Task: **PICK AND PLACE**

PICK:

1. Determine a pointed location of the object (e.g. one of the tables in lab).
2. Navigate to the location.
3. Identify a pointed object (ask for specification using pointing gesture when needed).
4. Pick the object.

PLACE:

1. Determine a pointed target location.
2. Navigate to the location.
3. Place the object safely to the location (ask for specification using pointing gesture when needed).

Types of gestures:

Pointing gesture (static):

Human (personal calibration needed):

Without gaze: using only position of arm, hand and fingers.

With gaze: using position of dominant eye and position of the index finger.

Robot:

using robotic arm with a extended end-effector (laser pointer can be used).

Interaction gestures (dynamic):

gestures to start/end of interaction (wave/ nod);

gestures to confirm or reject robot's requests;

gestures to stop robot in case of some error.

Task 0: **IDENTIFY POINTED OBJECT**

1. Identify a pointed object:

Sensors:	Kinect	-for gesture recognition (gesture without gaze).
	Camera	-for object recognition.