team will also manage the release process, ensuring that the app is properly packaged, tested, and deployed to production.

DEPLOYMENT ENVIRONMENT SETUP:

The deployment environment setup involves preparing the production environment for the app's deployment. The deployment team will set up the servers, databases, and other infrastructure required to host the app. The team will also configure the servers and databases to ensure that they are secure and scalable.

DEPLOYMENT PROCESS:

The deployment process involves deploying the app to the production environment. The deployment team will use automated deployment tools to deploy the app to production. The deployment team will also conduct manual checks to ensure that the app is functioning correctly after deployment.

MONITORING AND MAINTENANCE:

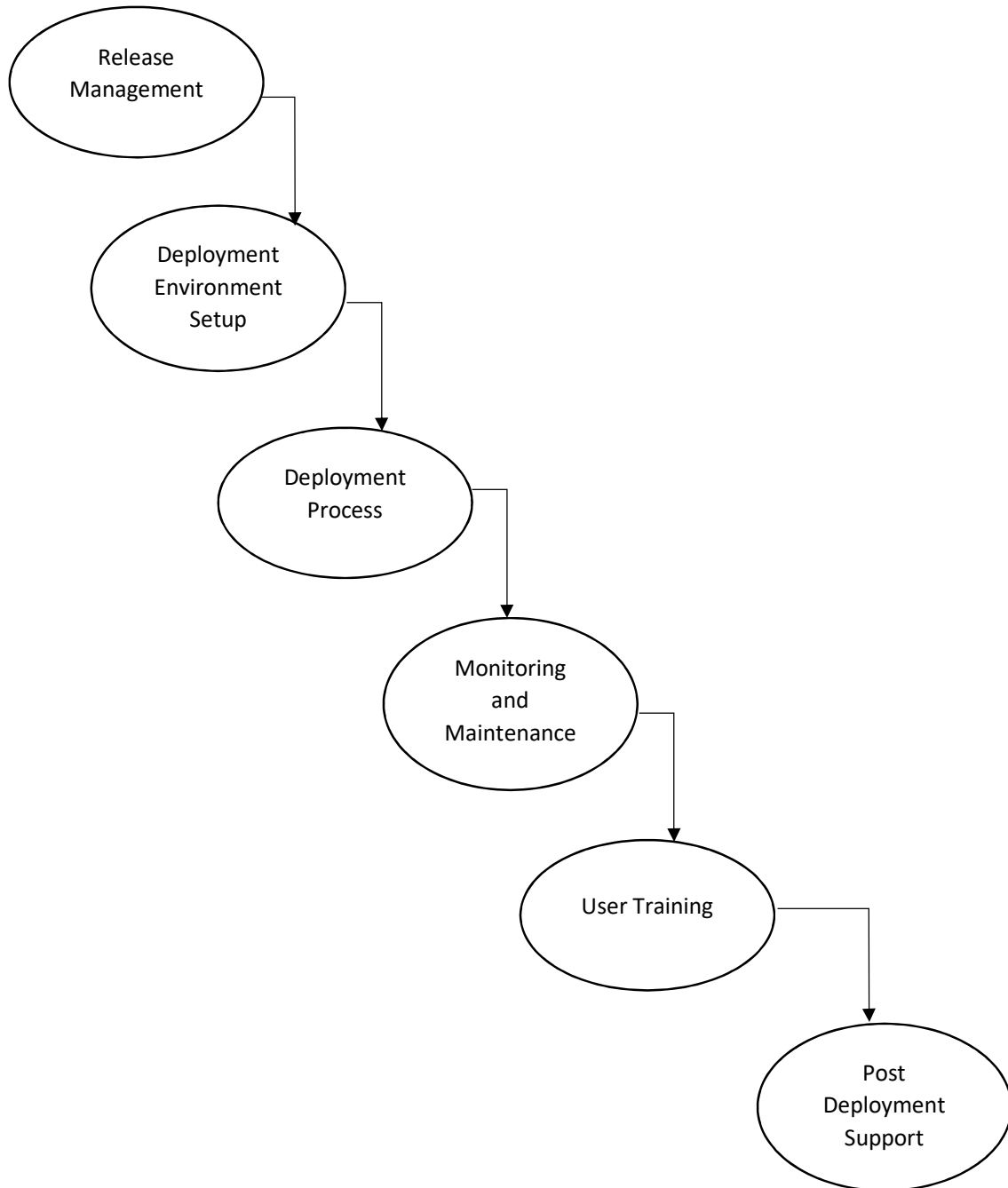
Monitoring and maintenance are critical to ensure that the app is functioning correctly after deployment. The monitoring team will set up monitoring tools to monitor the app's performance, availability, and other metrics. The team will also set up alerts to notify them of any issues with the app. The maintenance team will address any issues identified during monitoring and perform regular maintenance tasks, such as software updates and backups.

