

Project Overview

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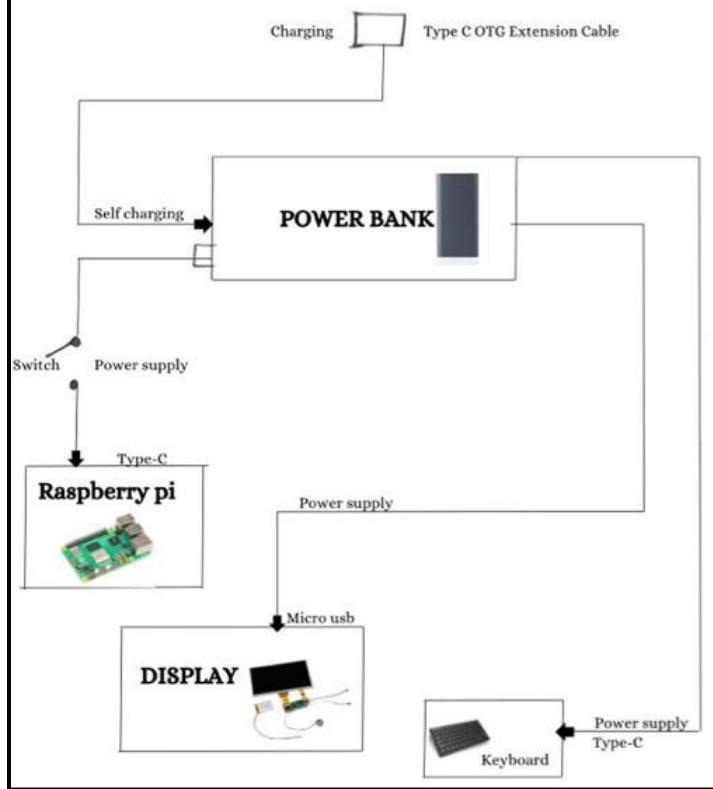
Mini Computer With Implementation Of IOT

Abstract	<p>In this project, we have implemented the concept of IOT by creating a computer without traditional boards and cables and building it using five small units and combining them to form a mini computer. This project focuses on building a computer with a minimum requirement of resources and a low cost of manufacture. The Mini computer can carry out several normal and external operations efficiently. This computer is based on the Raspbian operating system, which can carry out all the necessary functionalities of a modern computer. This computer is based on the Raspberry Pi, which is used in many applications to support IOT. and the IOT board is based on 4 GB of RAM and customizable memory carried out by a secure digital card. This computer supports the boot loop of multiple operating systems by just swooping a secure digital card. The computer is focused on carrying out learning outcomes for the students working on IOT devices as well as for the coders who want their coding environment to use multiple integrated development environments in it, which are Vs Code, PyCharm, C-lion, etc. This computer is as efficient as any computer in its category.</p>
Objectives	<p>In the world of technology, the requirement for computer devices is enlarging day-by-day. With this requirement, the mini computer plays a major role in the education industry regarding the need for small-scale computers with minimal cost that provide a huge pace of excellence in the learning sector. To make the learning medium affordable, especially for the organizations that take care of orphanages and try to provide education about technology, they can afford this type of computer device, learn about their software configuration and hardware integration with the required specifications, and build a small form-factor IoT device itself with minimal hardware spare parts and a price margin. From a business point of view, it has a major impact over other devices, providing the same features and functionality as a minicomputer, along with the same basic tasks like daily usage, web surfing, content watching, coding, web development, etc.</p>
Timeline	<ul style="list-style-type: none"> day 1-9: research and planning of the project day 10-15: collection o resources from vendors day 16-21: designing the Frame of mini computers day 22-29: assembling all the components with configuration day 30-32: final finishing of the resources day 32-34: testing of the mini computer day 35: project build with successful outcome
	<p>Step 1 : Gather all the hardware requirements from the project planning.</p>

Methodology	<p>Step 2: Design of customized case by taking measurements of hardware components.</p> <p>Step 3: Assembly of hardware components on the customized case for the mini computer.</p> <p>Step 4: Installation of Operating System with Memory Card.</p> <p>Step 5: Testing of all components to Achieve the project scope.</p> <p>Step 6: To deliver the required milestone {fully functional Mini Computer}</p> <p>Expected Outcomes with References:-</p> <p>In a project to create a mini computer using Raspberry pi, will vary depending on the specific goals and scope of the project.</p>
Budget	<p>List of all component with their respective prices</p> <ol style="list-style-type: none"> 1. Raspberry Pi 4GB : 5500/- 2. Display 7'inch : 4000/- 3. Power bank 10,000mah : 1049/- 4. Heat sink protector : 750/- 5. Wireless Bt Keyboard : 1454/- 6. Memory Card : 1019/- 7. Raspberry pi official mini HDMI to std HDMI cable :299/- 8. 20Cm Duo port wire color jumble female : 39/- 9. Small Adapter Oncro : 300/- 10. USB Type A female Switch : 190/- 11. Custom wooden frame layout : 1010/- 12. Small Push Start Button : 14/- <p>Total cost : 15,624/-</p>

Circuit Diagram

Circuit Diagram of Mini Computer



Project Implementation and schematic's:-

