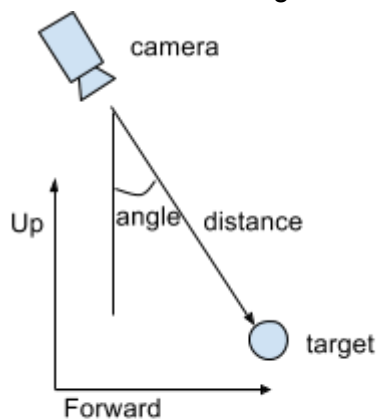


Assignment 1 - Vector math and trigonometry

In game programming vector math and trigonometry are used often in different kind of calculations. In this assignment, we are going to implement a component which makes the camera follow the player unit. The idea is that the camera should not be parented to the player object. Instead, a component should be created which will be attached to the camera and the component calculates the position and rotation of the camera. There is an interface called `ICameraFollow` in the project. This interface should be implemented. There should also be three fields defined which can be set from the Unity editor,

- Distance
 - The distance from which the camera follows the target
- Angle
 - The angle of the camera
- Target
 - The target transform the camera follows



The position and rotation of the camera are calculated using vector math and trigonometry. Required methods are available in `UnityEngine.Mathf` class.

Requirements

1. A component which implements `ICameraFollow` interface is created
2. The component is attached to the camera's `GameObject` and it calculates the camera's position and rotation
3. The camera must be left to the root of the scene instead of making it player unit's child
4. The camera will follow the player unit at the distance and in the angle which is set either from Unity editor or from the code using the public interface of the component

Submitting

The assignment has to be submitted Friday 16.2.2018 23:59. All submissions should be stored to your repository. The link to the repository should be sent to sami.kojo@tamk.fi when the assignment is done with the commit message of the submission commit. If you have a private repository, you have to send the invitation to that repository to Sami. The assignment can be submitted by a pull request also.

Grading

- 0: The assignment is not returned on time or the assignment doesn't work at all.
- 1-2: The assignment is returned on time, but it has some flaws.
- 3: The assignment is returned on time and it works exactly as this document defines.
- 4-5: The assignment is returned on time, the code is clean and well commented.