Challenge 1

Difficulty: low Create two simple structures or classes, `Edge` and `Triangle` storing two and three unsigned integers that represent the identifiers of the points defining an edge and a triangle, respectively.
Given a container of triangles that represents a mesh (a simple one, initialized by hand), create a function accepting the container as input and returning a `set` containing all edges, without repetition.

Challenge 2

Difficulty: medium From the same structures created in Challenge1. Create a function that accepts the Triangle container as input and returns a set containing only the boundary edges.

Hint: The triangles must be oriented consistently, for instance counter clockwise orientation.

Challenge 3

Difficulty: medium-high Repeat Challenges 1 and 2 for the classes Tetrahedron and Triangle. Create a container for the tetrahedra representing a mesh and find all faces and all boundary faces. Do it for a very simple mesh that you can create by hand: two tetrahedra are enough!

Hint: The tetrahedra must be oriented consistently, for instance following the right-hand rule.