SIMULATION & PHYSICS – PRACTICAL 2

Write a report (pdf or word) in which you **explain** your solution to the assignments below.
For each assignment:

1. repeat the assignment you are implementing;
2. explain your approach;
3. describe your code;
4. show (relevant) code snippets;
5. include a screenshot of your program.

Once your report is finished, make sure your name and student number is on the title page, and upload it to the corresponding Assignment in your **VLO group** before May 21st, 23:00.

Assignments are graded with a V (sufficient) or O (insufficient).
You can work in pairs, but you each have to write your own explanations!
(Code snippets and screenshots may be identical.)

Download the source solution for “Movement” from the VLO. Make sure that the program runs, and you understand the code before you start implementing the assignments below.

Assignment 1: SpaceShip

Expand the SpaceShip class:

- Make a Ball that can be placed on the mouse position by clicking the mouse
- The SpaceShip uses this Ball as its target
- The SpaceShip has to move towards its target and rotated in the direction of its velocity

Assignment 2: Easing & Stopping

Expand the SpaceShip class:

- Implement easing
- Let the SpaceShip stop when it reaches its target

Assignment 3: Springing, Mass & Force

Expand the Shield class so that it springs around the SpaceShip:

- The Shield uses the "GreenSoftColorBall" sprite
- Add a mass to the PhysicsObject class
- Calculate the acceleration *using force and mass*