# Exercise 1 (Project m4-jva007-bank-app)

# Bank Application: Generrics

## Objectives

Learn how to use generics.

## Description

Will keep working on Bank Application for module 3.

Here we will:

1. Replace arrays with **List**-s.
2. Add **StorageService** interface that will provide functionality to store clients.
3. Add storage implementation **ClientStorageService** that will store clients in memory.

## Tasks:

1. Replace **Client#accounts** array with the **List** (use **ArrayList** implementation).
2. Update **Client#getAccounts** to return **Collections.unmodifiableList(…)**.
3. Replace **Bank#listeners** array with the **List** (use **ArrayList** implementation). Also update all affected code to make it work with the **List**.
4. Create new **StorageService** interface.

**public interface** StorageService<T **extends** Indexed>  
{  
 T store(T object);  
  
 T getById(**int** id);  
  
 T update(T toUpdate);  
  
 **void** delete(T object);  
  
 List<T> getAll();  
}

1. Add **ClientStorageService** implementation for **StorageService** use **List<Client> clients** to store clients.
2. Add property **StorageService<Client> clientStorageService** to the **Bank** class and provide setter to it.
3. Update methods **Bank#addClient** and **Bank#getClients** to work with **Bank#clientStorageService** use **Collections.unmodifiableList(...)** to return clients.