

# Overview of Spring Boot's Internal Architecture

**Douglas C. Schmidt**

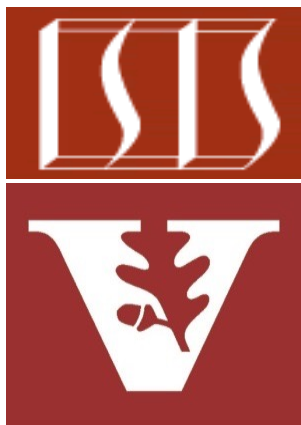
**[d.schmidt@vanderbilt.edu](mailto:d.schmidt@vanderbilt.edu)**

**[www.dre.vanderbilt.edu/~schmidt](http://www.dre.vanderbilt.edu/~schmidt)**

**Professor of Computer Science**

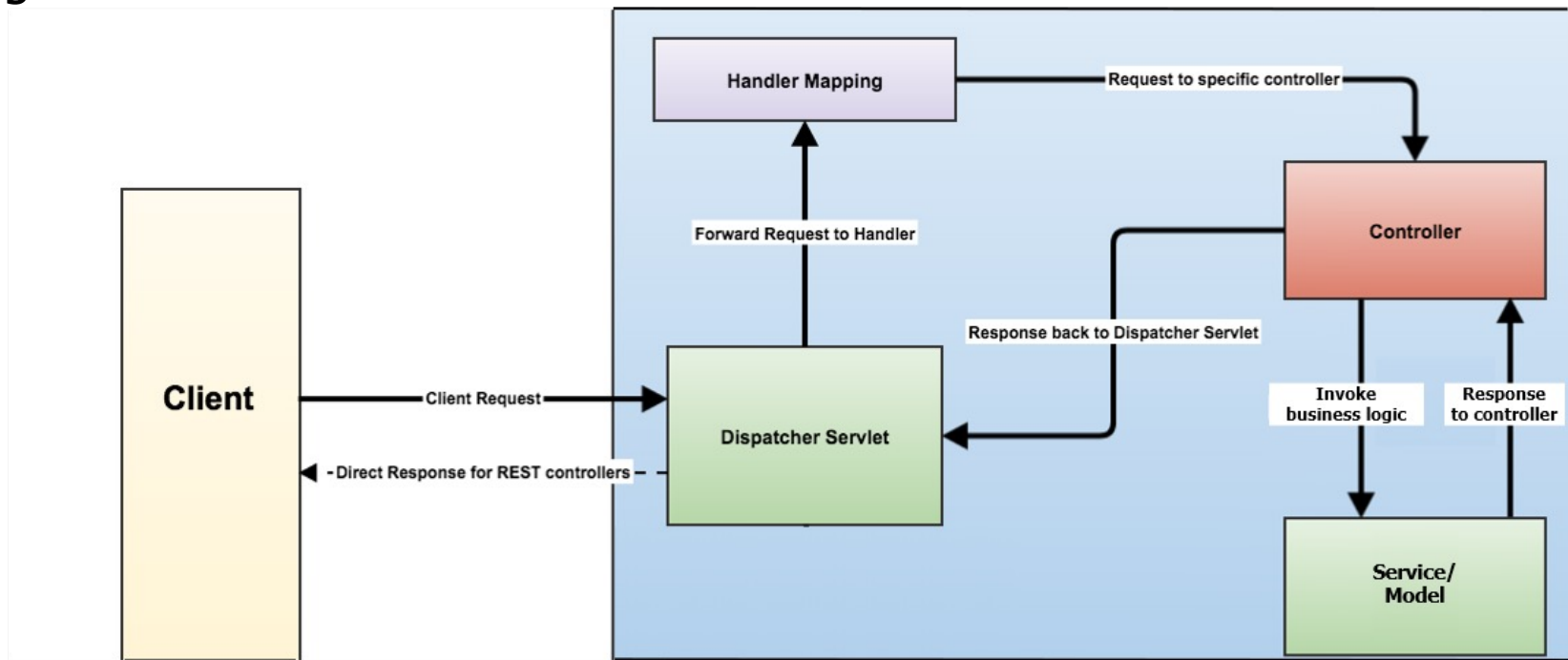
**Institute for Software  
Integrated Systems**

