IAT 337 - Representation & Fabrication
Final Project - Individual Contribution Report
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My role in this project was a deeply involved and wide ranging one, primarily focusing on technical strengths to attempt to ensure the greatest output possible.

First Phase:

-Ideated with group mates on conceptual mechanisms that could be created as well as possible thematic elements to meet project criteria.

-Assisted in generating conceptual sketches of various components and mechanisms

-Took lead role in developing SolidWorks prototype models, particularly the hammer/cam (Cammer) mechanism and the paddle module. Compiled these modules together with Windmill, Base, and Arduino components generated by other group members.

-Created descriptions detailing purpose and intent behind all configurations of product.

-Took some documentation of process (pictures, notes)

Second Phase:

-Went to SolidSpace and other meetings to physically work on developing physical prototype frequently. Measured and cut/drilled various wood blocks before going in to compile and construct assemblies out of them. Assisted assembling most components aside from Windmill. Particular focus on creating 'cammer' system.

-Reiterated Solidworks models to more closely match the physical components being generated, as the physical manifestations had restrictions that were not apparent when constructing the original digital model. Digital assemblies also changed to allow full functionality in assembled form rather than containing sub -assemblies that functioned only as fixed modules.

-Worked with team on determining and implementing potential solutions to construction problems as they arose (cam friction, axle alignment, etc)

-Took some documentation of process (pictures, notes)

Third Phase:

-Helped work on fixing final prototype to have proper alignments and positioning of parts

-Helped find new solution to the sticking cam follower problem our project was having significant problems with.

-Finalized Solidworks models to match the physical implementation as close to actual dimensions as possible.

-Added motor/generator component to Solidworks models to address power issues in project.

-Created Exploded views and Bills of Materials for all components and configurations.

-Iterated on descriptions of configurations as well as modifying configurations and generating a new fourth configuration.

-Attempted to finish current website developed by other team member, but incompatibility issues led to creation of a new secondary website option instead.

-Took some documentation of process (pictures, notes)