Project Base Learning Proposal

COMPUTER ORGANIZATOIN & ASSEMBLY LANGUAGE

INTRODUCTION

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Project Title:

Blood Management System

Using Assembly Language

Main Idea:

This project aims to develop an assembly language-based blood management system. The blood bank's activities, such as donor data, blood inventory levels, and processing blood requests, will be effectively managed by the system. The goal of this project is to show how we may optimize data storage and retrieval, making the system dependable and quick, by utilizing the low-level capabilities of assembly language. Working directly with hardware-level programming in this project will present an intriguing challenge and help us gain a deeper grasp of how data management functions at its most basic level.

Relevant Diagram:

- **Flowchart:**

  This will outline the process flow from donor registration to blood inventory updates and how requests are fulfilled.

- **Block Diagram:**

  This will visually represent the interaction between the different components of the system, such as donor records, blood stock levels, and request management, highlighting how they are connected and how data moves through the system.

Useful Links:

- Intro to 8086 Assembly Language:

  A good starting point to understand the basics of assembly language programming.

- Overview of Blood Bank Management Systems:

  This provides insights into existing blood management systems, which can help shape the project.

Software Tools:

- **Emu8086:**

  This emulator will allow us to write and test our assembly language code as if we were running it on an actual microprocessor.

- **TASM (Turbo Assembler):**

  A tool for writing and compiling assembly language code.

- **MASM (Microsoft Macro Assembler):**

  Another assembler that is widely used for developing assembly language programs.