The algorithm uses one .obj file with complete human body.

First, I manually calculated the range of the model data and find the vertices of two legs.

Then, Based on the algorithm of Lab1, which updates every point’s coordinate for every frame, one function was added before that ( def rotateLeg(self, degree) ).

In this new function, the vertices of legs were rotated.

Assume this function’s motion is RT1, and the keyframing motion is RT0.

Then the V’body = RT0 \* Vbody , and V’leg = RT0 \* RT1 \* Vleg