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WebService(BackEnd application)

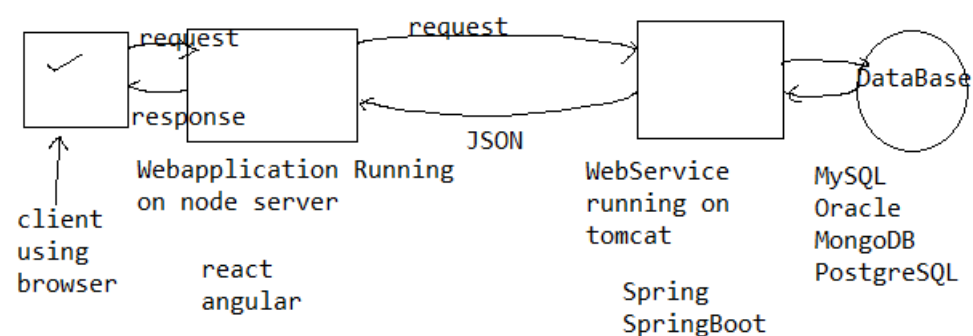
1. Any program which connects to database and return data in JSON format is called as webservice, It is also called as B2B (business to business)communication
2. In RESTFUL WebService data can be return in json, xml, text format, and it uses http protocol
3. Full form of REST webservice is Representational State transfer
4. It uses 4 mehods

GET	Read data
POST	Create data(add data)
PUT / PATCH	Update data
DELETE	Delete data

5. Always use nouns in url
6. In Older days webservices were using SOAP(Simple Object Access Protocol) protocol
These WebServices always return data in XML format by using SOAP envelop

Frontend application

1. It is a application which reads data from webservice or database. And converts it in html or user understandable format, also called as B2C(business to client) communication
2. Usually build by using technologies like react, angular, Spring, Python,.net



Spring validation

@NotNull – to check field should not be null

@NotEmpty--- to check the field is not empty

@NotBlank ---- to check that string field should not be blank, it must have at least one character

@Min and @Max ---- to check the range of values

@Pattern --- to check the value satisfies the given pattern

@Email---- to check whether email has @ symbol

It generates a validator object and throws ValidationException which spring boot converts into bad request

Junit and Mockito

@Test--- this will execute method when you will run the test code

@Before ----- It will get executed before every @Test method

@After----- It will get executed after every @Test method

@Mock --- it create a dummy object

@InjectMocks—it creates a dummy object and also inject all dependencies

Step 1:

Add security start dependency in pom.xml

Step 2

Add database and hibernate properties in application.properties

Step 3

Create following packages

1. Dao
2. Service
3. Config
4. Controller
5. Bean/entity
6. Filter
7. Util

Step 4:

Add security configuration in config package

1. Create a class SecurityConfig extend with WebSecurityConfigurerAdaptor and annotate with @Configuration and @EnableSpringSecurity
2. Override method configure(AuthenticationManagerBuilder auth),configure(HttpSecurity http) and a method to create Authentication manager

Step 5

Create a class which implements UserDetailsService and add method loadUserByUsername

Step6

Add /authenticate url in controller and call authenticationmanager authenticate method

If valid then call jwtutil.generatetoken method

Otherwise handle the exception

Step 7

Add JWTUtil class and add generateToken and validateToken methods

Step 8

Add JwtFilter extends OncePerRequestFilter, and override doFilterInternal

In this method, check authorization header, retrieve token and call jwtUtil.validateToken method.