

Lecture 2, Jan 11, 2023

Prototyping

- A model that demonstrates part(s)/concepts of the finished product
 - Could be physical, mathematical, graphical, etc
 - Serves a purpose – communicate, demonstrate, de-risk, and verify
- Prototyping is a process:
 1. Conceptualize/express/sketch ideas at a very high level
 2. Specify and flesh out details via CAD, pseudocode, schematics, etc to enable verification
 3. Building the prototype
 4. Evaluate the prototype, check against the concept and/or specification
- Systems Theory/Thinking Framework for Prototyping: Systems have a functional perspective, e.g. change in state to change of output, state machines, and a structural perspective, e.g. how parts connect together