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**SANAD**

**Asayel al-Dosari – 443051308**

**Norah al-Dosari – 443061845**

**Aljoharah al-Dosari – 443051560**

**To obtain**

**Diploma Title**

**Department of Information Systems**

**College of Computer Engineering and Sciences**

**October 2024**

**Number: \*\*\*/\*/\*\***

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**October 2024**

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| **Declaration Page**  صفحة إقرار الملكية |
| **DECLARATION**  I/we hereby claim that this mission document is based on my/our authentic work besides for citations and quotations that have been duly recounted. I/We also declare that it has not been formerly or concurrently submitted for some other diploma at PSAU or some other organization.  **Signature**: ……...……..………………… **Date**: ……………..…………….  **Name**: Asayel al-Dosari **ID**: 443051308  **Name**: Norah al-Dosari **ID**: 443061845  **Name**:Aljoharah al-Dosari **ID**: 443051560 |
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| **Supervisor Approval Page** صفحة موافقة المشرف |
| **APPROVAL FOR SUBMISSION**  I certify that this undertaking document entitled SANAD became organized by using Asayel al-Dosari, Norah al-Dosari, and Aljoharah al-Dosari. This has met the specified preferred for submission in partial success of the necessities for the diploma in Information Systems at PSAU.  **Approved by**  **Signature**: ……...……..………………………..................  **Supervisor**: Dr. Samah al-Nafti Neji  **Date**: ……………..……………………………………… |
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| **Acknowledgements Page** صفحة الشكر والعرفان |
| **ACKNOWLEDGEMENTS**  I/we would love to extend our gratitude to our manager, Dr. Samah al-Nafti Neji, for her steering and support all through this project. We also thank all individuals and companies who contributed to the a hit finishing touch of this assignment**.** |
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| **Abstract Page (English)**صفحة المستخلص (إنجليزى) |
| **SANAD**  The SANAD mission introduces a mobile software that enables food assistance for underprivileged communities by using amassing digital donations. These donations, converted into credits, permit beneficiaries to order meals immediately thru the platform. By integrating geolocation, verification structures, and a consumer-pleasant interface, SANAD aims to improve the efficiency of useful resource distribution even as enhancing transparency and believe among donors and beneficiaries. Through partnerships with shops and pharmacies, the assignment will even provide a wide variety of assist services**.** |
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| **Abstract Page (Arabic)**صفحة المستخلص (عربى) |
| **ساند**  يقدم مشروع ساند تطبيقًا للهاتف المحمول يتيح المساعدة الغذائية للمجتمعات المحتاجة عن طريق جمع التبرعات الرقمية. يتم تحويل هذه التبرعات إلى أرصدة تمكّن المستفيدين من طلب الوجبات مباشرة من خلال المنصة. يسعى ساند لتحسين كفاءة توزيع المساعدات من خلال دمج ميزات تحديد الموقع الجغرافي، ونظام التحقق، وواجهة مستخدم سهلة، بالإضافة إلى تعزيز الشفافية والثقة بين المتبرعين والمستفيدين. ومن خلال الشراكات مع المتاجر والصيدليات، يقدم المشروع مجموعة متنوعة من الخدمات للمستفيدي |
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Xii**  **Chapter 1 - Introduction**  **1.1 Background**  **1.2 Problem description**  **1.3 Proposed solution**  **1.4 Project targets**  **1.5 Project plan**  **1.6 Description of last chapters**  **Chapter 2 – Literature Review**   * **Review of literature associated with the domain hassle (wide lit assessment)** * **Review of contemporary solutions associated with the precise hassle (centered lit evaluation)** * **Advantages of proposed answer compared to present day methods**   **Chapter 1 – Introduction**  **1.1 Background:**  The SANAD challenge is an modern virtual platform designed to cope with the urgent issue of food insecurity among underprivileged participants of the community. By developing a cellular application that allows food help, SANAD pursuits to streamline the system of collecting donations and dispensing resource. This software lets in benevolent participants to donate digital credit, which beneficiaries can use to order meals and medicines at once. In doing so, SANAD seeks to foster social team spirit, construct consider among donors and recipients, and decorate network participation in supporting those in need.  **1.2 Problem Description:**  The SANAD project became conceived in reaction to several interrelated issues affecting prone populations:   * + - Poverty and Food Insecurity Many individuals and families face financial problems that avoid their ability to fulfill simple wishes along with meals and medicinal drug. The rising value of living and financial disparities exacerbate this issue, leaving many without enough assets.     - Inefficiencies in Traditional Aid Distribution Traditional charitable businesses regularly come across inefficiencies in their operations, leading to delays in useful resource transport and misallocation of assets. These inefficiencies can bring about vast gaps in aid for folks that need it maximum .     - Lack of Trust in Charitable Giving Donors frequently explicit concerns about the transparency and effectiveness of charitable agencies. Without guarantee that their contributions will be used correctly, many capacity donors hesitate to give, restricting the assets to be had for those in want.     - Barriers to Accessing Assistance Individuals seeking aid often face complicated processes, including lengthy registration, documentation, and verification requirements. These barriers can deter those in need from accessing vital assistance   **1.3 Proposed Solution:**  To successfully deal with the recognized demanding situations, SANAD proposes the following complete answers:   * + - * Digital Donation System The SANAD platform will permit clean series of donations in virtual shape. This gadget facilitates brief help to beneficiaries, making sure that aid is delivered efficiently and efficiently.       * Beneficiary Verification System A robust verification machine may be applied to verify the eligibility of recipients. This technique guarantees that aid is directed handiest to deserving people, thereby improving the credibility and trustworthiness of the software.       * Transparent Operations SANAD will prioritize transparency by way of providing clear and on hand reporting on how finances are utilized. This openness will assist construct agree with amongst donors, encouraging greater participation inside the platform.       * User-Friendly Interface The software will function a simple and intuitive design, making it on hand for both tech-savvy users and those less familiar with generation. This ease of use will inspire wider adoption amongst donors and beneficiaries alike.   1.4 **Project Objectives:**   * + - **Address Food Insecurity:** The primary objective is to address food lack of confidence by way of providing underprivileged individuals with an green and on hand manner of receiving meals assistance via a cellular platform.     - **Simplify Donation Process:** SANAD aims to streamline the gathering of donations with the aid of permitting donors to make a contribution virtual credit without difficulty. These credit can then be utilized by beneficiaries to reserve meals and essential drugs.     - **Build Trust and Transparency:** A key goal is to decorate consider between donors and recipients through transparency in operations. SANAD ensures that donations are directed closer to tested beneficiaries and gives unique reporting on how budget are applied.     - **Empower Beneficiaries:** The platform will empower beneficiaries with the aid of giving them direct get entry to food assistance with out the need for complex techniques, making sure they acquire resource speedy and successfully.     - **Foster Social Solidarity:** SANAD goals to sell network participation by encouraging people, organizations, and organizations to guide the platform. By simplifying the donation manner, the undertaking fosters social harmony.     - **Ensure Secure and Verified Aid Distribution:** Implement a robust verification machine to make certain that handiest deserving people get hold of help, thereby stopping fraud and misuse.     - **Leverage Technology for Efficient Operations:** SANAD will use functions like geolocation, synthetic intelligence, and integration with fee gateways to improve the performance and scalability of the platform, making sure it meets the wishes of each donors and recipients.     - **Expand Partnerships for Comprehensive Support:** Build partnerships with neighborhood shops and pharmacies to offer quite a number items and services, ensuring beneficiaries can use their credits for food and essential items.   1.5 **Project Plan:**  The SANAD task will be accomplished over six months, divided into the subsequent key phases:  **Research and Planning (Month 1):**  Conduct market studies and define technical requirements.  **Deliverables**: Project proposal and technical specs.  **Design and Prototyping (Month 2):**  Create wireframes, prototype the core capabilities, and design  the system structure.  **Deliverables**: App layout, prototype, and system layout report.  **Development (Months 3-four):**  Build the mobile app (iOS/Android) and back-give up services, integrate geolocation, charge gateways, and verification structures.  **Deliverables**: Fully practical app and again-give up infrastructure.  **Testing (Month 5):**  Conduct checking out (unit, integration, person reputation) and make certain safety.  **Deliverables**: Bug-free, tested app.  **Launch and Deployment (Month 6):**  Monitor app performance, replace functions, and make bigger partnerships.  1.6 **Description of Remaining Chapters:**  **Chapter 2: Literature Review**  This bankruptcy offers a comprehensive evaluate of relevant literature on meals insecurity, the inefficiencies of conventional useful resource systems, and era-based solutions. It will spotlight comparable systems and become aware of gaps that SANAD pursuits to fill.  **Chapter 3: System Analysis**  In this chapter, an in-intensity analysis of the SANAD device might be supplied. It will cover the purposeful and non-purposeful requirements, the consumer needs, and the operational workflow. The evaluation will consciousness on how the system will cope with challenges in meals help.  **Chapter 4: System Design**  The system design chapter will detail the structure and design of the SANAD platform. It will consist of database layout, software interfaces, the person interface format, and the combination of geolocation, verification, and donation systems.  **Chapter 5: Conclusion and Recommendations**  This chapter will summarize the general findings of the project, its effect, and the important thing lessons found out. It may even provide guidelines for future enhancements and scaling of the SANAD platform to in addition enhance its effectiveness in addressing meals lack of confidence.  **Chapter 2 - Literature Review**  **2.1 Review of Literature Related to the Domain Problem (Broad Literature Review)**  Food lack of confidence is a growing international issue, especially among underprivileged communities. Several studies spotlight the growing wide variety of individuals unable to get entry to sufficient, safe, and nutritious meals because of monetary and social obstacles. Traditional techniques of food aid regularly fall quick in addressing the root reasons of poverty, main to inefficient distribution, delays, and even fraud. Research suggests a want for greater green, obvious, and generation-driven answers to bridge the space among donors and beneficiaries. Many studies call for the combination of virtual systems that streamline donation methods, allowing aid to reach those in need more efficiently.  **2.2 Review of Current Solutions Related to the Specific Problem (Focused Literature Review)**  Existing systems consisting of GiveDirectly and different digital-based charitable agencies have made strides in simplifying the donation technique via direct coins transfers or virtual wallets. These answers have demonstrated effective in getting aid to recipients quickly and efficaciously, however they regularly consciousness in the main on cash aid as opposed to food-unique help. Platforms that include geolocation and actual-time tracking, like ShareTheMeal, have successfully engaged donors via providing transparent and consumer-pleasant approaches to make contributions. However, lots of these platforms still face challenges in verifying beneficiary eligibility and making sure that the aid reaches the proper human beings.  **2.3 Advantages of Proposed Solution Compared to Current Methods**  The SANAD platform offers several key blessings over existing methods. By focusing on digital credit mainly for meals and medicine, SANAD guarantees that donations are used for vital wishes. The geolocation characteristic allows for actual-time monitoring, making sure that aid reaches beneficiaries in proximity and actually in need. The robust beneficiary verification gadget reduces the possibilities of fraud, imparting self assurance to donors. SANAD’s person-friendly interface and partnerships with nearby shops and pharmacies supply it a aggressive part, presenting greater options to beneficiaries and fostering believe and engagement from the community.  **Chapter 3 – System Analysis**  **System Requirements**  **Functional Requirements**  Functional requirements specify what the device have to do, outlining the key functions and functionality.  **User Registration and Authentication:**   * The app ought to allow customers (both donors and beneficiaries) to create new accounts. * It ought to aid login authentication the usage of e-mail or smartphone quantity and password.   **Digital Donation System:**   * The app must allow donors to transfer budget into digital credits that can be used by beneficiaries to buy food or medicinal drug. * The device should securely manipulate donations and make it clean for donors to make a contribution.   **Beneficiary Verification System:**   * The app ought to consist of a verification gadget to make sure that only eligible beneficiaries acquire useful resource. * The system need to require identity files and registration for the verification process.   **Geolocation (GPS) System:**   * The app need to use geolocation to reveal beneficiaries the nearest partner stores or pharmacies wherein they can use their credit. * It have to help beneficiaries discover themselves and navigate to the nearest help factor.   **Partnerships with Stores and Pharmacies:**   * The app have to assist partnerships with nearby shops and pharmacies, allowing beneficiaries to apply their credit for meals and remedy.   **Donor Dashboard:**   * Donors need to be able to access a dashboard wherein they are able to overview their past donations and notice how their budget are getting used.   **User Notifications:**   * The system must ship notifications to beneficiaries while new credits are introduced to their debts or whilst credit are approximately to run out.   **Non-Functional Requirements**  Non-functional necessities outline how the gadget have to carry out, which includes factors like safety, scalability, and value.  **Security**:   * All sensitive records, including payment and login information, must be encrypted. * The machine should guide multi-thing authentication (MFA) to make certain account security.   **Performance**:   * The app should be capable of deal with a big range of concurrent customers with out overall performance degradation. * Page load times should be much less than 2 seconds underneath all situations.   **Scalability**:   * The machine should be scalable to house increasingly users over time. * The app should guide the addition of recent stores and pharmacies with out foremost device changes.   **User Interface (UI):**   * The UI need to be easy and intuitive for each donors and beneficiaries, even for users with restricted tech revel in. * The interface ought to help a couple of languages to cater to customers from distinct cultural backgrounds.   **Reliability**:   * The system ought to be to be had 99.9% of the time. * Donations and credit additions need to be assured to system with out loss or delays.   **Maintenance and Updates**:   * The device have to be designed to permit for clean upkeep and ordinary updates with out negatively impacting person experience. * Users need to get hold of enhance notifications of any system preservation or updates.   **Compatibility**:   * The app ought to be compatible with each iOS and Android systems. * It need to support numerous screen sizes and tool sorts. |
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| **List of Tables Page صفحة** قائمة الجداول |
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| **List of Abbreviations Page صفحة** قائمة الاختصارات |
| **LIST OF SYMBOLS/ABBREVIATIONS**   |  |  | | --- | --- | | **DESCRIPTION** | **ABBREVIATION** | | File Transfer Protocol | **FTP** | | World Wide Web | **WWW** | | |  | | --- | |  |  |  | | --- | | Application Programming Interface | | **API** | | User Experience | **UX** | |
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| **List of Abbreviations Page صفحة** قائمة الاختصارات |
| **LIST OF KEYWORDS**    **MOBLE COMPUTING ,CLOUD COMPUTING ,** DIGITAL DONATIONS **,**  FOOD ASSISTANCE |
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