Visionaries Final Project
Description
Find a reference image within a scene and estimate the pose in real time.

Using the pose estimate we can draw a rectangle around the found object indicating the pose.

The pose is calculated using DLT and RANSAC.

Using the camera intrinsics we can calculate the rotation and translation and display a 3D object above the found object.
Roadmap
• 17.06.2014 : Kick off

• 24.06.2014:
  − Matching between camera image and pre defined image to get the 2D-2D point correspondances
  − Implement Direct Linear Transform to calculate the homography matrix

• 01.07.2014:
  − Implement RANSAC for calculating a robust homography matrix with small error
  − Display outline of matched object using the homography. E.g. green lines are drawn around one object
• Till 08.07.2014:
  - Match multiple different objects and draw different coloured outline

• Project expansion prospects:
  - Get the camera intrinsics matrix
  - Get the rotation and translation from the homography using the intrinsics matrix
  - Display a 3D model on top the found object(s)