Project Proposal

EGT 31303

DIGITAL MEASURING SYSTEM FOR CLOTH

By

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1 PROBLEM DEFINITION

There is a pertaining problem for measuring lengths of cloth quickly and accurately. It is hard to maintain a tape straight while holding cloth as well. The existing methods such as using a Meter ruler requires more adjustments to perform perfect measurements. It is also hard to make continuous measurements of long cloths as well.

Issues with Current Methods used

- **Tape**
  - It is not feasible to hold both tape and cloth at the same time
  - High precision can not be obtained easily.
  - The tape wears over time reducing its feasibility
- **Meter Rule**
  - Meter rules are quite accurate, but hard to operate.
  - The markings on meter rule may vanish over time, making it hard to read easily.
  - It is not feasible for regular household usage or making small measurements.

2 METHODOLOGY

We are planning to construct a connected device based on Microcontroller. It will be able to measure short and long lengths very easily. It will also be easy to measure in multiple scales at the same time. The device will also be able to connect to smart-phones and display and record readings on the smart-phone.

- **Step 1:** Creating a rough design of the object
  - Identify proper locations for placing the parts
  - Perfect the placement of parts for easier handling
  - Purchase of the parts necessary for construction of the device
- **Step 2:** Defining the wiring diagram
  - Wire and Assemble the parts with Arduino Uno
  - Test the proper functioning of assembled parts
  - Make adjustments according to the issues found.
  - **Minimum Viable Product**
- **Step 3:** Mobile Connectivity
  - Create a mobile app(Android application) and connect it via Bluetooth
  - Perfect the Functionality of the device to connect via Bluetooth for readings.
- **Step 4:** Final Assembly and Testing
  - Final Testing of the device before assembling it into a unit
  - Final Assembly

3 TIME SCHEDULE