st

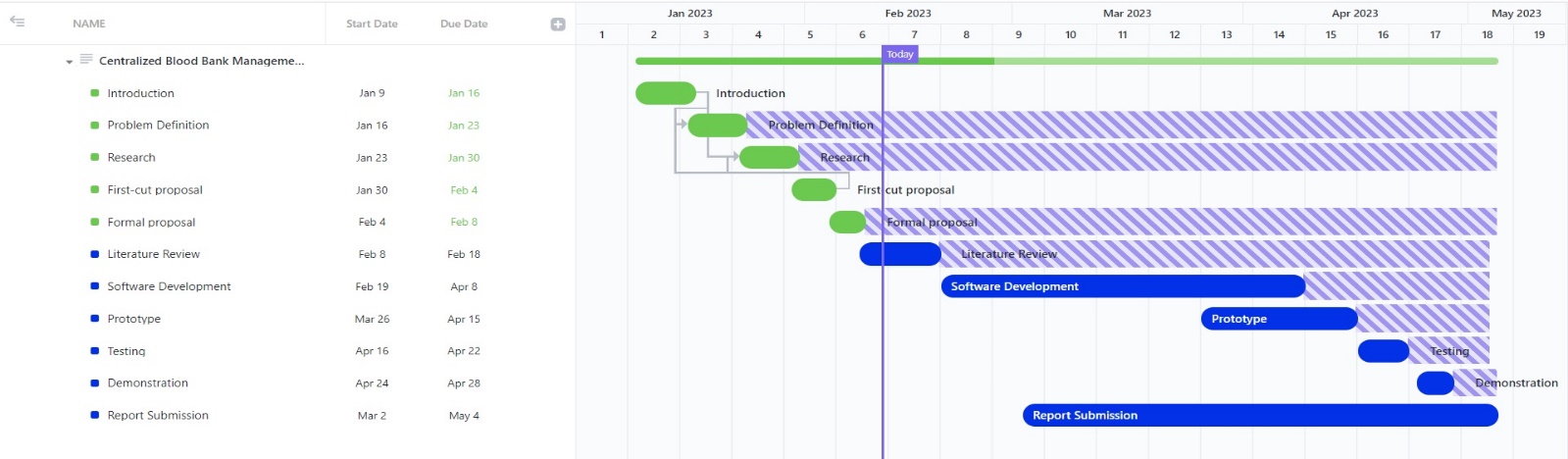
# Formal Proposal Form

|  |  |
| --- | --- |
| Student Name | Sherry Shaghayegh Haghbin |
| Student ID Number | M00 759813 |
| Study Status | Full-Time |
| Campus | Middlesex university - Dubai |
| Date of Submission | 11/2/2023 |

|  |  |
| --- | --- |
| Type of Research Proposal | The type of research proposal for my project is analytical research since it requires to check the basic data of people and to observe the availability of blood in the desired locations. |
| Name of Supervisor | Dr. Sumitra Kotipalli |
| Title | To help those in need of blood in an emergency, a system should provide an online platform for blood donation management. Thus, the development of a centralized blood bank system is highly needed for such an approach. |

