SNS COLLEGE OF TECHNOLOGY

Coimbatore-37.
An Autonomous Institution

COURSE NAME : 19CSE301 INTRODUCTION TO DATA SCIENCE

III YEAR/ V SEMESTER

UNIT – III
Topic: REST

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- **A REST API is a way for two computer systems to communicate using the HTTP technologies found in web browsers and servers.**

- Sharing data between two or more systems has always been a fundamental requirement of software development. For example, buying motor insurance.

- APIs (Application Programming Interfaces) help this type of communication between systems by providing an interface for them to talk to each other.

- REST is simply a widely adopted style of API that we use to communicate with internal and external parties in a consistent and predictable way. It can be compared with how we used to send a letter with a postage stamp, address, and envelope in a certain way to ensure it gets delivered and read.

- REST is commonly used by people on the web systems to interact with each other. For example, retrieving and updating account information in a social media application.

System A makes an HTTP request to a URL hosted by System B, which returns a response.

- It's identical to how a browser works.

- A browser makes a request for a specific URL.

- The request is routed to a web server which typically returns an HTML page.

- The page may contain references to images, style sheets, and JavaScript, which incur further requests and responses.

- REST is stateless: the client request should contain all the information necessary to respond.

- In other words, it should be possible to make two or more HTTP requests in any order, and the same responses will be received (... unless the API was designed to return random responses such as the quiz example above).

- A response should be defined as cacheable or not.

- Caching improves performance because it's not necessary to regenerate a response for the same URL.

- Private data specific to a certain user at a certain time would not normally be cached.

- The requesting client need not know whether it's communicating

  with the actual server, a proxy, or any other intermediary.

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- Tom M. Mitchell, "Machine Learning", McGraw-Hill Education (India) Private Limited, 2013.

- 2Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, "An Introduction to Statistical Learning: with Applications in R", Springer; First Edition 2013.

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