

Day 9 Assignment: Spring basics and dependency injection

1. Implement the following use-case showing demonstration of tightly coupled application.

Write a following classes/interfaces to implement tightly coupled example..

- ShapeDrawer → This should invoke the draw method on particular shape object
- ShapeAreaCalculator → Should have method to invoke area calculation methods from shape object provided to it.
- Circle → Should have methods to calculate area and perimeter of circle , and draw method
- Square → Should have methods to calculate area and perimeter of square, and draw method
- Rectangle → Should have methods to calculate area and perimeter of Rectangle, and draw method
- AppRunner → This should use ShapeDrawer and ShapeAreaCalculator to invoke the required functionality.

2. Now implement the above use-case demonstrating loose coupling by using interface instead of direct class implementation

3. Now create simple Spring application and implement the same above given use-case by using dependency injection and auto-wiring. Use field injection, constructor injection and setter injection in all different

shape implementations (i.e. field injection in Circle, constructor injection in Rectangle etc)

NOTE: Create project using Spring Initializr (<https://start.spring.io/>) to create spring app without any extra dependency configuration. You can use annotations for wiring and declaring beans