The PrimeCheck App Case Study: Test Driver Implementation & Performance

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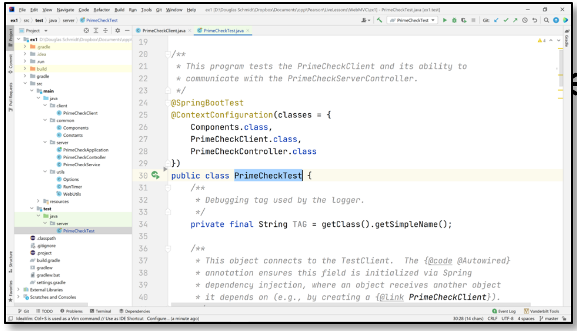
Learning Objectives in this Part of the Lesson

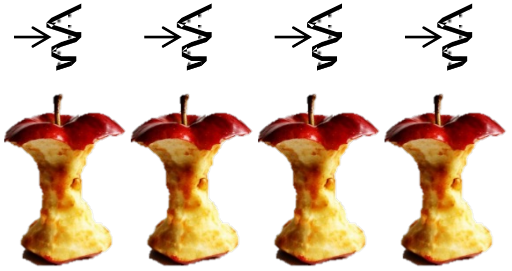
- Understand the implementation of a test driver program that runs the PCClient* classes & measures the performance of various methods

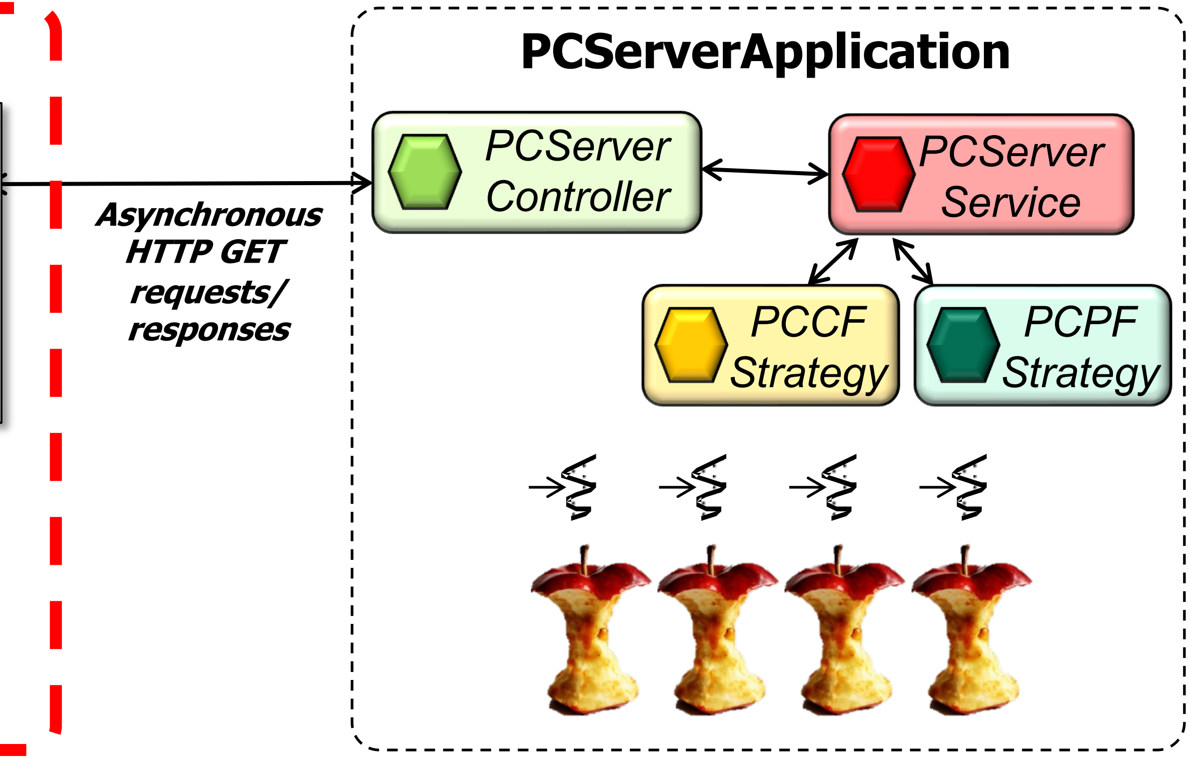
PrimeCheckTest



```
/**
 * This program tests the PrimeCheckClient and its ability to
 * communicate with the PrimeCheckServerController.
 */
@SpringBootTest
@ContextConfiguration(classes = {
    Components.class,
    PrimeCheckClient.class,
    PrimeCheckController.class
})
public class PrimeCheckTest {
    /**
     * Debugging tag used by the logger.
     */
    private final String TAG = getClass().getSimpleName();

    /**
     * This object connects to the TestClient.  The {@code @Autowired}
     * annotation ensures this field is initialized via Spring
     * dependency injection, where an object receives another object
     * it depends on (e.g., by creating a {@link PrimeCheckClient}).
```





