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## Java Spring-boot theory response

1. IOC is a design principle that means rather than having an application call methods in a framework, the framework call implementations that are provided by the application whereas Dependency injection is a form of IOC where implementations are passed into an object through constructors, setters and service look ups which the object depends on in order to work correctly.
2. Tomcat which also happens to be the default container.
3. Spring Boot uses an externalised config file known as application.properties
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- 6a. @Controller annotation is used to mark a class as Spring MVC controller whereas @RestController is a special controller used in RESTful web services and it is the equivalent of @Controller and @ResponseBody
- 6b. @RequestParam is used to get request parameters from the URL, it is also know as query parameters whereas @PathVariable extracts values from the URI path
- 6c. @ResponseBody represents an HTTP response and allows more flexibility in defining HTTP response headers and status codes whereas @ResponseBody puts the return value within the body of the response, it tells the controller that the object returned is automatically serialised into JSON and passed back into the HTTPResponse object
- 6d. @Component is used to mark Springs Managed components, Spring will pick up and register beans annotated with @Component and ignore @Service and @Repository whereas @Repository is used to catch persistence specific exceptions and throw the exception as a unified unchecked exception. @Service on the other hand is used to annotate beans as indication that they are holding business logic, they are used in the service layer.
7. Spring Batch
8. Server side load balancing is a classical load balancing. The traffic is distributed by a load distributor placed in front of the servers and distributed to the servers that will perform the main work equally or according to certain rules. As examples most common used server side load balancers nginx and netscaler