**Vanderbilt University  
Nashville, Tennessee, USA**



# Learning Objectives in this Lesson

- Understand the internal architecture of Spring Boot



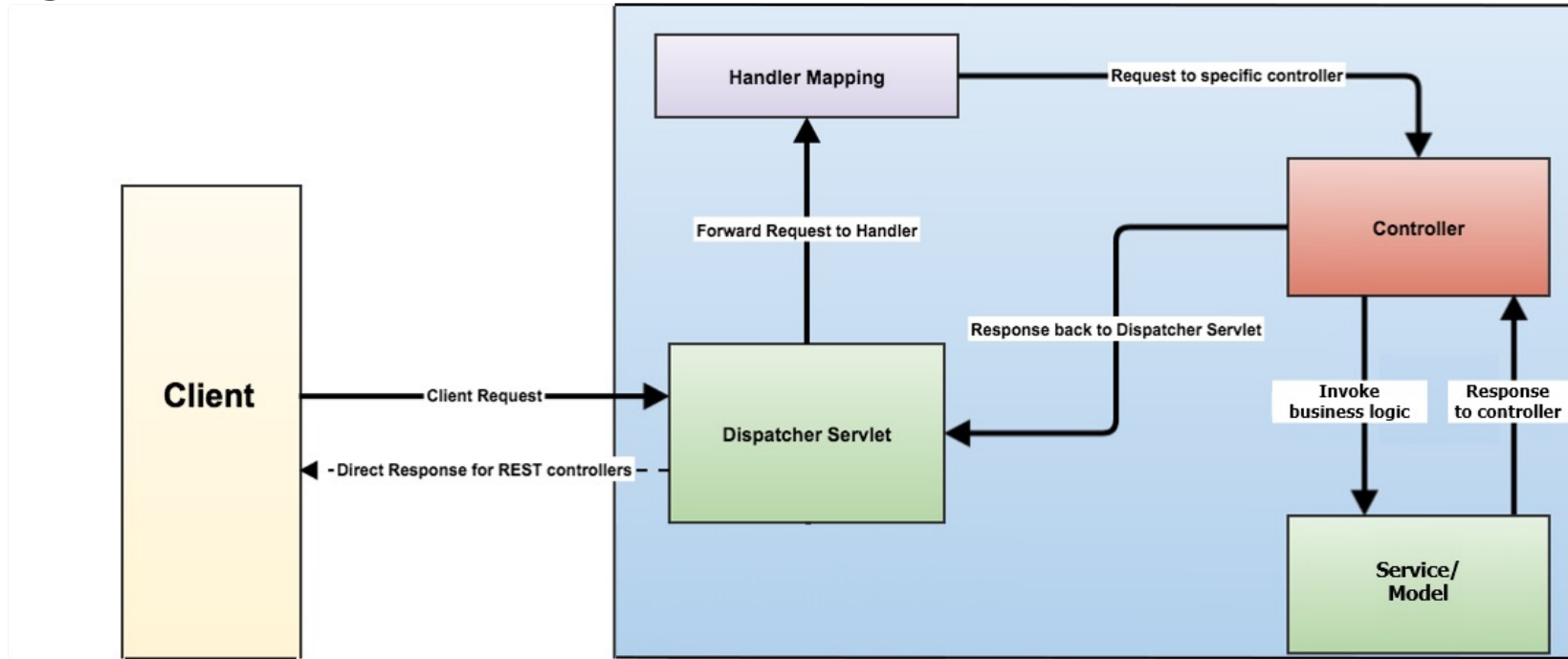
This architecture is similar (though not identical) for WebMVC & WebFlux

---

# Overview of Spring Boot's Internal Architecture

# Overview of Spring Boot's Internal Architecture

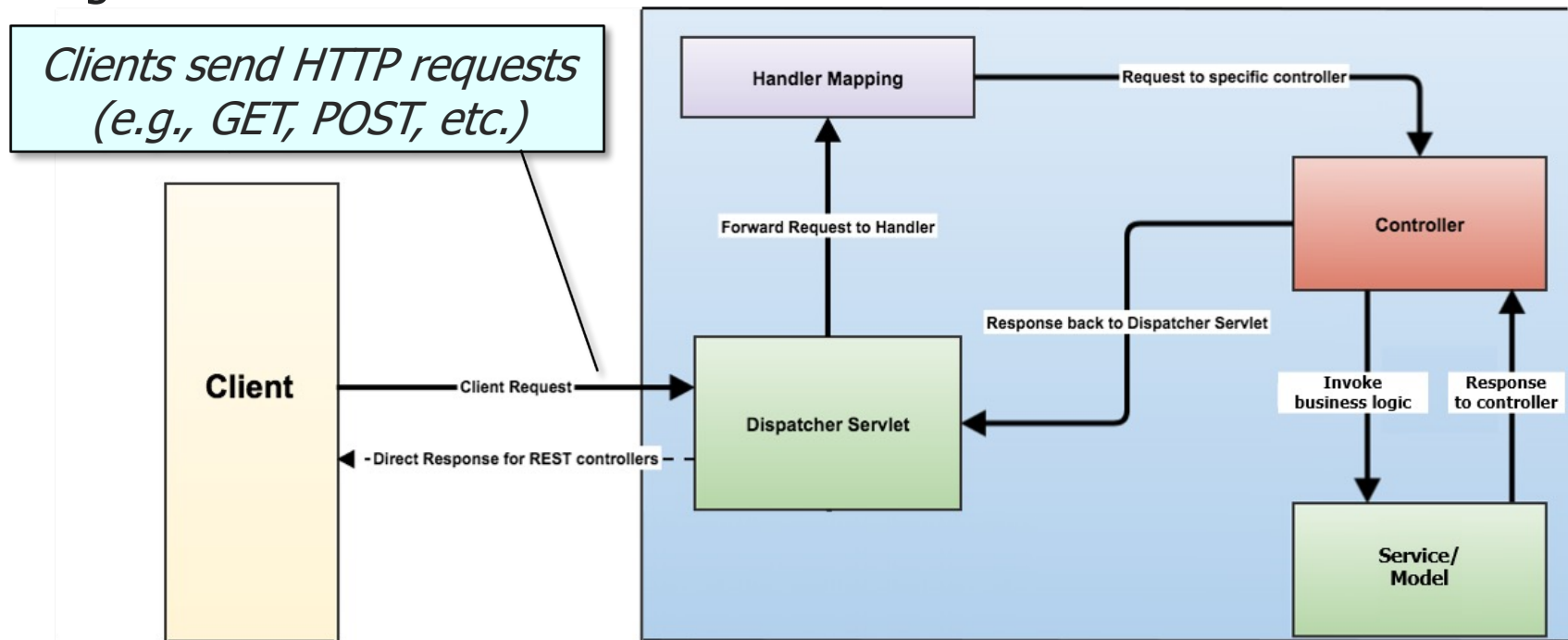
- Internally Spring Boot leverages Servlets & associated HTTP request/response processing



See [www.javadevjournals.com/spring-mvc/spring-controllers](http://www.javadevjournals.com/spring-mvc/spring-controllers)

# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing

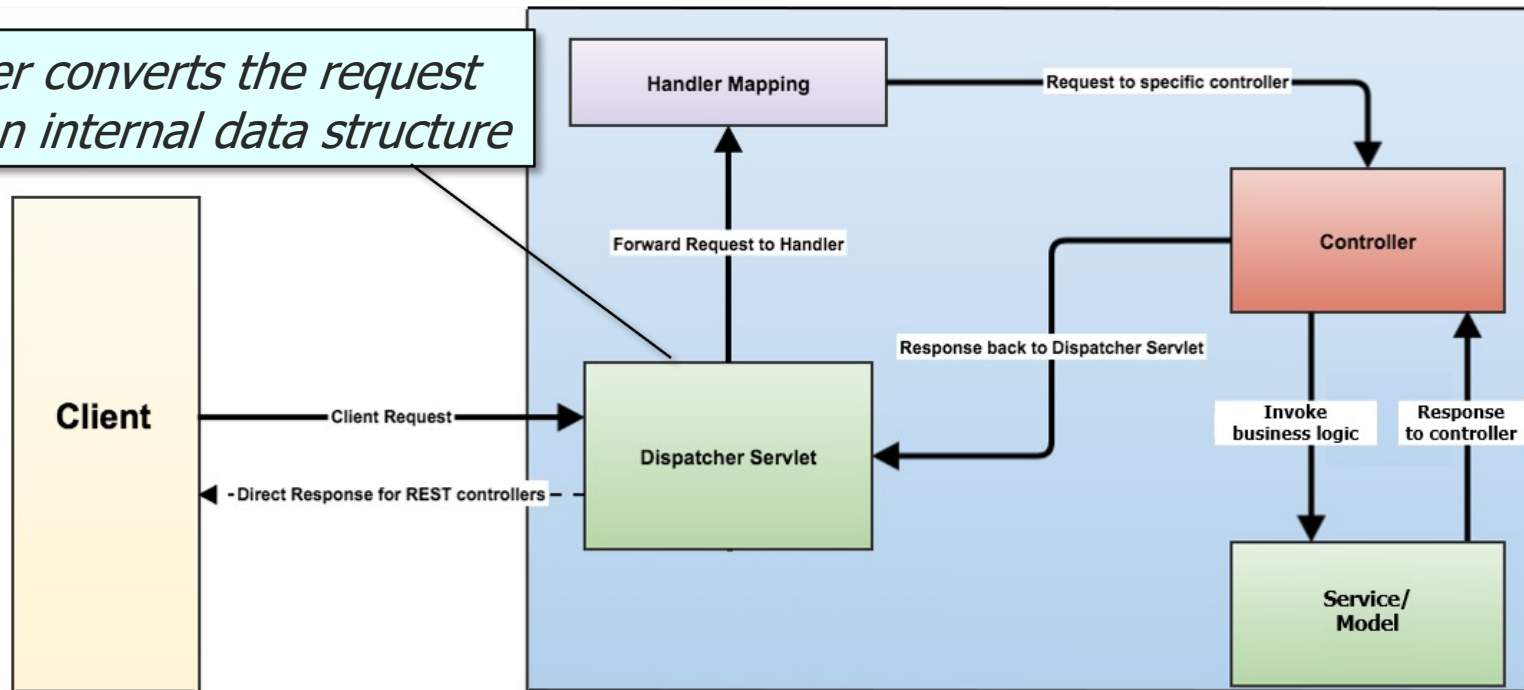


See [developer.mozilla.org/en-US/docs/Web/HTTP/Methods](https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods)

# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing

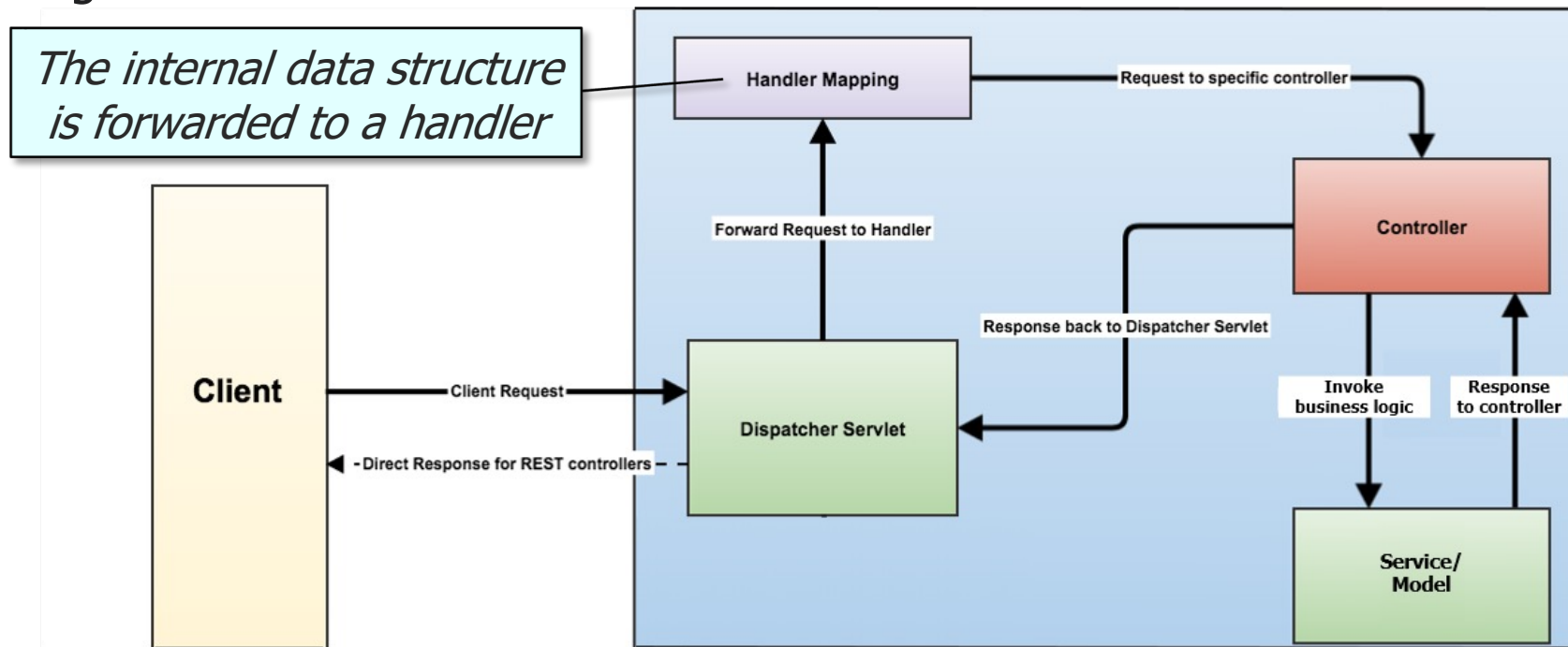
*The dispatcher converts the request contents into an internal data structure*



