/\*Reference: https://docs.oracle.com/javase/tutorial/rmi/implementing.html

<https://www.youtube.com/watch?v=GURClZeR96E&t=662s>\*/

package com.sdsu.edu;

import java.rmi.registry.LocateRegistry;

import java.rmi.registry.Registry;

import java.util.Calendar;

import java.util.LinkedList;

import java.util.Queue;

import java.util.TimeZone;

import javax.swing.\*;

public class Advisor{

public static void main(String[] args) {

try{

//Returns a reference to the remote object Registry on the specified host and port.

Registry reg= LocateRegistry.getRegistry("127.0.0.1",1099);

MessageInterface im=(MessageInterface)reg.lookup("vkbind");

//this variable stores the course list

Queue<String> q=new LinkedList<String>();

//this variabel is used to either open a new alert box or to append the message to existing box

int count=0;

//a jframe is used inside which the textarea is used

JFrame jframe = new JFrame();

JPanel jp=new JPanel();

//the message is displayed in this textarea

JTextArea jta = new JTextArea(60,50);

jframe.setSize(600, 600);

//this is used to set the jframe in the middle

jframe.setLocationRelativeTo(null);

//i am setting the title of the jframe to advisor

jframe.setTitle("ADVISOR");

//this is used to add the scrollbar to textarea

JScrollPane scroll = new JScrollPane(jta,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS, JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

//i am adding the scrollbar to jframe

jframe.add(scroll);

//the textarea should not be allowed to be edited

jta.setEditable(false);

jp.add(jta);

jframe.add(jp);

//we are setting the jframe to visible

jframe.setVisible(true);

System.out.println("---------ADVISOR PROCESS STARTED--------");

while(true){

//we get the queue of course list

q=im.advisorRequest();

//if queue is empty then the control goes inside a loop for 3 seconds and checks again for the queue

if(q.isEmpty())

{

long start = System.currentTimeMillis();

long end = start + 3\*1000;

//the control stays inside the loop for 3 seconds

while (System.currentTimeMillis() < end)

{}

//here we either add the message to existing textarea or create a new textarea

if(count==1)

{

jta.setText("Waiting for response \n");

}

else

{

jta.append("Waiting for response \n");

}

}

else

{

//for each value in the queue the decision is made

for(String str:q)

{

//we take the time and convert it into milliseconds and add it to the random generated number and check whether it is odd or even

Calendar cal = Calendar.getInstance(TimeZone.getTimeZone("GMT"));

long time = cal.getTimeInMillis();

long random = (long )(Math.random() \* 50000 + 1);

time+=random;

//if the number is even then the decision is no

if(time % 2==0)

{

//here we either add the message to existing textarea or create a new textarea

count++;

if(count==1)

{

jta.setText("advisors decision for course '"+str+"' is 'NO' \n");

count++;

}

else

{

jta.append("advisors decision for course '"+str+"' is 'NO' \n");

}

System.out.println("advisors decision for course "+str+" is 'NO'");

//for each decision made the response is sent to the queue

im.advisorResponse(str, "no");

}

else//if the number is odd then it is 'yes'

{

//here we either add the message to existing textarea or create a new textarea

count++;

if(count==1)

{

jta.setText("advisors decision for course '"+str+"' is 'YES' \n");

count++;

}

else

{

jta.append("advisors decision for course '"+str+"' is 'YES' \n");

}

System.out.println("advisors decision for course "+str+" is 'YES'");

//for each decision made the response is sent to the queue

im.advisorResponse(str, "yes");

}

}

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

}