**Day 2 : 25 Aug 2024**

http module : http is a type of core module provide by node. Which help to create server as well responsible to receive the request from client and the response.

Req(http/https)----🡪

Client server

🡨--Res(http/https)

url module : this module provides set of property and function which help to extract url details.

Http moduel part of node js provide few event.

req.on(“eventName”,callback)

node JS web third party modules

1. Express JS
2. Koa JS
3. Hapi JS
4. Etc

Express JS is third party web node js framework which help develop web application using node very easily. It help us to serve static file like html, css every easily. It provide lot in built middleware. It help develop rest api very easily. It support all http protocol method like get, post, put, patch and delete. Express JS base upon http module. Express JS provided lot of view engine as Jade, Pug etc.

Create web application in node js using third party module ie express module

First you create separate folder express-demo-app

npm install express

this command download all required dependencies as well as create package.json file.

In Express JS use middleware module ie body-parser . This module is use to extract the data from request body part ie raw data or json or xml data.

Express 3.x version we need install this module separately. But from new version of express js this module present with express module

Syntax to use middleware modules

app.use(MiddlewaremoduleName); these can be pre defined or user defined.

Express provided express generator cli command line tool which help to generate sample template project with default few module with standard project structure.

Npm (node package manager) this command is use to download the external module

npm install -g express-generator

express express-generator-demo

or

express express-generator-demo --view=viewtechname

please move inside a folder

npm install it read all dependencies present in package.json file and install those modules.

Web Service

Giving the service for web application when more than one web application running using different technologies.

Amazon E application : They develop using Java or python or angular etc.

Payment -----🡪 Paytm Java

Gpay Python with Django

Phone pay Express JS

Credit car or debit cart Aps.net

Net banking

Req(in Form of Java object)

App1 XML/JSON App2

Res (in the form of Javascript object)

XML : eXtensible Markup language

JSON : Java Script object notation

Using Web Service we can consume as well as produce the data in xml or non xml ie json.

1. SOAP Web Service : Simple Object Access Protocol .SOAP web service base upon SOA (Service Oriented Architecture).

Broker UDDI Registry

Download or search WSDL file

Service details in wsdl file Web Service Description Language

Consumer Producer

SOAP Req getBalance(accno)

SOAP Res this information in the form of XML.

Using WSDL file they generate respective language code which help to call web service.

Limitation of SOAP Web Service

1. We need to share the data only in the form of XML
2. Using WSDL file we are creating classes or code using some tool. That code help to us to call other program service.
3. Rest full web service : In Rest full web service we can consume and produce data in any format base upon client requirement like xml, json, plain text, html or any other format. In Rest API we are making our resource as rest api. Rest full web service is not standard it is a style to expose our resource as service on demand.

Creating simple rest api using express js

Creat the folder express rest api

cd express rest api

npm install express

**app.js**

let express = require("express");

let app = express();

let product = {id:100,name:"Computer",price:45000}

app.get("/product",(req,res)=> {

    res.json(product)

})

app.listen(9090,()=>console.log("express server up"))

**protobuf**