See [www.baeldung.com/spring-dispatcherservlet](http://www.baeldung.com/spring-dispatcherservlet)

# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing

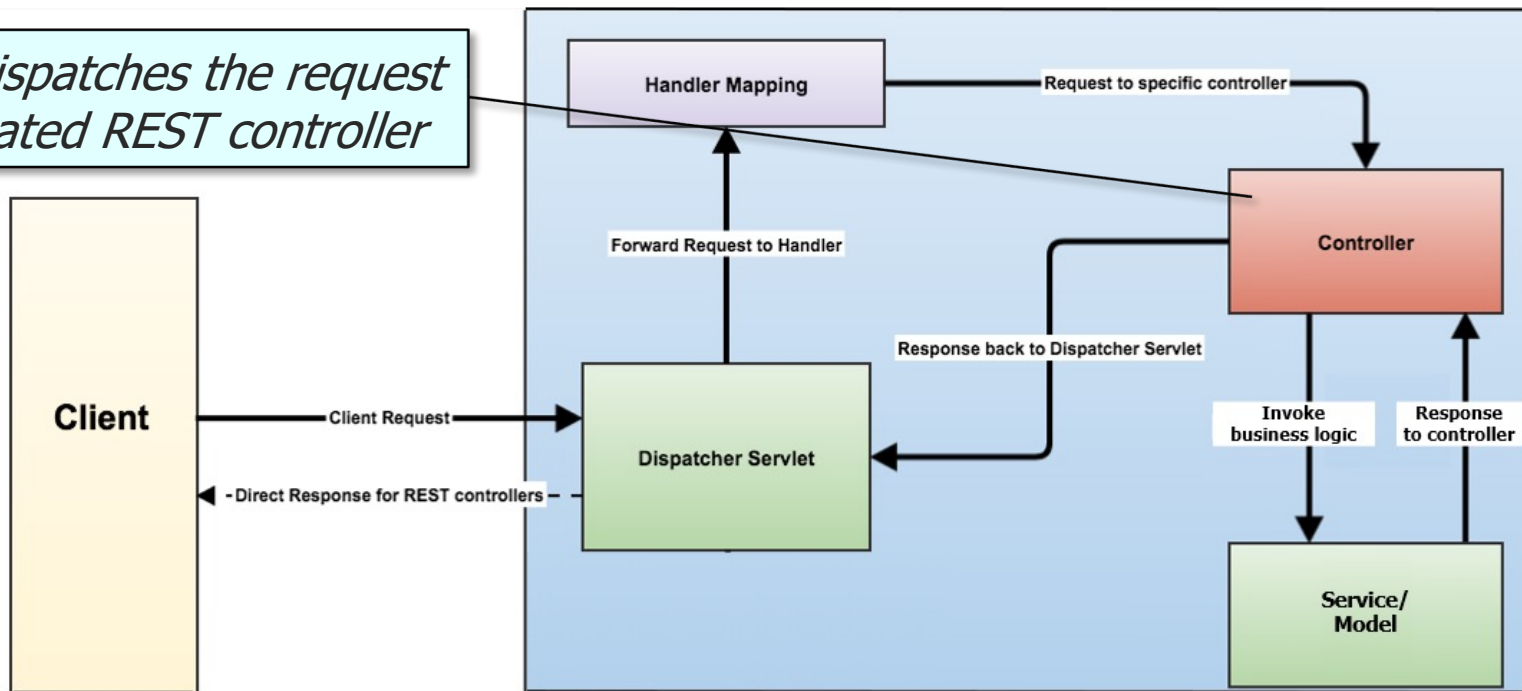


See [docs.oracle.com/javaee/7/api/javax/servlet/http/HttpServletRequest.html](https://docs.oracle.com/javaee/7/api/javax/servlet/http/HttpServletRequest.html)

# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing

*The handler dispatches the request on the associated REST controller*



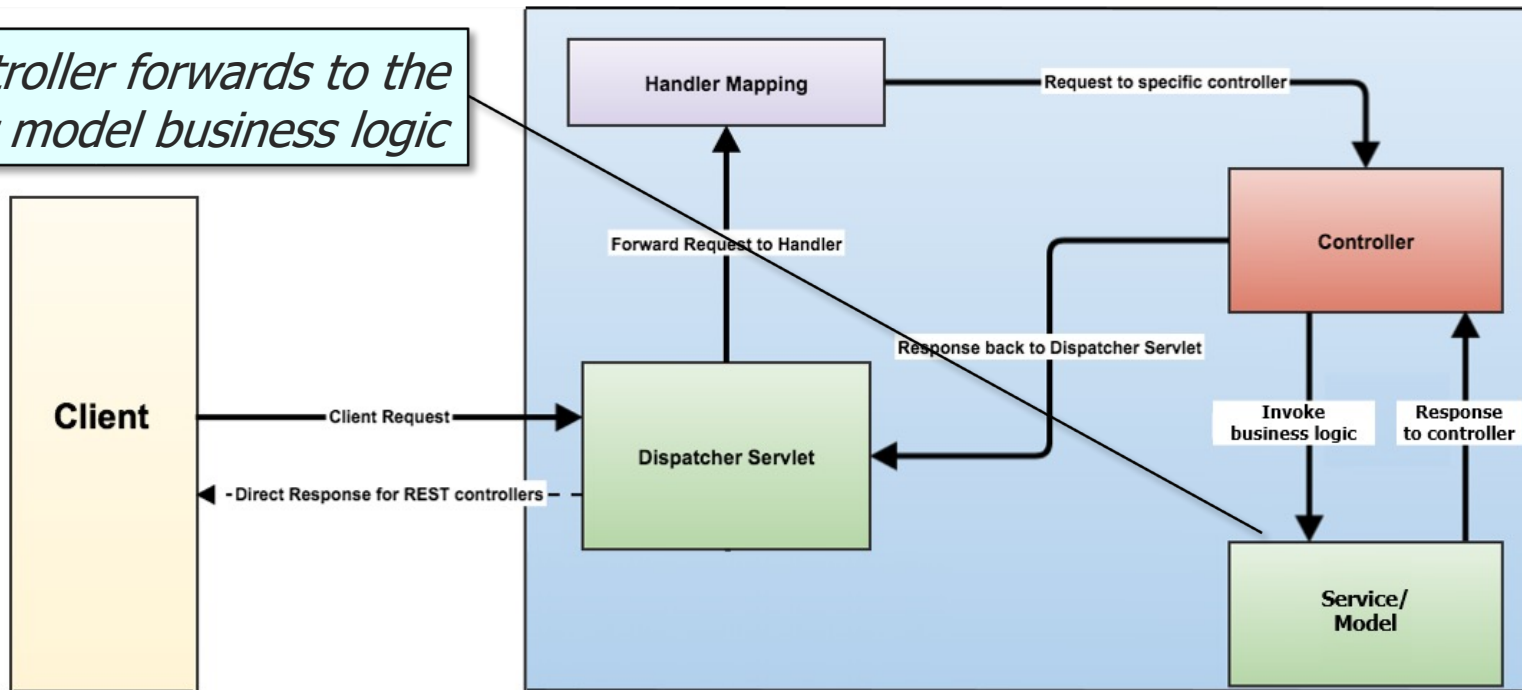
See [spring.io/guides/tutorials/rest](https://spring.io/guides/tutorials/rest)



# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing

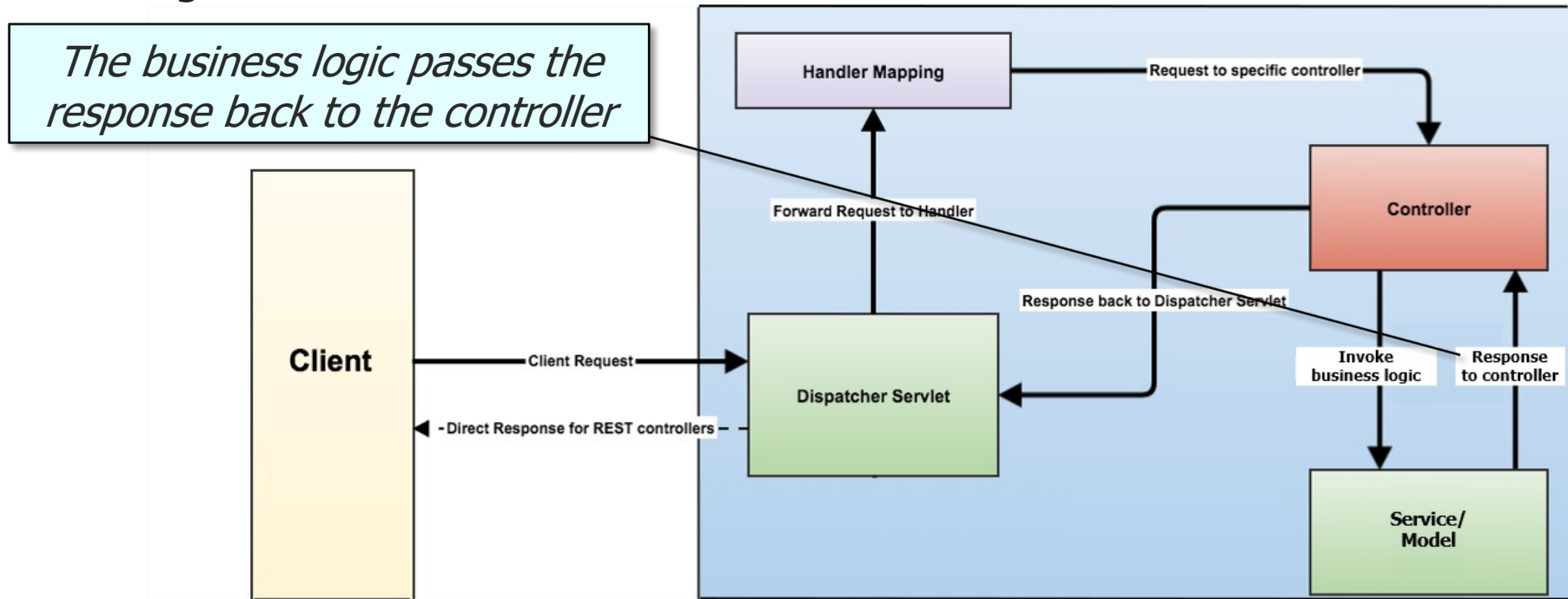
*The REST controller forwards to the service and/or model business logic*



