ackage farmgui;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.event.MouseAdapter;

import java.awt.event.MouseEvent;

import java.io.FileWriter;

import java.io.IOException;

import java.util.ArrayList;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JScrollPane;

import javax.swing.JTable;

import javax.swing.JTextField;

import javax.swing.table.DefaultTableModel;

/\*\*

\*

\* @author HP

\*/

public class FarmGui {

ArrayList<Cattle> cattlelist = new ArrayList<Cattle>();

String header[] = new String[]{"Cattle Id", "Weight (Kg)", "Breed type", "Date registered"};

DefaultTableModel dtm = new DefaultTableModel(header, 1);

FarmGui() {

JFrame frame = new JFrame("Cattle Information System");

frame.setSize(400, 450);

JLabel jlabel = new JLabel("Cattle Id");

jlabel.setBounds(10, 10, 60, 20);

frame.add(jlabel);

JLabel jlabela = new JLabel("Weight(Kg)");

jlabela.setBounds(10, 30, 100, 20);

frame.add(jlabela);

JLabel jlabelb = new JLabel("Breed Type");

jlabelb.setBounds(10, 50, 100, 20);

frame.add(jlabelb);

JLabel jlabelc = new JLabel("Date Registered");

jlabelc.setBounds(10, 70, 100, 20);

frame.add(jlabelc);

JTextField jtfcattleId = new JTextField();

jtfcattleId.setBounds(150, 10, 100, 20);

frame.add(jtfcattleId);

JTextField jtfweight = new JTextField();

jtfweight.setBounds(150, 30, 100, 20);

frame.add(jtfweight);

JTextField jtfbreedType = new JTextField();

jtfbreedType.setBounds(150, 50, 150, 20);

frame.add(jtfbreedType);

JTextField jtfdateRegistered = new JTextField();

jtfdateRegistered.setBounds(150, 70, 100, 20);

frame.add(jtfdateRegistered);

JButton jbuttoninsert = new JButton("INSERT");

jbuttoninsert.setBounds(120, 100, 150, 20);

frame.add(jbuttoninsert);

JTable jtable = new JTable();

jtable.setBounds(20, 140, 250, 350);

frame.add(jtable);

jtable.setModel(dtm);

JScrollPane scrollPane = new JScrollPane(jtable);

scrollPane.setBounds(20, 140, 350, 250);

frame.add(scrollPane);

jtable.getColumnModel().getColumn(0).setPreferredWidth(180);

jtable.getColumnModel().getColumn(1).setPreferredWidth(230);

jtable.getColumnModel().getColumn(2).setPreferredWidth(300);

jtable.getColumnModel().getColumn(3).setPreferredWidth(350);

jbuttoninsert.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent ae) {

String cattleId = jtfcattleId.getText().toUpperCase();

String weight = jtfweight.getText();

String breedType = jtfbreedType.getText();

String dateRegistered = jtfdateRegistered.getText();

if (cattleId.length() < 3) {

JOptionPane.showMessageDialog(frame, "Id should contain more than 3 number!!!");

return;

}

if (!isInteger(weight)) {

JOptionPane.showMessageDialog(frame, "Weight should only contain number!!!");

return;

}

Cattle cattle = new Cattle(cattleId, weight, breedType, dateRegistered);

cattlelist.add(cattle);

writeData();

}

});

frame.setResizable(false);

frame.setLocationRelativeTo(null);

frame.setLayout(null);

frame.setVisible(true);

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

}

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// TODO code application logic here

FarmGui farmgui = new FarmGui();

}

private void writeData() { //write data to file "data.txt"

try (FileWriter f = new FileWriter("data.txt")) {

StringBuilder sb = new StringBuilder();

for (int i = 0; i < cattlelist.size(); i++) {

sb.append(cattlelist.get(i).getCattleId() + "," + cattlelist.get(i).getWeight() + "," + cattlelist.get(i).getBreedType() + "," + cattlelist.get(i).getDateRegistered() + "-");

}

f.write(sb.toString());

f.close();

} catch (IOException e) {

return;

}

dtm.setRowCount(0); //update table content

for (int i = 0; i < cattlelist.size(); i++) {//populate table using object list

Object[] objs = {cattlelist.get(i).getCattleId(), cattlelist.get(i).getWeight(), cattlelist.get(i).getBreedType(),cattlelist.get(i).getDateRegistered()};

dtm.addRow(objs);

}

}

public boolean isInteger(String str) {

if (str == null) {

return false;

}

int length = str.length();

if (length == 0) {

return false;

}

int i = 0;

if (str.charAt(0) == '-') {

if (length == 1) {

return false;

}

i = 1;

}

for (; i < length; i++) {

char c = str.charAt(i);

if (c < '0' || c > '9') {

return false;

}

}

return true;

}

}