What is Api(Web Service):

A web service is a collection of open protocols and standards used for exchanging data between applications or systems. Software applications written in various programming languages and running on various platforms can use web services to exchange data over computer networks like the Internet in a manner similar to inter-process communication on a single computer. This interoperability (e.g., between Java and Python, or Windows and Linux applications) is due to the use of open standards.

Web services based on REST Architecture are known as RESTful web services. These webservices uses HTTP methods to implement the concept of REST architecture. A RESTful web service usually defines a URI, Uniform Resource Identifier a service, provides resource representation such as JSON and set of HTTP Methods.

## Advantages of RESTful web services

* RESTful web services are **platform-independent**.
* It can be written in any programming language and can be executed on any platform.
* It provides different data format like **JSON, text, HTML,** and **XML**.
* It is fast in comparison to SOAP because there is no strict specification like SOAP.
* These are **reusable**.
* They are **language neutral**.

In this i used spring boot to develop RestApi

What is spring boot :

Spring boot is developed on the top of spring framework which provide auto configuration based on dependency added in pom.xml

t provides an easier and faster way to set up, configure, and run both simple and web-based applications.

## Advantages of Spring Boot :

* There is no requirement for **XML** configuration.
* It also minimizes writing multiple **boilerplate codes** (the code that has to be included in many places with little or no alteration), XML configuration, and annotations.
* It creates **stand-alone** Spring applications that can be started using Java **-jar**.
* It **increases productivity** and reduces development time.

Yaml Support:

It provides a convenient way of specifying the hierarchical configuration. It is a superset of JSON. The SpringApplication class automatically supports YAML. It is an alternative of properties file.

Rabbit QA:

<https://www.cloudamqp.com/blog/2015-05-18-part1-rabbitmq-for-beginners-what-is-rabbitmq.html>

How to run application .

Download STS start :

<https://spring.io/tools>

Import project in this

--------------------

Download rabbitmq and install (follow how to start ) then right click on project and run as->spring boot application

Hit URL i sent in whatsapp

U will see the output

@RestController

@RequestMapping(value = "topic/")

public class TopicController {

@Autowired

RabbitMQRequestHandler rabbitMQRequestHandler;

@GetMapping(value = "/chat/{message}")

public String sender(@PathVariable("message") String message) {

rabbitMQRequestHandler.send(message);

return "Message sent to the RabbitMQ Successfully";

}

}

This sender method handle request and send it to rabbit mq server and server will send to consumer , Now there will no load of processing resposne and send back to client but it will be handler by rabbit mq server .

This is can process almose 100k request in a second