

The report should contains the following sections

**Contents:**

- 1 Theoretical considerations
    - 1.1 Numerical methods (Description)
    - 1.2, ...,
  - 2 Problem definition
  - 3 Numerical solution with very small value of time step
  - 4 Analytical solution (using Laplace transform and Heaviside step function)
  - 5 Comparison results between the above and the analytical (Acceleration, velocity, and displacement)
  - 6 Conclusions
- List of Figure captions
  - List of Abbreviations (if available)
  - Reference list
  - MATLAB code