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| USER’S MANUAL  Newton’s law demonstartion app |

# I. Getting started

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| To run this application, you need:   1. Eclipse: latest version (<https://www.eclipse.org/downloads/>) 2. JavaFX library for Java (tutorial: <https://o7planning.org/en/10619/install-efxclipse-into-eclipse>) 3. The source code of this application in .zip format (open source on GitHub: <https://github.com/tudragon/JavaFinalProject.git> ) |
| After installing all the prerequesites, you can follow these steps to get the application running  Step 1: Open eclipse.  Step 2: Create a general project in your working space. Ex: "Java Project - Group 12 ICT K61".  Step 3: Select “File > Import > Archive File", then choose the .zip file of the source code, then choose the project folder created in Step 2.  Step 4: Open file "<project folder>/src/application/Main.java" and hit “run” inside Eclipse interface. |

# II. How to use

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| 1. If you run the application successfully, a welcome scene will appear: |
| Here you can choose to view any law. Still, going from law one to three would be recommended   1. First Law of Motion: |
| Here are the inteface of the first law. The interface includes (from top to bottom):  + Law’s Title, and a forward button, which will navigate you to the next law (law two)  + Content of the law, alongside a picture to illustrate it  + Visualization:   * START button: start to display objects’ force, velocity and acceleration * SPEED UP button: Exert/increase the force to the first circle (upper circle) * SLOW DOWN button: Eliminate/decrease the force to the first circle * Two panels. Each includes a circle, some blocks and three labels to display the circle’s motion state |
| 1. Second Law of Motion: |
| That’s the inteface of the second law. It’s similar the the first law, with some exceptions:  + There’s two forward/backward buttons up top, which navigates to the next/previous law  + Visualization:   * F\_engine++ button: Exert/increase the force of engine to the truck * F\_engine-- button: Eliminate/decrease the force of engine to the truck  1. Third Law of Motion |
| Here’s the third law’s interface. The only difference between this and law two’s intergace lies in the buttons:   * MORE GAS button: Burn more gas to push the rocket up faster * LESS GAS button: Burn less gas |

# III. Notes

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| * It’s recommended to run this application with a screen resolution of 1366 x 768 |