See [www.tutorialspoint.com/spring\\_boot/spring\\_boot\\_service\\_components.htm](http://www.tutorialspoint.com/spring_boot/spring_boot_service_components.htm)

# Overview of Spring Boot's Internal Architecture

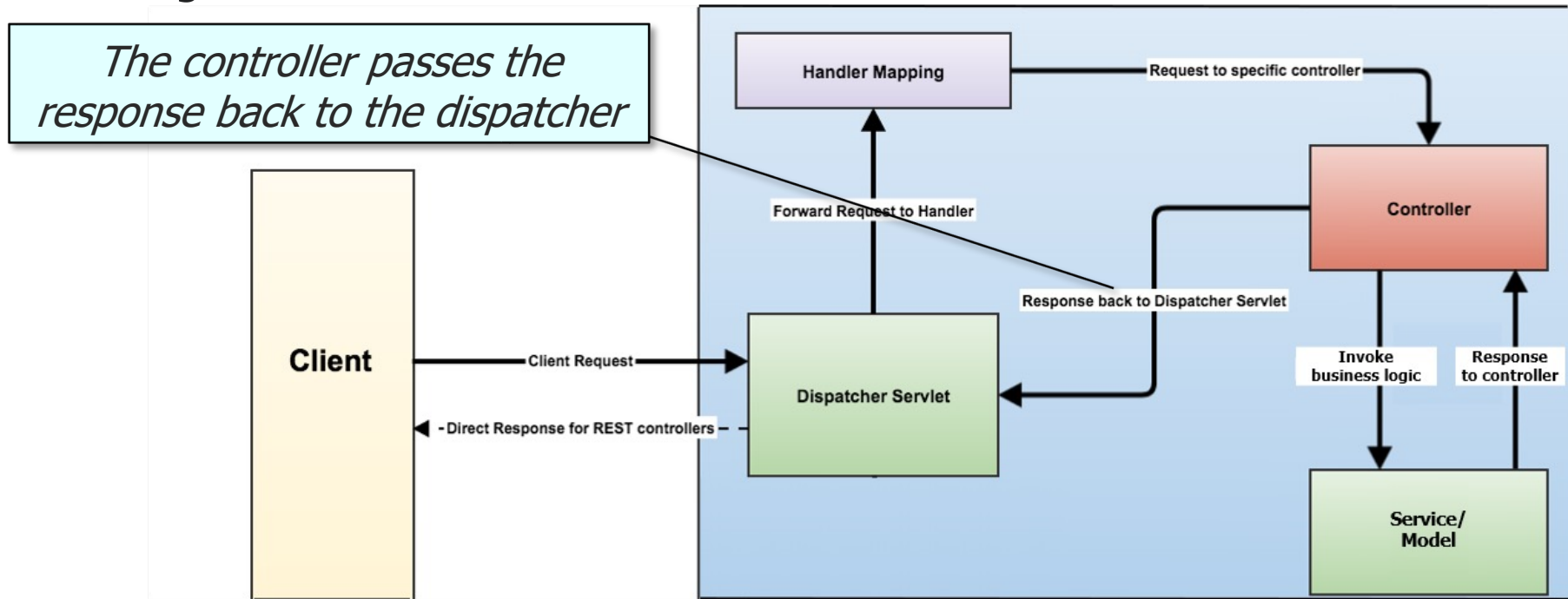
- Internally Spring Boot leverages Servlets & associated HTTP request/response processing



These interactions are performed by Java method calls

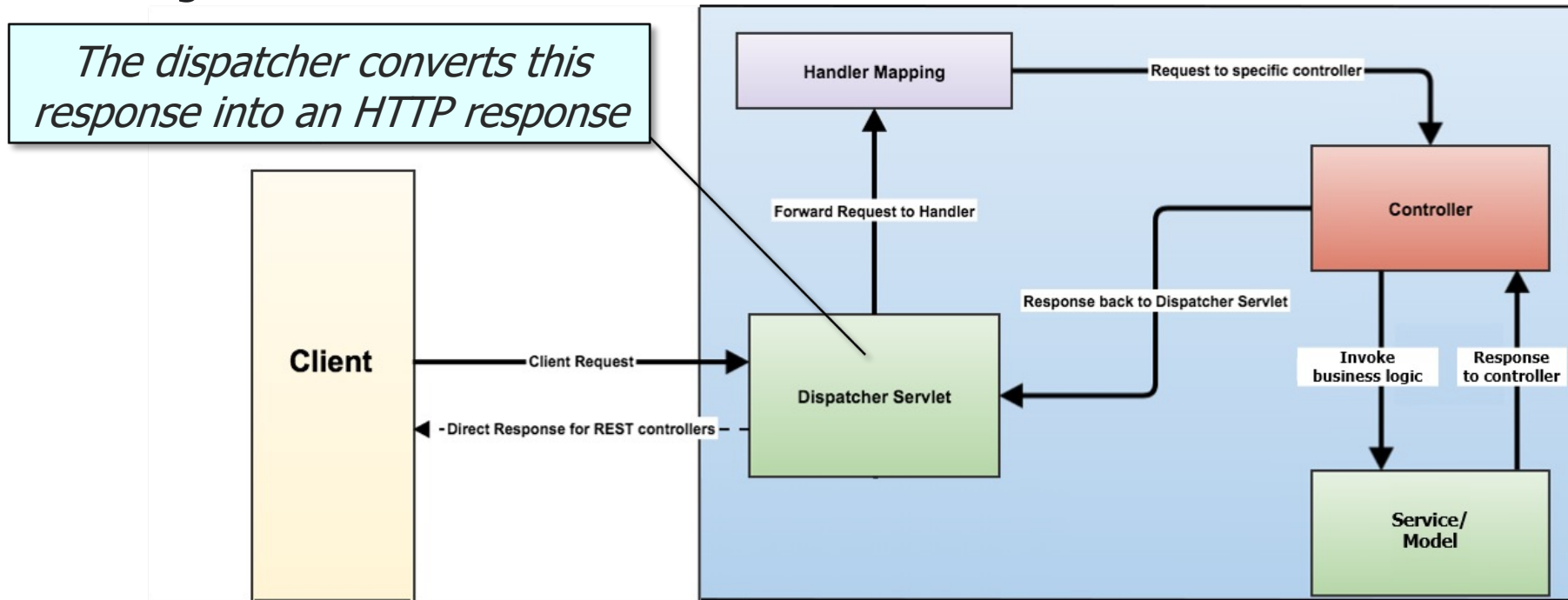
# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing



