**package** firstSwing;  
  
**import** java.awt.EventQueue;  
**import** java.awt.FlowLayout;  
  
**import** javax.swing.JFrame;  
**import** javax.swing.JButton;  
**import** java.awt.event.ActionListener;  
**import** java.awt.image.BufferedImage;  
**import** java.awt.event.ActionEvent;  
**import** java.net.HttpURLConnection;  
**import** java.net.URL;  
**import** java.util.ArrayList;  
**import** java.io.BufferedReader;  
**import** java.io.InputStreamReader;  
**import** org.json.\*;  
**import** javax.swing.JLabel;  
**import** javax.swing.JTextArea;  
**import** java.io.InputStream;  
**import** org.apache.commons.io.IOUtils;  
**import** javax.swing.JToggleButton;  
**import** javax.swing.event.ChangeListener;  
**import** javax.swing.event.ChangeEvent;  
**import** javax.swing.AbstractButton;  
**import** javax.swing.ButtonModel;  
**import** javax.swing.ImageIcon;  
**import** javax.imageio.\*;  
**import** java.awt.Panel;  
  
**public class** FirstSwing {  
  
 **private** JFrame **frame**;  
 **boolean fallback** = **false**;  
  
 */\*\*  
 \* Launch the application.  
 \*/* **public static void** main(String[] args) {  
 EventQueue.*invokeLater*(**new** Runnable() {  
 **public void** run() {  
 **try** {  
 FirstSwing window = **new** FirstSwing();  
 window.**frame**.setVisible(**true**);  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
 }  
 });  
 }  
  
 */\*\*  
 \* Create the application.  
 \*/* **public** FirstSwing() {  
 initialize();  
 }  
  
 */\*\*  
 \* Initialize the contents of the frame.  
 \*/* **private void** initialize() {  
 **frame** = **new** JFrame();  
 **frame**.setBounds(100, 100, 470, 295);  
 **frame**.setDefaultCloseOperation(JFrame.***EXIT\_ON\_CLOSE***);  
 **frame**.getContentPane().setLayout(**null**);   
 String prodUrl = **new** String(**"https://dog.ceo/api/breed/breedname/list"**);  
 String testUrl = **new** String(**"https://dog.ceo/api/breedasdas/breedname/list"**);  
   
   
 JTextArea textArea\_1 = **new** JTextArea();  
 textArea\_1.setBounds(102, 27, 205, 26);  
 **frame**.getContentPane().add(textArea\_1);  
   
 JLabel lblNewLabel = **new** JLabel(**""**);  
 lblNewLabel.setBounds(53, 108, 318, 71);  
 **frame**.getContentPane().add(lblNewLabel);  
   
 JButton btnNewButton = **new** JButton(**"Search"**);  
 btnNewButton.addActionListener(**new** ActionListener() {  
 **public void** actionPerformed(ActionEvent e) {  
 **try** {  
 JSONObject resultObj = **null**;  
 JSONArray resultArr = **null**;  
 String textVal = textArea\_1.getText();  
 **if** (textVal.length() > 0) {  
 String url = **null**;  
   
 **if**(**fallback**) {  
 url = testUrl;  
  
 System.***out***.println(**"Falling back"**);  
 ClassLoader classloader = Thread.*currentThread*().getContextClassLoader();  
 InputStream is = classloader.getResourceAsStream(**"sample.json"**);  
 String jsonTxt = IOUtils.*toString*(is);  
 resultObj = **new** JSONObject(jsonTxt);  
 JSONObject jsonObj = resultObj.getJSONObject(**"message"**);  
 System.***out***.println(textVal);  
 resultArr = jsonObj.getJSONArray(textVal);  
 System.***out***.println(resultArr);  
  
 **if** (resultArr == **null**) {  
 lblNewLabel.setText(**"No result found."**);  
 }  
  
 } **else** {  
 url = prodUrl;  
  
