Objective: To generate chains of drag-link mechanisms connected to a final slider-crank device capable of producing any periodic curve.

Introduction:
Slider-crank device is shown below. As the crankshaft makes full rotations, the output piston produces periodic curves similar to a sine wave.

Motivation:
- Designing the slider-crank device to end up with the periodic curve required.
- Getting less error as we add more drag-link mechanisms.

Methodology:
Utilized
- Matlab to generate the drag-link mechanisms.
- SolidWorks to animate the final mechanism.

Examples:
The figures below show how the error reduces as we add more drag-link mechanisms.

SolidWorks Result:
Eight drag-link mechanisms
Motion of slider-crank generated by SolidWorks for the first example discussed.

Future Direction:
Geared five-bar mechanism to get curves with more than one max and min points.