1 – SOAP vs Restful ?

Rest is an architecture that makes communication between client and server with HTTP protocol. Rest supports JSON, HTML and XML formats. It is more useful than SOAP in this regard.

Soap literally means Simple Access Protocol. Basically, it is a protocol for transferring small-sized information or messages over the internet. It sends messages in XML format and uses the HTTP protocol.

2 - Difference between acceptance test and functional test ?

We use "functional testing" when we want to test only a function, regardless of the environment and side effects. However, if we want to check whether the expected work from the software is done, then we use "acceptance test". Acceptance Tests is used in scenarios for end users. We learn the answers to questions such as: Is this the app the customer really needs?

3 - What is Mocking ?

Mock is fake objects that can replace an object we want. We can make these objects behave as we want. Benefits of mocking:

- Unit test tests a unit. Therefore, while testing the flow there, it ensures that the dependencies connected to this flow do not disrupt the test flow.
- It allows us to direct the test in the scenario we want.
- It allows us to get rid of the slowness of complex objects.

4 - What is a reasonable code coverage % for unit tests (and why) ?

It may vary from person to person, but the generally accepted rate is 80%. The purpose of choosing this ratio is to ensure that most of the code is tested. Even if 51% is the majority, 80% is a generally accepted number. Usually, less focus is placed on a certain percentage of the code, allowing us to look more carefully at critical points. This allows us to focus on the important parts of the code.

5 – HTTP/POST vs HTTP/PUT ?

Both are HTTP methods used to send data to the server. POST is used to send data to a specific resource. The server decides what to do with the sent data. PUT accesses the same resource with the same address. If it is inside, the incoming data is changed. If there is no content, a new content is created. If it is desired to send a file-based content to the server, PUT operation is preferred.

6 - What are the Safe and Unsafe methods of HTTP ?

GET, HEAD, OPTIONS are safe methods. They are read-only structure. Safe methods don't change the server state.

PUT,Delete,POST,Patch are unsafe methods.

7 - How does HTTP Basic Authentication work ?

HTTP Basic Authentication is the form of authentication that the client requests. By entering the user name and password on the screen that comes up, the entity is provided to prove its identity.

- The browser sends a request to the page.
- The server sends code 401 and www-Authenticate variable with "basic" value. "WWW-Authenticate : Basic"
- When the client browser encounters this header, It creates ID-Password window and collects the inputs.
- The client enters the user name and password information on the screen and sends it. The browser codes these entries with base64. For example ID=Dogukan , Password= Bayrak
- " Base64Encode ('Dogukan:Bayrak') like this. Output will be YWRtaW46MTIzNDU=
- Client browser adds this base64 value into the Authorization.
- Authorization : Basic YWRtaW46MTIzNDU=
- The server receives the encode value sent by the client in the Authorization header. And compares it with the same base64 encode value of the username and password registered on the server.
- If both base64 encodes are equal , servers sends HTTP 200 status code.

8 - Define RestTemplate in Spring ?

If we want to define RestTamplate, we can say that the system where we reach Restful services via java and get a response.

9 – What is idempotant and which HTTP methods are idempotant ?

No matter how many times we call a method, if the result is the same, that method is an idempotent method. For example :

public void calculation() {

a=67;

}

When we call calculation method, the result always be the same.

Options,Get,Head,Put,Delete methods are idempotant.

10 – What is DNS Spoofing ? How to prevent ?

DNS snoofing is data change in the cache database on the nameserver. Data is added to the database or existing data is changed. That's why DNS returns wrong IP addresses and redirects traffic elsewhere.

- Use DNSSEC
- Always encrypt the data contained in DNS requests and records.

11 – What is content negotiation ?

Generally, the REST resources can have multiple presentations, mostly because there may be different clients expecting different representations. Asking for a suitable presentation by a client is referred to as content negotiation.

12 – What is statelessness in RESTful Web Services ?

It means that the server does not keep information such as session about the client. Only client does. Therefore, the server does not keep information such as how many requests the requesting client has made before or which requests. The client, on the other hand, gives all the information the server needs in its request.

13 - What is CSRF attack? How to prevent ?

CSRF meaning Cross Site Request Forgery. They take advantage of the vulnerability of a website as a general structure.

It includes the process of taking action by accessing the site users as if they were that user, against their will. Generally, it allows attackers to take advantage of vulnerabilities in cases where GET requests and SESSION operations cannot be properly controlled.

As a user :

- Regularly clear cookies and site data
- Don't click the unknown links.

Non user :

- Use a POST method.
- Give the user a unique randomly generated "token".

Token : The web server creates a token. The token is stored in the form as confidential information. POST data includes token. The web application compares the token generated by the system with the token sent in the request. If the data matches, request is approved. If there is no match, the request will denied.

14 - What are the core components of the HTTP request and HTTP response ?

HTTP Request has 5 parts.

- Request Header
- Request Body

- VERB
- URI
- Http version

  HTTP Response has 4 parts.

- Status/Response Code
- HTTP version
- Response Header
- Response Body: