CLOUD COMPUTING REDUCED CODES

**PRAC 1**

**Currency\_converter.py**

from flask import Flask, request, jsonify

app = Flask(\_\_name\_\_)

RATE = 0.012

@app.route('/convert')

def convert():

    try:

        inr = float(request.args.get('inr', ''))

        return jsonify(INR=inr, USD=round(inr \* RATE, 4))

    except (TypeError, ValueError):

        return jsonify(error="Invalid or missing INR amount"), 400

if \_\_name\_\_ == '\_\_main\_\_':

    app.run(debug=True)

**CurrencyConverterClient.java**

import java.net.http.\*;

import java.net.URI;

import java.util.Scanner;

public class CurrencyConverterClient {

    public static void main(String[] args) {

        System.out.print("Enter INR: ");

        String inr = new Scanner(System.in).nextLine();

        try {

            String url = "http://localhost:5000/convert?inr=" + inr;

            var request = HttpRequest.newBuilder().uri(URI.create(url)).build();

            var response = HttpClient.newHttpClient().send(request, HttpResponse.BodyHandlers.ofString());

            System.out.println("Response: " + response.body());

        } catch (Exception e) {

            System.out.println("Error: " + e);

        }

    }

}

**PRAC 2**

**CalculatorClient.java**

package com.example.soap;

import javax.xml.namespace.QName;

import javax.xml.ws.Service;

import java.net.\*;

public class CalculatorClient {

public static void main(String[] args) throws Exception {

CalculatorService calc = Service.create(

new URL("http://localhost:8080/calculator?wsdl"),

new QName("http://soap.example.com/", "CalculatorServiceImplService")

).getPort(CalculatorService.class);

System.out.println("Result: " + calc.add(10, 20));

}

}

**CalculatorPublisher.java**

package com.example.soap;

import javax.xml.ws.Endpoint;

public class CalculatorPublisher {

public static void main(String[] args) {

Endpoint.publish("http://localhost:8080/calculator", new CalculatorServiceImpl());

}

}

**CalculatorService.java**

package com.example.soap;

import javax.jws.WebService;

@WebService

public interface CalculatorService {

int add(int a, int b);

}

**CalculatorServiceImpl.java**

package com.example.soap;

import javax.jws.WebService;

@WebService(endpointInterface = "com.example.soap.CalculatorService")

public class CalculatorServiceImpl implements CalculatorService {

public int add(int a, int b) {

return a + b;

}

}

**PRAC 4**

import requests

res = requests.get(

    'https://www.googleapis.com/customsearch/v1',

    params={

        'q': 'nykaa',

        'key': ‘your api key’,

        'cx': 'your search engine id'

    }

).json()

if 'items' in res:

    print(res['items'][0]['link'])

else:

    print("No results found.")

**PRAC 6**

from flask import Flask, request, send\_from\_directory

import os

app = Flask(\_\_name\_\_)

os.makedirs('uploads', exist\_ok=True)

@app.post('/upload')

def upload():

    f = request.files.get('file')

    if not f: return {"error": "No file"}, 400

    f.save(f'uploads/{f.filename}')

    return {"message": f"'{f.filename}' uploaded"}

@app.get('/download/<name>')

def download(name):

    try: return send\_from\_directory('uploads', name, as\_attachment=True)

    except: return {"error": "Not found"}, 404

app.run(debug=True)