USER TRAINING:

User training is an essential part of the deployment phase. The training team will create user training materials, including user manuals and help files, to assist users in using the app. The training team will also conduct training sessions for users to teach them how to use the app.

POST-DEPLOYMENT SUPPORT:

Post-deployment support is essential to ensure that the app continues to function correctly after deployment. The support team will provide support to users who encounter issues while using the app. The team will also address any issues identified during monitoring and maintenance. The support team will also provide ongoing maintenance and updates to the app to ensure that it remains secure and up to date.



CHAPTER 3: FINAL RESULTS

The expected final results of this project are:

1. A fully functional Flutter application for ordering medication from pharmacies.
2. A user-friendly interface that allows users to register and login, search for medications, place orders, track deliveries, and manage their profiles.
3. A medication catalogue with detailed information on each medication, such as its name, price, dosage, and possible side effects.
4. A search and filter function that allows users to easily find the medication they need.
5. A secure payment gateway that accepts various payment methods and protects users' personal and financial information.
6. A pharmacy inventory management system that enables pharmacies to manage their stock levels and receive orders from the app.
7. A medication delivery tracking system that allows users to track their orders in real-time and receive notifications on their delivery status.
8. A testing and debugging process that ensures the app is fully functional, secure, and meets all user requirements.

The expected final results of this project will provide a convenient and accessible way for users to order medication, especially for those who may have mobility or transportation issues. The app will also streamline the process of managing pharmacy inventory and fulfilling medication orders, making it easier for pharmacies to manage their businesses.

CHAPTER 4: CHALLENGES, OBSTACLES, AND RISKS

Despite the thorough planning and testing process, there are several potential challenges, obstacles, and risks that may arise during the development and deployment of the pharmaceutical flutter app. These include:

1. **Technical Challenges:** There may be technical difficulties during the development process that can delay the project's progress or cause errors. Technical challenges may include integrating the payment gateway or ensuring that the medication search and filter function is working correctly.
2. **Security Risks:** The app will contain sensitive information such as user profiles, medication orders, and payment details, which make it susceptible to security breaches. As such, there is a risk of hackers trying to exploit vulnerabilities in the app's security features, which can lead to loss of data and financial losses.
3. **User Adoption:** While the app's features and benefits have been designed to meet the needs of the users, there is a possibility that some users may not adopt it due to various reasons such as preference for other channels, trust issues, or lack of awareness.
4. **Regulatory Compliance:** The pharmaceutical industry is highly regulated, and there are specific rules and regulations that must be adhered to when developing and deploying such an app. Failure to comply with these regulations can lead to legal challenges and penalties.
5. **Budget Constraints:** Developing and deploying a high-quality pharmaceutical flutter app can be expensive. Any unforeseen costs or budget constraints can impact the delivery of the project, leading to delays or a reduction in the app's quality.

To mitigate these challenges, obstacles, and risks, the project team will adopt a proactive approach. This includes conducting regular testing and audits to ensure the app's functionality, partnering with reputable payment gateways, implementing robust security features, and adhering to industry regulations. Additionally, the team will conduct user education and awareness campaigns to promote the app's adoption and provide excellent user experience. The budget will be regularly reviewed, and contingency plans will be put in place to ensure that the project is completed within the allocated budget.

CHAPTER 5: SCHEDULE AND BUDGET

5.1 SCHEDULE

The pharmaceutical flutter app project has a detailed schedule that includes several phases of development and testing. The schedule is designed to ensure that the project is completed within the given timeline and that all deliverables are met.

The schedule includes the following phases:

1. **Requirements gathering and analysis:** This phase includes gathering and analyzing the requirements for the app. It involves consultations with stakeholders and subject matter experts to identify the key features and functionalities required for the app. This phase is expected to take 2 weeks.
2. **Planning and design:** This phase includes the planning and design of the app. It involves developing a detailed project plan, creating wireframes and prototypes, and designing the user interface. This phase is expected to take 3 weeks.
3. **Development:** This phase includes the development of the app. It involves coding, testing, and debugging the app to ensure that it meets all the required standards. This phase is expected to take 8 weeks.
4. **Testing:** This phase includes the testing of the app to ensure that it is stable and reliable. It involves unit testing, integration testing, and acceptance testing. This phase is expected to take 3 weeks.
5. **Deployment:** This phase includes the deployment of the app to the target audience. It involves releasing the app to the app store and ensuring that it is available for download. This phase is expected to take 1 week.

The total duration of the project is expected to be 17 weeks, with a buffer period of 2 weeks for any unforeseen delays or issues.

Phase	Duration
Requirements gathering	2 weeks
Planning and design	3 weeks
Development	8 weeks
Testing	3 weeks
Deployment	1 week
Total (excluding buffer)	17 weeks
Buffer period	2 weeks
Total (including buffer)	19 weeks

5.2 BUDGET

Here is a revised budget for the pharmaceutical Flutter app project:

1. Salaries: Free, as it will be a student project.
2. Software and tools: Free, as Firebase software and Figma will be used.
3. Hardware: Kshs 60,000 will be allocated for the purchase of laptops or desktops needed for the project.
4. Data collection: Kshs 1,000 has been allocated for the collection of data.
5. Storage: Kshs 500 has been allocated for the purchase of flash disks.
6. Stationery and printing: Kshs 400 has been allocated for stationery and printing costs.
7. Hosting charges: Kshs 20,000 has been allocated for hosting charges. This will cover the cost of hosting the app on a cloud server and maintaining it to ensure its stability and security for the duration of the project.
8. Miscellaneous costs: Kshs 4,000 has been allocated for miscellaneous expenses that may arise during the project.

Overall, the budget has been carefully planned to ensure that all the necessary expenses required to develop a high-quality pharmaceutical Flutter app are covered, while taking into account the constraints of a student project budget. The allocation of funds to the different areas has been based on careful consideration of the requirements and needs of the project. The total estimated budget for the project is Kshs 85,900.

Expense Category	Amount (Kshs)
Salaries	Free
Software and tools	Free
Hardware	60,000
Data collection	1,000
Storage	500
Stationery and printing	400
Hosting charges	20,000
Miscellaneous costs	4,000
Total	85,900

CHAPTER 6: CONCLUSIONS AND FUTURE WORKS

6.1 CONCLUSIONS

In conclusion, the proposed pharmaceutical Flutter app for ordering medicine is expected to provide an efficient and convenient way for users to order and track their medications. The app will provide features such as medication search and filter, medication ordering, delivery tracking, payment gateway integration, user registration and login, user profile management, and pharmacy inventory management. These features will enable users to order their medications from the comfort of their homes and have them delivered to their doorstep.

The project team aims to deliver a high-quality, user-friendly, and reliable application that meets all the project requirements and user needs. The development process will follow a structured approach, including requirements analysis, planning, architectural design, software development, testing, and deployment. The project budget is estimated at Kshs 85,900 which is expected to cover all the expenses required to develop and deploy the application.

6.2 FUTURE WORKS

There are several potential areas for future work on this project. The app can be enhanced to provide additional features, such as medication reminders, drug interaction warnings, and health tips. In addition, the app can be integrated with electronic health record systems to provide healthcare providers with real-time access to patients' medication history, allergies, and medical conditions.

Furthermore, the app can be expanded to cover more pharmacies and healthcare providers to provide users with a wider range of medication options and healthcare services. Additionally, the app can be localized to support multiple languages and currencies to cater to users in different countries.

In conclusion, the proposed pharmaceutical Flutter app for ordering medicine has great potential to improve access to medication and healthcare services. There are several avenues for future work, and the project team is committed to continuously improving and expanding the application to meet the evolving needs of users and healthcare providers.

6.3 REFERENCES

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