# Overview of Spring Boot's Internal Architecture

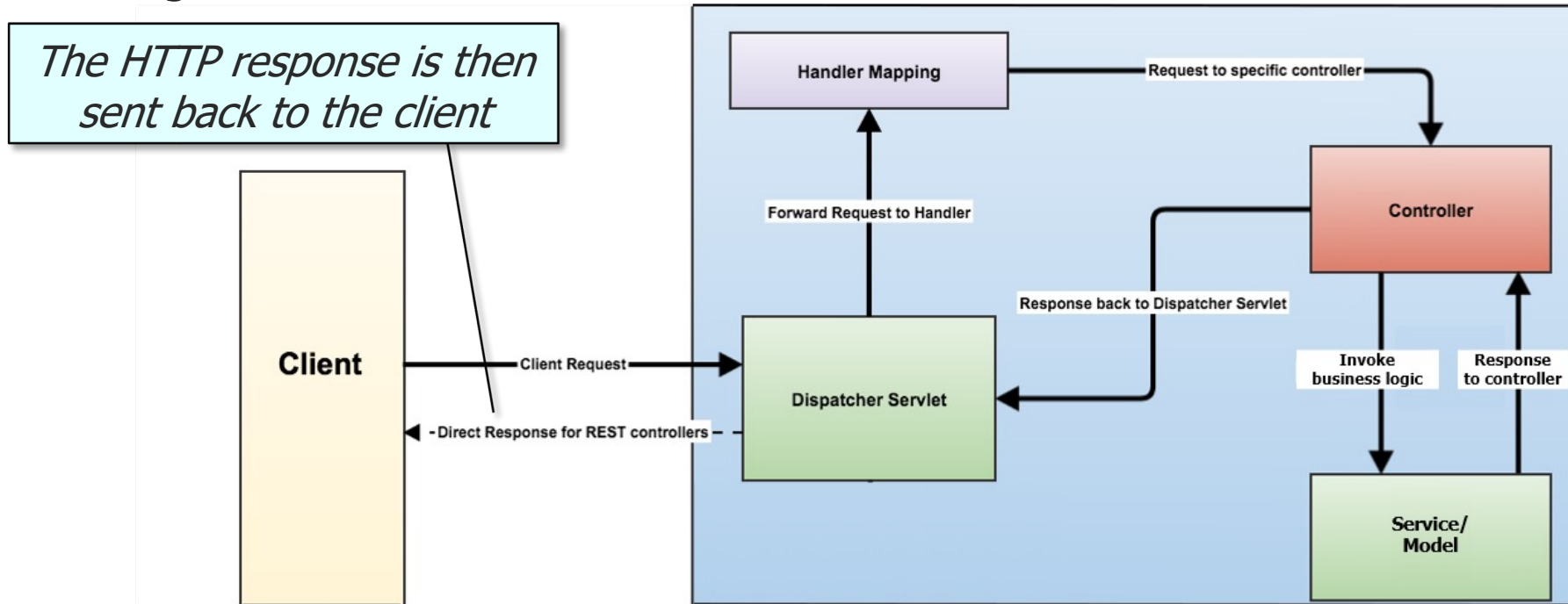
- Internally Spring Boot leverages Servlets & associated HTTP request/response processing



See [www.toolsqa.com/client-server/http-response](http://www.toolsqa.com/client-server/http-response)