|  |  |  |  |
| --- | --- | --- | --- |
| Key Words | |  | Blood Bank Management; Admin; Donor; Patient; Blood requests; Artificial Intelligence |
| Problem Definition | |  | * The problem definition of the system is to launch an application interaction medium for blood donation  management. * Despite advances in technology, nowadays, most blood bank systems are running in manual system. * There is no centralized database of volunteer donors. Therefore, it is tedious for a person to search for blood in case of emergency. * Without an automated management, there are also problems in keeping track of the actual amount of every blood quantity in the blood bank. |
| Research Question(s) | |  | * 1. What are the common diseases that can affect blood bank testing?   2. What are the important parameters of storing blood in the blood bank?   3. What is the potential problem with banked blood?   4. Which algorithm is used in blood bank management system?   5. How can a blood bank system reduce the wastage costs and achieve more cost savings?   6. What are the pros and cons of a purely software-based blood bank system? |
| Aims | |  | * The project's aim is to develop a website to minimize the manual work for Blood Bank, Donor, patient, and Blood Group management. * The main aim of the Blood Bank and Donor Management System project is to monitor Blood Bank data, Blood cells, Blood stock, Donor List. * To help people who need blood, this Blood Bank website can be used effectively for getting the details of available blood groups and user can also get contact number of the blood donors having the same blood group and within the same city. |
| Objectives | |  | * To evaluate the system in terms of user acceptability, effectiveness, quality, productivity, and reliability. * To develop a centralized website where blood donors and patients can transact with blood banks. * To electronically streamline operations and transactions in blood banks. * To minimize the wastage of outdated blood and optimize the blood supply. |
| Evidence of Requirements | |  | There is no superior gift than the gift of life, and that gift comes in the form of blood. Depending on how your blood is separated into red cells, platelets, and plasma, donating blood may save one life, or even several lives. Patients with conditions can utilize these components individually. The blood bank management system website provides logistics information to facilitate more efficient supply chain management, as well as improving the quality and safety of blood supply. Also, building an app for this helps in fulfilling factors like reliability, security, flexibility, cost efficiency and authenticity. |
| Context Description | |  | * While developing a website, one of the constraints or issues faced is time management, therefore, it requires a proper timetable and routine to manage work overload. * For a blood bank management, the existing system includes manual documentation and data entry, no proper coordination between various applications and users, less security and not able to download the latest updates on time. With such issues, constructing an app that fulfills factors like reliability, security, flexibility, cost efficiency and authenticity can be challenging. |
| Research Methodology | |  | The research methodology that I’m utilizing is quantitative since it deals with several numeric values and due to the use of surveys for obtaining an individual's basic details and blood type. On the other hand, utilizing an emergency chatbot provides qualitative data, therefore the Open-ended questions generate unstructured data, which can be analyzed with the help of artificial intelligence. |
| Brief Product Description | |  | My project is a centralized blood bank management system app which consists of three participants: the admin, the donor, and the patient. All three enter their respective credentials to create an account. The admin can view available blood groups, the number of donors, number of blood requests, the number of approved requests, and the total blood unit on the dashboard. If the donor is approved by the admin, then the blood is added to the stock and the donor gets a notification that their request is approved, with the location and blood type of the patient shown on the map . Else, it will be rejected and delivers the reason why the admin rejected the donor. |
| Deliverables | |  | * A website designed to ease up and simplify management processes and operations of centralized blood bank system. * A website that manages records of blood stock, blood requests, blood donations, blood donors, books appointments, inventory management, and recipients all in one place. * Developing an achievements page that tracks the donor’s blood donation and motivates them to save more lives in the future. |
| Resources | |  | Software resources used:   * HTML, CSS, JavaScript, python, Bootstrap, PHP, and Python Django web framework all contribute to building a strong, interactive application for the blood community. * Google Maps API to implement a dynamic location tracker that ensures the legality of the database and helps the patient to access the demanded blood from the desired location. * HTML, CSS, and JavaScript to visualize admin statistics management for the patients and donors. * HTML, CSS, and jQuery to create a chatbot for general queries and emergency cases. * Kaggle dataset to generate the blood bank dataset into google maps.   Hardware resource used:   * Laptop |
| Bibliography/list of References | |  | 1. *Blakemore,E.(2019) Want to give blood? There’s an app for that. Available at:* [*https://www.washingtonpost.com/national/health-science/want-to-give-blood-theres-an-app-for-that/2019/01/11/fc276fca-1367-11e9-803c-4ef28312c8b9\_story.html*](https://www.washingtonpost.com/national/health-science/want-to-give-blood-theres-an-app-for-that/2019/01/11/fc276fca-1367-11e9-803c-4ef28312c8b9_story.html) *(Accessed: 10/2/2023).* 2. *Sholapure,C.(2016) Best blood bank mobile apps which you require during emergency. Available at:* [*https://www.linkedin.com/pulse/best-blood-bank-mobile-apps-which-you-require-during-chetan-sholapure/*](https://www.linkedin.com/pulse/best-blood-bank-mobile-apps-which-you-require-during-chetan-sholapure/) *(Accessed: 10/2/2023).* 3. *Swan,C.(2020) Types of Qualitative Feedback You Need for Your Mobile App. Available at:* [*https://www.instabug.com/blog/types-of-qualitative-feedback-you-need-for-your-mobile-app*](https://www.instabug.com/blog/types-of-qualitative-feedback-you-need-for-your-mobile-app) *(Accessed at: 10/2/2023).* |
|  |  |
|  | To be completed by the |  |  |
| supervisor:  Is the Proposal Acceptable? |
| If no, please give feedback: | | | |

# GANTT-CHART: Project Plan and Deliverables

****

Signed (digitally)……………………………………………………Date……………………

11/2/2023

**EXPLANATION OF TYPICAL TERMS USED IN RESEARCH PROPOSALS**

***Title:*** Write a title which briefly describes the research problem and your approach to it.

***Key words or phrases:*** to give a clear and concise description of the scope and nature of the report, such as the main variables to be considered.

***Problem definition:*** Correctly defining the problem is the crucial first step in the research process. If the research problem is defined incorrectly, the research objectives will also be wrong**.** Problems must be stated in terms of underlying causes- they must be structured in a way in which they can lead to a solution. It is critical that the statement be useful for development and evaluation of potential solutions.

***Research Question:*** Indicate what you want to know most and first out of your research.

***Study Area Review:*** Explain the technical/discipline area you will be working, the problem area that you will be addressing in your research, and where would you locate your intended work in relation to previous researchers.

***Research Question(s)***: Cannot be answered by YES or NO, must generate and argument.

***Aims:*** They represent the changes you hope to achieve as a result of your work.

***Objectives:*** *A*re the activities you undertake and the methods you propose to bring these changes about.

***Evidence of requirements:*** *Outlining* the scope and range of facts/data the researcher has in support of the validity of the project. Such requirements would typically include conceptual, empirical, market demands, etc.

***Deliverables:*** Defining your intended outcomes (be as specific as possible). It is part of good project planning. Deliverables are linked to your aims.

***Milestones:*** A milestone is the end of a stage that marks the completion of a work package or phase. A deliverable is the outcome of a milestone.

***Project/Research Type:*** The nature of your research? For example, descriptive, exploratory, diagnostic, analytical, applied empirical (i.e. experimental), case study, etc.

***Research Methodology:*** Methods and techniques used in undertaking the research. There are two basic approaches, quantitative and qualitative. Quantitative involves the generation of data, through experiments or simulation, in quantitative form, which can then be analysed. Qualitative is concerned with subjective assessment of opinions, behaviour, impressions via, for example, interviews.

***Resource Audit:*** Information on the hardware, software and research resources you will be using during the course of your research, be specific i.e. give the name of any software and the titles of appropriate journals (although you will be adding to this list during your project).

***Ethical Approval:*** Explain what contact you will have with end users and all other stakeholders. Ethical issues in research typically include participants’ interests and rights, informed consent of participants, avoiding deception, confidentiality, possible impact and consequences, etc.

***Context Description:*** Refers to typical factors and constraints that may influence the research process and/or its outcomes (e.g. timing, resources).

**Project plan (including Gantt chart):** Refer to a Gantt chart or other document that shows project activities along a timeline. A **Gantt chart** is a type of bar chart that illustrates a project schedule. Gantt charts illustrate the start and finish dates of the terminal elements and summary elements of a project**.**