Mohammed .z

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**November 2023**

**Week 1-2:**

Project Kickoff

* Define project scope, objectives, and team member roles.
* Research and finalize the list of required components.
* Initial discussions on the 3D design concept.

**Week 3-4:**

3D Design and Planning

* + Mohammed Hasweh begins 3D design using Fusion 360.
  + Finalize the wooden exterior structure design.
  + Collaborate on the integration of components into the design.

**Week 5-6:**

Component Procurement and Initial Coding

* + - * Order necessary components, ensuring they align with the project schedule.
      * Hamza Waseem starts initial coding for Arduino, focusing on basic functionality.
      * Monitor progress and address any design adjustments.

**December 2023**

**Week 1-2:**

Woodcraft and Initial Hardware Setup

* Mohammed Zaloom begins woodcraft, bringing the 3D design to life.
* Commence initial hardware setup and test basic connections.

**Week 3-4:**

Coin Detection System Implementation

* Implement the coin detection system using the load cell weight sensor and IR sensors.
* Ensure accurate measurement of coin speed and diameter.
* Integrate the coin detection system with the Arduino code.

**Week 5-6:**

Full Hardware Integration and Testing

* Complete the hardware setup, connecting all components.
* Conduct comprehensive testing to identify and address any issues.
* Refine the code for optimal performance.

**January 2024**

**Week 1:**

Presentation Preparation

* Mohammed Zaloom prepared presentation materials showcasing the project journey, design choices, and functionalities.
* Rehearse the presentation to ensure a smooth and informative delivery.

January 2, 2024: Presentation Deadline

* Finalize the project documentation and presentation.
* Deliver the project presentation, highlighting key features, challenges, and solutions.
* **Phase 1: Project Planning and Design**

**Week 1-2:**

* + Define Project Scope:

Clearly outline the objectives, features, and constraints of the vending machine project.

* + Allocate Roles:

Identify team members' responsibilities based on their expertise.

**Week 3-4:**

* + Research and Component Selection:

Conduct research on suitable components, focusing on Arduino Mega, servo motors, keypad, LCD, load cell weight sensor, and IR sensors.

* + Make final selections based on functionality and compatibility.

**Week 5-6:**

* + Initial Design Concepts:

Begin the 3D design process for the wooden exterior structure using Fusion 360.

* + Collaborate on design concepts, considering both aesthetics and practicality.

**Week 7:**

* + Review and Adjustments:

Review initial design concepts as a team.

Make necessary adjustments based on feedback and requirements.

* **Phase 2: Component Acquisition and Prototyping**

**Week 8-9:**

* + Order Components:

Place orders for all selected components, ensuring timely delivery.

**Week 10:**

* + Woodcraft and 3D Printing:

Begin the woodcraft process based on the finalized 3D design.

Initiate 3D printing of plastic components.

**Week 11:**

* + Initial Prototyping:

Assemble acquired components for an initial prototype.

Test basic functionalities and identify potential issues.

**Week 12:**

* + Refinement:

Refine the prototype based on testing results.

Address any issues and ensure seamless integration of components.

* **Phase 3: Implementation and Coding**

**Week 13-16:**

* + Hardware Setup:

Mohammed Sameeh Zaloom leads the hardware setup, connecting components to Arduino Mega.

Ensure proper communication and functionality.

**Week 17-18:**

* + Coding Implementation:

Hamza Waseem Nasser begins coding for Arduino.

Develop logic for user input, LCD display, and servo motor control.

**Week 19-20:**

* + Integration Testing:

Integrate hardware setup with the coded logic.

Conduct thorough testing to identify and resolve any issues.

* **Phase 4: Finalization and Documentation**

**Week 21:**

* + Final Testing:

Conduct comprehensive testing of the complete vending machine.

Ensure all features work seamlessly.

**Week 22-23:**

* + Documentation:

Mohammed Zaloom document the entire project, including design decisions, challenges faced, and solutions implemented.

**Week 24:**

* + Presentation Preparation:

Prepare a presentation summarizing the project journey and outcomes.

**Week 25:**

* + Final Presentation:

Present the completed Vending Machine Arduino-based project to faculty and peers.

Showcase the functionality and innovation achieved. # Project Timeline: Vending Machine Arduino-based

Our "Vending Machine Arduino-based" project spans two months, from October 2023 to January 2, 2024. This timeline is designed to accommodate various stages of development, from initial planning to the final implementation and testing.

Certainly! Let's adjust the timeline without specifying weeks in January:

This adjusted timeline maintains a focus on key project milestones in November and December, allowing flexibility for the final preparation and presentation in January. Adjustments can be made based on the team's progress and unforeseen challenges.