**ABISHA - L**

Many products start out as low level, breadboarded prototypes.

Once you get it working, the next step is usually to build a user interface.

Unfortunately, this process can take almost as long, if not longer, than building the device itself!

**NIDA - R**

That's where we come in. This is protocontrol, an all in one user interface development platform, where we help you every step of the way. Our target market is anyone in the prototype stage of development on an embedded system, who wants a reliable, fast, and easy way to build a user interface. Whether you are a hobbyist or a seasoned engineer, protocontrol will allow you to benefit from a streamlined UI design process.

**WILL - L**

It all starts with an idea — such as a napkin drawing.

With just a simple input image, our software will detect your design components and generate everything you need for your desired user interface… all without writing a single line of code!

\*\*\*video of website prototype being used / functionality\*\*\*

After mapping the inputs and outputs for your device, you are ready to go in a matter of minutes. Allowing you to swap out your hardware and put it anywhere, and re-design your digital components on the fly.

**PARKER - R**

Our system consists of a few parts -

a feather m0 microcontroller connected to a touchscreen via our custom pcb,

which also houses our hardware component ports.

These ports are universal, meaning you can move components around without changing anything in the software.

We've come a long way in these short few weeks.

We've already created our object detection algorithm, and made a few prototypes running example interfaces.

**KELLY MAE - L**

We have made *considerable* progress working on making serial communication secure and reliable//

*in addition // we have worked to* create the support for a *wealth* of peripheral components.

Our main challenges with serial communication //involve interfacing protocontrol with user microcontrollers using the UART communication protocol.

**NIDA - R**

Our first iteration of PCB provides a platform for the touch screen to mount on while making the other pins of the microcontroller available. There are two I2C ports for peripheral panels to connect to.

With a custom PCB on the way, an enclosure in the works, and making software progress every day, we are getting closer than ever to our finish line.

**KELLY MAE - L**

By the end of the year, we want to demonstrate our user interface with the following popular microcontrollers.

Our first example system will interface with an *arduino* connected to a variety of sensors.

For our second example system we will interface Protocontrol with an MSP430 based system.

And our third system will receive and transmit data with a raspberry pi.

In addition to these example systems that demonstrate compatibility, our documentation will show just how easy it is to set up our device compared to competitors.

**ABISHA - R**

Our next steps include finishing our first fully working prototype,

and running a series of user trials to get some valuable feedback

\\about not only how easy it is for the end user, but also for the customer.

**GROUP**

We are protocontrol, and we are revolutionizing inter userface design.

1.1 Provides background to understand the project and target customers 10

Black and white introduction of sad version of our customer

1.2 Identifies possible markets for the project (if applicable) 5

Black and white introduction of sad version of our customer

1.3 Explains project scope: States product requirements with key features 10

* Protocontrol is compatible with a variety of c-based microcontrollers
* Touch screen display
* It has snap on panels with user interface components
* It uses standard serial communication protocols
* User can create a layout for their desired UI

1.4 Explains project need and desired advantage over other products (if applicable) 10

Infomercial style description of how protocontrol solves all the problems of the person in black and white

2.1 Description of technical challenges in the project 10

Explains with bullet points what challenges have and will be over come to meet the user’s needs

Serial communication (interfacing with other microcontrollers without changing protocontrol itself)

2.2 Technology solution proposed for the project and prototype building details 10

Someone showing og person how to use prototype and website to fix their problem

2.3 Demo and explanation of first prototype 10

Someone showing og person how to use prototype and website to fix their problem

2.4 Explanation of steps for next semester 5

\*text on screen\* “PRE ORDER NOW ” while explaining goals for next semester in the context of a product to be preordered

LINE 1: “Man, there sure are a lot of inputs and outputs that our system has

“Will, have you gotten a user interface working yet? Its the most time consuming part of our project, and its an incredibly important

**Will** and **kelly mae** striggleing with a messy wires

We introduce protocontrol and explain the technical details of the project, passing it off to remaining team members to explain the varius technical features of our product

**Abisha** explains the hardware snap on compnennts

**Parker** explains the layout and generation of digital components and how the website works

**Nida** explains the connection between micros

Cuts back to **kelly mae** and will to talk about the problems that it solves for them and how grateful they are.