

Tutorial exercises
Objektorientierte Programmierung: Wintersemester 2021
Nr. 1

Task 1.1: Gatherer's Garden

Algorithms have uses in different daily activities. An algorithm always needs a prerequisite and a postcondition to function properly.

Describe the internal algorithm for a basic traffic-light for a pedestrian crossing. If a pedestrian pushes the button on either side, the traffic light lights the "Crossing is soon possible"-light. The light for cars then switches to Yellow and after some time to Red. Only after the light for cars has switched to Red, the one for pedestrians is allowed to switch to Green and the "Crossing is soon possible"-light is turned off. After a while, the pedestrian light switches to Red and the one for cars switches to Yellow and then Green.

What are the inputs and possible outputs? You are allowed to simplify parts of the algorithm like the lighting of different lights.