Our team is designing a mini elliptical machine which helps people do exercise. The main goal of our team’s design is to let people enjoy an unique exercise mode and to make the machine smaller and lighter.

**Design Statement**

A. **Inspiration**

Our design is an elliptical machine. The idea comes from the piston. One point of the pedal has a round movement, and another point has a front and back movement. The total movement is an elliptical movement.

B. **CAD Model**

This is the final CAD model. The front part is an active wheel, and the back part is roller bearing slides. The top part of the machine is pedal. They are connected with ball bearing and rod.

**Technical Approach**

C. **Component Designs**

Some components are finished

D. **Function, Features & Innovation**

The main function of our product is helping the elders and officers to do some simple exercise. The sizes of our product is probably 5in. x 8in. x 19in. Portability and convenience are the features of the product. We also add some extra parts for innovation such as friction device that can regulate the resistance. We also use special components like lazy susan.

**Conclusion & Next Steps**

The components of our product are producing. The next step is assembly and test. When we finish the stress, friction, and noise test, we will consider the material we should change or add. We will improve our product.

**Team Members**

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