

## TC3022. Computer Graphics

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Assignment: Object-Oriented Programming and Transformations

**Due: Friday, March 16<sup>th</sup> 2021**

**Project teams (4 at most).** Only one member of the team will upload to Canvas. Write your names in the first comment of the **Walker.cs** script.

Reproduce, as closely as possible, the following walking animation loop<sup>1</sup> in an **OOP / C# / Unity** application:



### Instructions:

- Use Object-Oriented Programming with **C#** in **Unity**. At least two classes in addition to the main `Walker.cs` file (**30 points**). **The main file must have only the declaration, instantiation and use of one Robot object.** The `Walker.cs` file will be attached to an empty game object without other associations from script to object in your editor.
- Use simple cubes (no materials required) as the meshes developed in class. No Unity shapes are allowed at this time.
- Your model should have the following animated parts:
  - 1 body (**10 points**).
  - 2 arms with forearms and hands, attached to the body by shoulders (**10 points**).
  - 2 thighs attached to the hip, in turn attached to the body (**10 points**).
  - 2 legs attached to the thighs (**10 points**).
  - 2 feet attached to the legs (**10 points**).
  - 1 head with neck attached to the body (**10 points**).
- Quality of the animation: **10-20 points**.
- **Upload only your own (original) code.** The terms in the Syllabus apply.
- **Upload only the source files without folders** (files with extension `.cs`) to Canvas **in a single ZIP file**. This is to speed the grading process so please comply.
- Remember to add your name(s) to the first comment of the source files and to the assignment comments in Canvas.

<sup>1</sup> "Isometric games : 3d character animation test - Panebianco3d.com." 18 Mar. 2008, <http://www.panebianco3d.com/en/20080318-isometric-3d-games-character-animation-test>. Accessed 1 Feb. 2018.