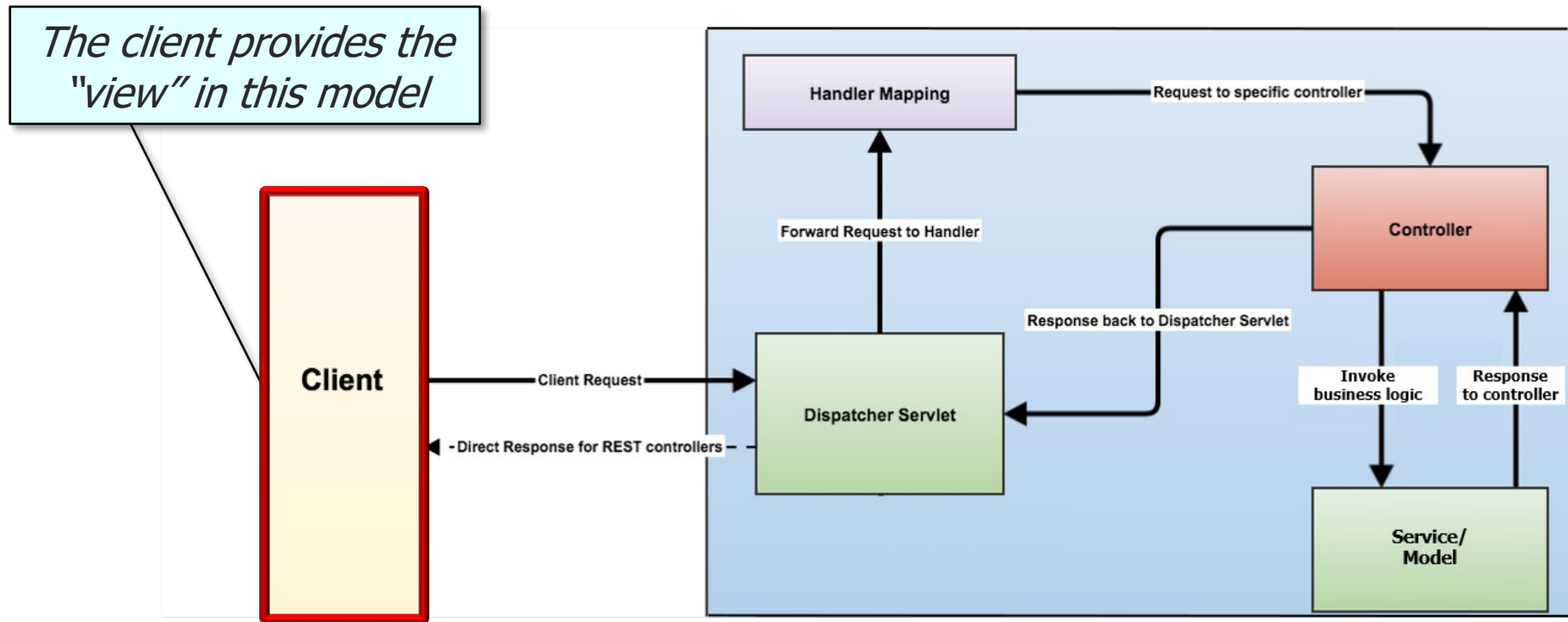
# Overview of Spring Boot's Internal Architecture

- Internally Spring Boot leverages Servlets & associated HTTP request/response processing



# Overview of Spring Boot's Internal Architecture

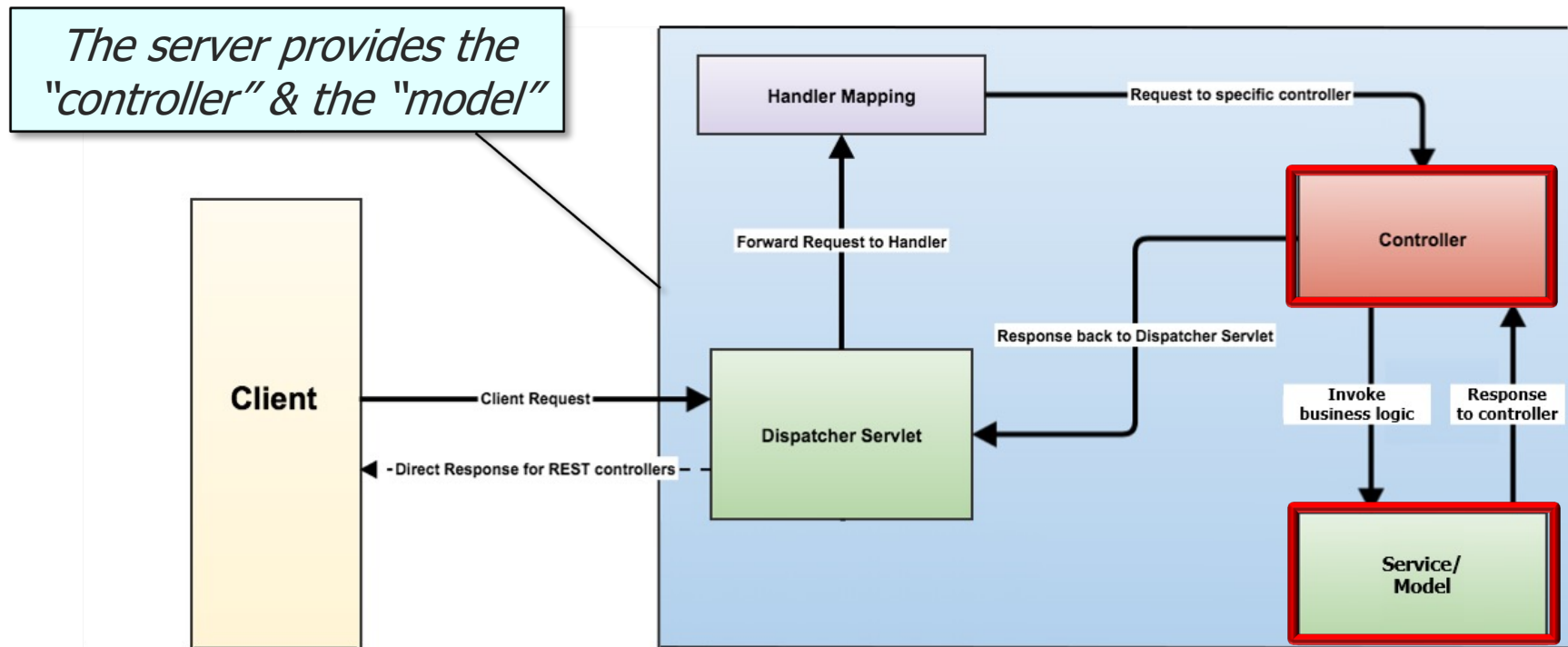
- Spring Boot implements the Model-View-Controller (MVC) pattern



See [en.wikipedia.org/wiki/Model-view-controller](https://en.wikipedia.org/wiki/Model-view-controller)

# Overview of Spring Boot's Internal Architecture

- Spring Boot implements the Model-View-Controller (MVC) pattern



See [en.wikipedia.org/wiki/Model-view-controller](https://en.wikipedia.org/wiki/Model-view-controller)

---

# End of Overview of Spring Boot's Internal Architecture