Learning Objectives in this Part of the Lesson

- Understand the structure & functionality of the BerraQuotesController & the BerraQuotesService used with Spring WebMVC to obtain Yogi Berra quotes

See [github.com/douglasraigschmidt/LiveLessons/tree/master/WebMVC/ex2](https://github.com/douglasraigschmidt/LiveLessons/tree/master/WebMVC/ex2)
Structure & Functionality of the BerraQuotesController
Structure & Functionality of the BerraQuotesController

- BerraQuotesController maps HTTP GET requests to endpoint handler methods

```java
@RestController
public class BerraQuotesController {

    @GetMapping("allQuotes")
    public List<Quote> getAllQuotes(Integer strategy) {...}

    @GetMapping("quotes")
    public List<Quote> getQuotes(Integer strategy,
                                  @RequestParam List<Integer quoteIds) {...}

    @GetMapping("search" + "/{query}")
    public List<Quote> search(Integer strategy,
                               @PathVariable String query) {...}

    @GetMapping("searches")
    public List<Quote> search(Integer strategy,
                               @RequestParam List<String> queries) {...}

...

See WebMVC/ex2/src/main/java/berraquotes/BerraQuotesController.java
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```

This annotation ensures request handling methods in the controller class automatically serialize return objects into HttpResponse objects

See [www.baeldung.com/spring-controller-vs-restcontroller](http://www.baeldung.com/spring-controller-vs-restcontroller)
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These endpoint handler methods forward to the BerraQuoteService methods that fulfill the requests
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See [www.baeldung.com/spring-new-requestmapping-shortcuts](http://www.baeldung.com/spring-new-requestmapping-shortcuts)
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}
```

These strings are used to automatically identify & route to endpoint handler methods from incoming GET requests.

See [www.baeldung.com/spring-new-requestmapping-shortcuts](www.baeldung.com/spring-new-requestmapping-shortcuts)
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See www.baeldung.com/spring-request-param
BerraQuotesController maps HTTP GET requests to endpoint handler methods

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    ...
}
```

This annotation can be used to handle template variables in the request URI mapping, & set them as method params

See [www.baeldung.com/spring-pathvariable](http://www.baeldung.com/spring-pathvariable)
Structure & Functionality of the BerraQuotesService
Structure & Functionality of the BerraQuotesService

- BerraQuotesService defines methods called by BerraQuotesController, which simply forward to the designated implementation strategy.

```java
@Service
public class BerraQuotesService
{
    BQAbstractStrategy[] mStrategy = {
        new BQStructuredConcurrencyStrategy(),
        new BQParallelStreamStrategy(),
        new BQParallelStreamRegexStrategy(),
        new BQSequentialStreamsStrategy()
    };

    ...
}
```

See WebMVC/ex2/src/main/java/berraquotes/BerraQuotesService.java
Structure & Functionality of the BerraQuotesService

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    };
    ...
}
```

This annotation indicates the class implements "business logic" & enables auto-detection & wiring of dependent classes via classpath scanning

See [www.baeldung.com/spring-component-repository-service](http://www.baeldung.com/spring-component-repository-service)
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    ...
}
```

*This array contains strategies whose methods are implemented to provide Berra quotes (the order of these strategies matter)*
Structure & Functionality of the BerraQuotesService

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```java
@Service
public class BerraQuotesService {
    ...
    List<Quote> getAllQuotes(Integer strategy) {
        return mStrategy[strategy].getAllQuotes();
    }
    ...
}
```

Return all the quotes via the given strategy
Structure & Functionality of the BQAbstractStrategy Hierarchy
Structure & Functionality of the BQAbstractStrategy Hierarchy

- The BQAbstractStrategy abstract class defines methods used by various Berra quote implementation strategies that extend it.

See WebMVC/ex2/src/main/java/berraquotes/server/strategies
End of the BerraQuotes App Case Study: Server Structure & Functionality