

## Lab 8: Polymorphism

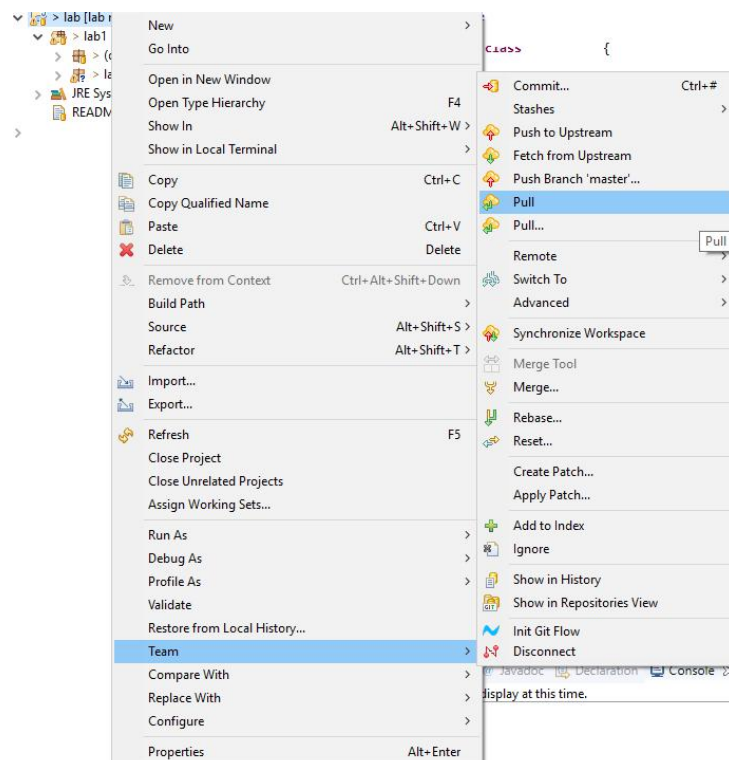
### Setup

1. Merge your lab repository with OzgurKilic/lab repository as described in lab2.pdf. After merge operation you should find the following sources in your lab8 folder.

drawingV1/



2. In command line, change directory to lab8 directory which was created after cloning your repository. If you haven't cloned your repository, you should clone it as described in previous lab.
3. If you are using eclipse click the “Pull” item in the “Team” menu



4. If you are not using eclipse, execute the following command in the lab directory.
  - a) `git pull`
  - b) Change directory to lab8

### ***Exercise 1 : Using Object ArrayList***

1. Create a new package named drawingV2 and copy the content of drawingV1 to drawingV2. Do not forget to modify the package statements in the copied classes.
2. In the drawingV2.Drawing class, delete the existing ArrayList variables and define the following ArrayList instead  
**`ArrayList shapes = new ArrayList();`**
3. Modify the existing code to use the shapes list.

### ***Exercise 2 : Define Shape Class***

1. Create a new package named drawingV3 and copy the content of drawingV2 to drawingV3.
2. Define “Shape” class which contains common behaviour of shapes.
3. Modify the shapes list variable in Drawing class to contain only Shape instances.
4. Modify the existing code in the drawing class to benefit from polymorphism.

### ***Exercise 3 : Create Square Class***

1. Create Square class in drawingV1, drawingV2 and drawingV3 packages and modify the Drawing class in each package to use the Square class.

NOTE: Your lab will **not be graded** if

- Your account name does not have the format described in lab1.pdf
- Your repository name is not lab
- Your files have compilation errors
- You haven't complete the steps described in exercises
- Your added/modified files are not submitted to Bitbucket.
  - You have to add commit and push files as described in lab1.pdf