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ITCS – 6151

Project Report

Work Related:

I have been doing the RAMP algorithm with a 3R spatial robot with a movable base. In the AnimationApp.java there are two important fields which are used to setup the environment (environment) and to set up different goal positions (goalPoses). The goal positions specified in the goalposes list are executed or reached one after other in the space with the corresponding objects at specified positions in the environment list.

For the case of simplicity, I am only considering the spherical objects and even in the RAMP for collision detection I have been using the spherical collision ranges for each body.

Controls:

- Z – for zoom in
- X – for zoom out
- Mouse Scroll – to move the view up (+90) to base (0)
- Mouse LeftButton Press and drag – to move the view around the scene from -180 to +180

Improvements:

For evaluating the trajectories generated I have been using only the two criteria (Energy & Time), so need to implement manipulability and check the results.

Implementation Details:

I am implementing using the eclipse so to run the program, must execute from the eclipse. All the corresponding class libraries are also along with the project folder “libraries”. The main function of the entire project is in AnimationApp.java