

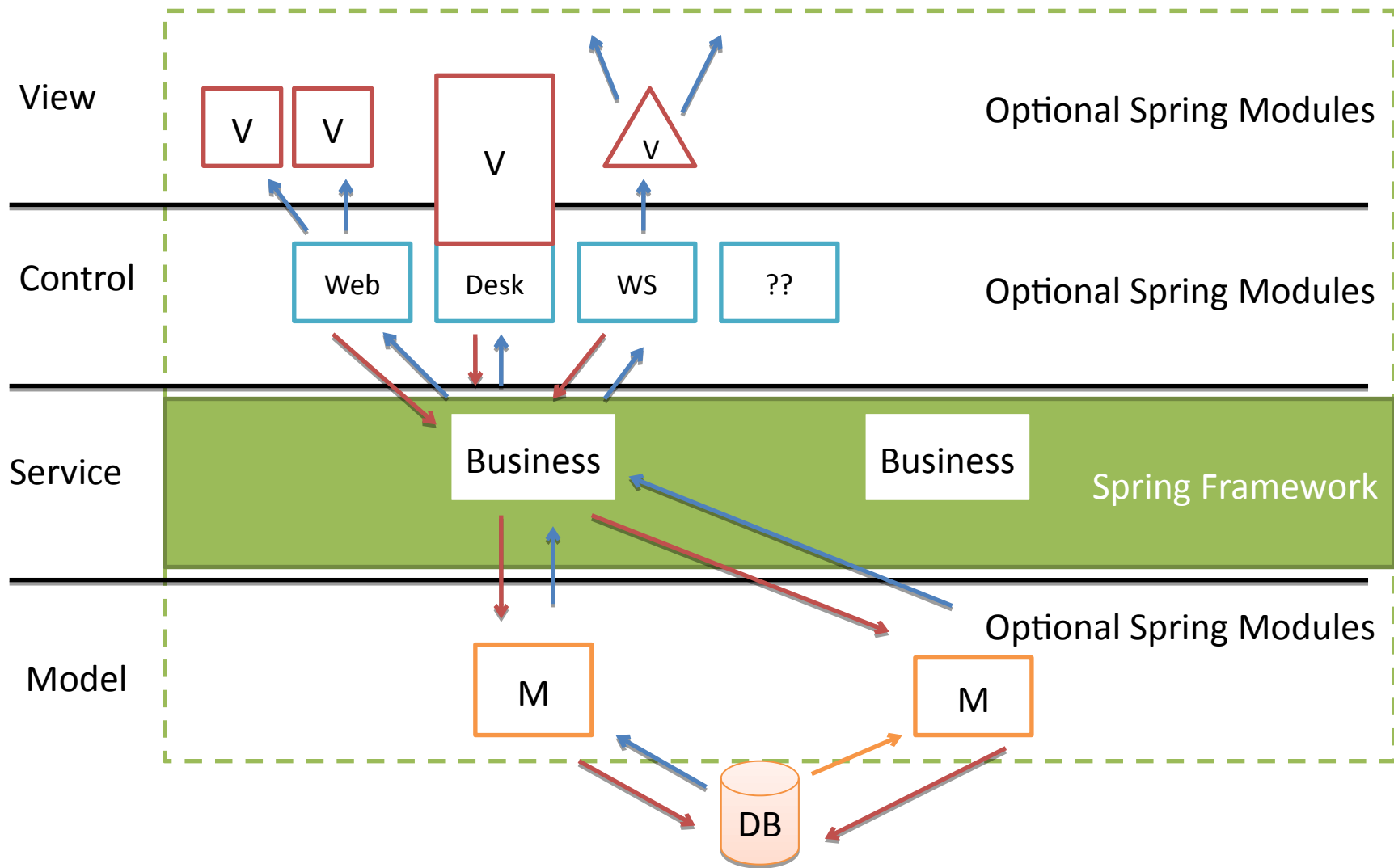


CS544 EA
Spring

Spring Applications

Spring Applications

- A typical Spring Application **manages Beans** for:
 - The Service layer @Service
 - Data Access Objects @Repository
 - Controllers @Controller



Multiple Configurations

- The spring config file often gets large
 - **Easy to split** according to layers
- There are several ways to **combine** them
 - When creating the context pass in multiple files
 - You can import one config into another

Multiple Files

- You can always pass multiple files when creating a Spring Context

```
public class App {  
    public static void main(String[] args) {  
        ConfigurableApplicationContext context = new AnnotationConfigApplicationContext(  
            RepoConfig.class, ServiceConfig.class, WebConfig.class);  
  
        ...  
    }  
}
```

```
public class App {  
    public static void main(String[] args) {  
        String[] xmlResources = {"accountService.xml", "dataAccess.xml", "jmsService.xml"};  
        ApplicationContext context = new ClassPathXmlApplicationContext(xmlResources);  
  
        ...  
    }  
}
```

Import

- Alternately you can import a config into another

```
@Configuration
@Import(EmailConfig.class)
public class AppConfig {
    @Autowired
    EmailService emailService;

    @Bean
    public CustomerService customerService(){
        CustomerService customerService = new CustomerServiceImpl();
        customerService.setEmailService(emailService);
        return customerService;
    }
}
```

With Java Config
define beans from the other config
with @Autowired (provides type safety)

```
<beans ...>
  <import resource="dataAccess.xml"/>
  <import resource="jmsService.xml"/>
  <bean id="accountService" class="bank.service.AccountService">
    <constructor-arg index="0" ref="accountDAO" />
    <constructor-arg index="1" ref="jmsSender" />
  </bean>
</beans>
```

Converting to use Spring

- When converting an application to use Spring
 - Remove all the **new** keywords for bean objects
 - Add meta data for objects to become **beans**
 - Add meta data for objects to connect (**DI**)
 - Be sure that the **Spring Context** is created