**REPORT ON THE VERLET INTEGRATOR**

Introduction

The aim of this report is to explain the Verlet Integrator we developed.

Our goal in the integrator is to have an integrator with an interactable interface that, given an initial data, in our concrete case the initial position, speed, acceleration and elapsed time, it computes their values at the end of that given time. Our intention is that it will also have a way to test the correct function of the integrator and a graphic representation.

Implementation

As stated in the introduction, we implemented an interactable interface to show the results and make it to the user to use the integrator. We designed each screen and fonts to be used and then implemented modules to shange between the screens and to control the Fonts and UI to show the data in each screen.

Input and debug keys

Test of the integrator

Final data show

Graphic representation

Newton's Laws to compare

Verlet Integrator

All the code comes together and how it works

Results

Tests we want to run (conditions, initial data)

Results of the tests (with images!)

Comparison with other integrators and Newton's Laws

Compare results with Newton's Laws

Compare results with other integrators (ask classmates)

Conclusions