 System.***out***.println(url);  
 url = url.replace(**"breedname"**, textVal);  
 System.***out***.println(url);  
 URL obj = **new** URL(url);  
 HttpURLConnection con = (HttpURLConnection) obj.openConnection();  
  
 *// optional default is GET* con.setRequestMethod(**"GET"**);  
 **int** respCode = con.getResponseCode();  
  
 **if**(respCode == 200) {  
 BufferedReader in = **new** BufferedReader(  
 **new** InputStreamReader(con.getInputStream()));  
 String inputLine;  
 StringBuffer response = **new** StringBuffer();  
  
 **while** ((inputLine = in.readLine()) != **null**) {  
 response.append(inputLine);  
 }  
 in.close();  
  
 resultObj = **new** JSONObject(response.toString());  
 resultArr = resultObj.getJSONArray(**"message"**);  
  
 } **else if** (respCode == 404 ) {  
 lblNewLabel.setText(**"Invalid input"**);  
 } **else**{  
 lblNewLabel.setText(**"Something went wrong."**);  
 }  
  
 }  
  
 *//print result* ArrayList<String> ar = **new** ArrayList<String>();  
 System.***out***.println(resultArr.length());  
 **for**(**int** i = 0; i < resultArr.length(); i++)  
 ar.add(resultArr.getString(i));  
   
   
   
 String resultText = String.*join*(**" "**, ar);  
 lblNewLabel.setText(resultText);  
 }  
   
 } **catch** (Exception e2) {  
 *//* ***TODO: handle exception*** }   
 }  
 });  
 btnNewButton.setBounds(148, 65, 97, 29);  
 **frame**.getContentPane().add(btnNewButton);  
   
 JToggleButton tglbtnApiTest = **new** JToggleButton(**"Test fallback"**);  
 tglbtnApiTest.addChangeListener(**new** ChangeListener() {  
 **public void** stateChanged(ChangeEvent e) {  
 AbstractButton abstractButton = (AbstractButton) e.getSource();  
 ButtonModel buttonModel = abstractButton.getModel();  
 **boolean** selected = buttonModel.isSelected();  
 **fallback** = selected;  
 }  
 });  
 tglbtnApiTest.setBounds(45, 215, 161, 29);  
 **frame**.getContentPane().add(tglbtnApiTest);  
   
 Panel panel = **new** Panel();  
 panel.setBounds(28, 100, 419, 110);  
 **frame**.getContentPane().add(panel);  
   
 JButton btnNewButton\_1 = **new** JButton(**"Show Picture"**);  
 btnNewButton\_1.addActionListener(**new** ActionListener() {  
 **public void** actionPerformed(ActionEvent e) {  
 **try** {  
   
 URL obj = **new** URL(**"https://dog.ceo/api/breeds/image/random"**);  
 HttpURLConnection con = (HttpURLConnection) obj.openConnection();  
   
 *// optional default is GET* con.setRequestMethod(**"GET"**);  
 **int** respCode = con.getResponseCode();  
   
 **if**(respCode == 200) {  
 BufferedReader in = **new** BufferedReader(  
 **new** InputStreamReader(con.getInputStream()));  
 String inputLine;  
 StringBuffer response = **new** StringBuffer();  
  
 **while** ((inputLine = in.readLine()) != **null**) {  
 response.append(inputLine);  
 }  
 in.close();  
   
 JSONObject resultObj = **new** JSONObject(response.toString());  
 URL imgUrl = **new** URL(resultObj.getString(**"message"**));  
 BufferedImage img = ImageIO.*read*(imgUrl);  
   
 JFrame frame = **new** JFrame();  
 frame.getContentPane().setLayout(**new** FlowLayout());  
 frame.getContentPane().add(**new** JLabel(**new** ImageIcon(img)));  
 frame.pack();  
 frame.setVisible(**true**);  
 }  
 } **catch** (Exception e2) {  
 *//* ***TODO: handle exception*** }  
 }  
 });  
 btnNewButton\_1.setBounds(254, 65, 117, 29);  
 **frame**.getContentPane().add(btnNewButton\_1);  
   
 }  
}