# Homework M1: Core Concepts

Main goal is to build further on what was demonstrated during the practice

For the successful completion of the tasks, you will need a simple (single node) cluster as the one used during the practice

## Tasks \*

1. Execute a series of commands to
   1. Create a namespace named **homework**
   2. Create a **homework-1** pod in that namespace that uses this (**shekeriev/k8s-oracle**) image and set two labels on it (all at once) – **app=hw** and **tier=gold**
   3. Remove the **tier=gold** label with a separate command
   4. Create a **homework-2** pod in that namespace that uses this (**shekeriev/k8s-oracle**) image
   5. Add a label to the second pod **app=hw** with a separate command
   6. Set annotation on both pods with the following content **purpose=homework**
   7. Create a **homerwork-svc** service to expose both pods on port **32000** of every node in the cluster
2. Create manifests for every object (the namespace, the two pods, and the service) from task 1 and apply them one by one
3. Is there a way to submit those manifests at once? Find and demonstrate **two ways** of doing it
4. ***Optional:*** Try to translate the attached **docker-compose.yml** file to a set of **Kubernetes** objects and the corresponding manifest(s)
5. ***Optional:*** Give the **KIND** tool a try and spin up a **Kubernetes** cluster in a **Docker** instance. Once done, start the pod (task 1.b) and the service (task 1.g) either imperatively or with manifests (for example, the ones from task 2)

*\* There are five tasks. You are free to solve any number of them. Please keep in mind, that before continuing with the next task in the line, you should remove all objects from the previous one*

## Proof

Prepare a document that show what you accomplished and how you did it. It can include (not limited to):

1. The commands you used to achieve the above tasks
2. A few pictures showing intermediary steps or results