Implementing the PrimeCheckTest Driver

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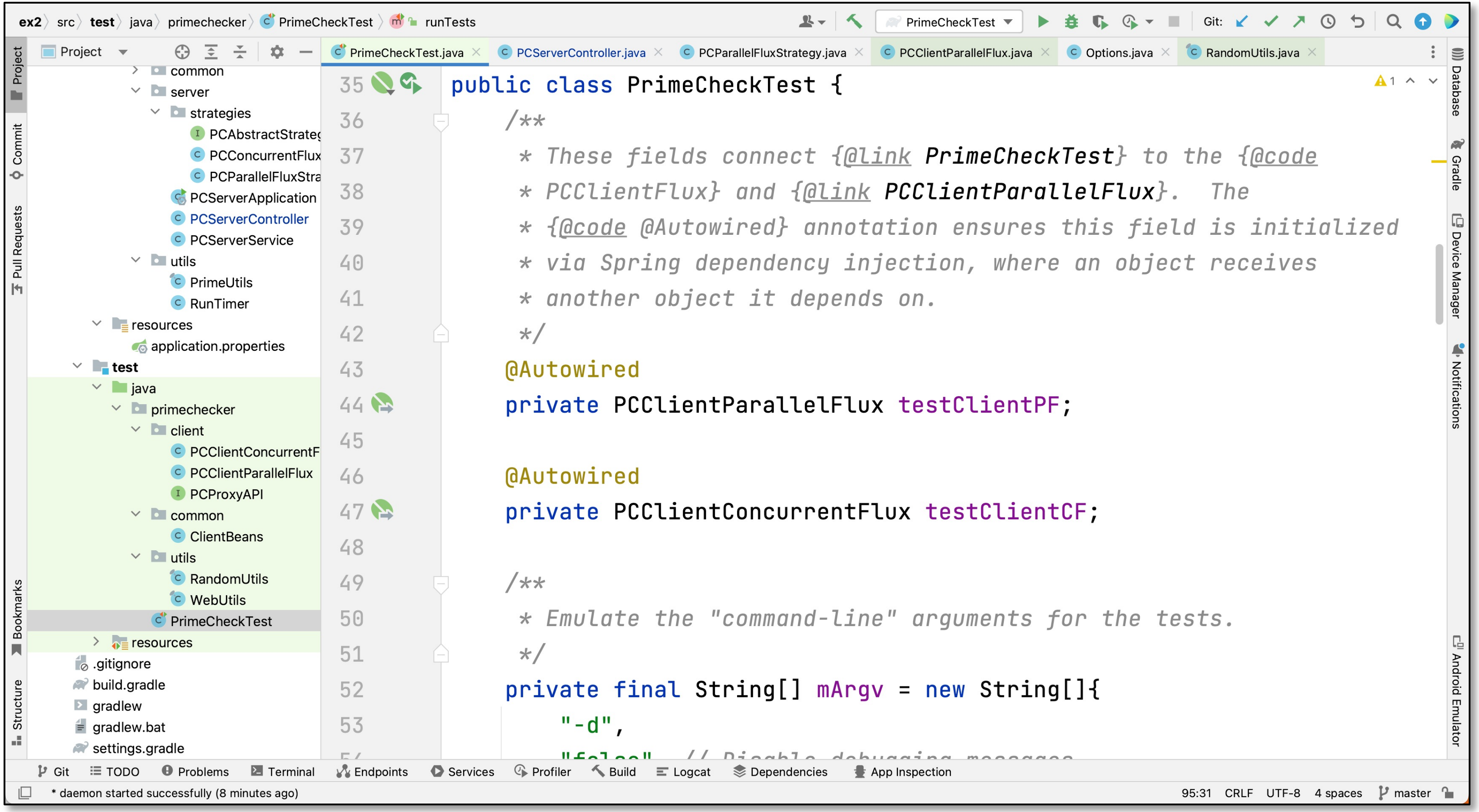

```java
public class PrimeCheckTest {
    /**
     * These fields connect {@link PrimeCheckTest} to the {@code
     * PCClientFlux} and {@link PCClientParallelFlux}.  The
     * {@code @Autowired} annotation ensures this field is initialized
     * via Spring dependency injection, where an object receives
     * another object it depends on.
     */
    @Autowired
    private PCClientParallelFlux testClientPF;

    @Autowired
    private PCClientConcurrentFlux testClientCF;

    /**
     * Emulate the "command-line" arguments for the tests.
     */
    private final String[] mArgv = new String[]{
        "-d",
        "false",  // Disable debugging messages
```

See github.com/douglascraigschmidt/LiveLessons/tree/master/WebFlux/ex2

End of the PrimeCheck App Case Study: Test Driver