import java.aut.\*;

import java.aut.event.\*;

import java.io.\*;

import java.net.HttpURLConnection; import java.net.URL;|

import javautil Scannec;

public class WeathecEocecast extends Frame f private TextEield sitxInput;

private TextAce cesultAcea;

private final String apiKey = "036939265f38b7943c9d6acc5a5db0b®"; // Your OpenWeatherMap API key

public WeatherFocecast f

settitle("Weather Forecasting System"); setSize (400, 300);

setLaxout (new ElawLaxeut));

Label cityLabel = new Label ("Enter City:");

sityInput = new TextEield (20) ;

Button forecastButton = new Button ("Get Forecast");

cesultAce = new TextAcea (10, 30);

add (sityLabel);

add (cityIngut) ;

add (forecastButten);

add (cesultAcea) ;

forecastButton addActionListenec(new ActionListener) f

public void actionlecformed (ActionEvent e) {

getWeatherFacecast);

3);

addwindowListener (new WindowAdapter) 1

public void windowClosing WindowEvent e f

dispose);

3);

setVisible (true);

｝

private void getweathecEocesast 1

String city = sityInput.getText);

if (sitvuisEmpty)) 1 cesultAcea setText"Please enter a city name.");

return;

}

}

try i

String response = fetchWeatheData (city);

if (response ! = null) f

pacseAndDisplayWeathecData (response);

} else fl

cesultAcea-setText ("Error fetching weather data. Please try again.");

} catch (IOException e) 1

resultAcea, settext ("Error:" + eugetMessage));

｝

private String fetchWeatheData (String city) throws IDException f

String uclStcing = "http://api.openweathermap.org/data/2.5/weather?q=" + city + "&appid=" + apiKey + "&units=metric" ;

URL uch = new URL (uc/Stcing) ;

HttpURLConnection conn = (HttpURLConnection) uct openConnection) ;

conn. setRequestMethed ("GET");

int responselode = conn.getResponseCode();

if (cesponseCode == 200) 1

Scanner scanner = new Scanner (uch OpenStcean();

StringBuilder response = new StringBuilder);

while (scannec.hasNext) 1

response append (scannec.nexthine));

｝

scanner.close );

return response toStcing);

} else i

InputStcean eccorStceam = conn. getEcrecStcean);

if (eccorStcean != null) i

Scanner scanner = new Scanner (eccocStceam);

StringBuilder eccorResponse = new StringBuilder();

while (scannec.hasNext)) {

eccorResponse, append (scannec.nexthine));

scanner.close );

System. Out pcintlo ("Error Response:" + eccorResponse, toStcing()); // Debugging output

｝

return null;

｝

}

private void pacseAndDisplaykleatherlata (String response) 1

String temperature = "N/A";

String humidity = "N/A";

String condition = "N/A";

// Simple JSON parsing without using libraries

try i

int tempIndex = response. indexQf("\ "temp\":") + 7;

int tempEndIndex = response.indexQf(",\*, tempIndex);

temperature = response substring(tempIndex, tempEndIndex) + "°C";

int humidityIndex = response. indexQf("\"humidity\":") + 11;

int humiditxEndIndex = response indexQf(",", humiditxIndex);

humidity = response substring(humidityIndex, humidityEndIndex) + "%";

int conditionindex = response indexQf("\ "main\": I\*\*) + 8;

int conditionEndIndex = response indexQf("|"", conditionIndex);

condition - response substring(conditionindex, conditionEndIndex);

} catch (Exception e) { cesultAcea.setText"Error parsing weather data.");

return;

String forecast = "Weather in " + cityInput.getJext() + ":\n" +

"Temperature: " + temperature + "\n" +

"Humidity: " + humidity + "\n" +

"Condition: " + condition;

cesultAcea.setext (forecast) ;

public static void main (String[] args) {

new keathectorecast;

}

}