```
code : AgentPi


Afficheur.java
import org.javact.util.BehaviorProfile;

public interface Afficheur extends BehaviorProfile {

}

************************************************************
AgentTourisk.java

import org.javact.util.ActorProfile;

public interface AgentTourisk extends ActorProfile, Recherche, Superviseur, Afficheur {

}


************************************************************
Recherche.java

import org.javact.util.ActorProfile;
import org.javact.util.BehaviorProfile;
import org.javact.util.StandAlone;

public interface Recherche extends BehaviorProfile {
    public void become(Superviseur beh);
}

************************************************************

Superviseur.java

import org.javact.util.BehaviorProfile;
import org.javact.util.StandAlone;

public interface Superviseur extends BehaviorProfile, StandAlone {
    public void become(Afficheur beh);
}

************************************************************
Tourisk.java

import org.javact.util.ActorProfile;

public interface Tourisk extends Recherche, ActorProfile {

}


```

```
************************************************************
Skeleton1.java

import java.lang.management.ManagementFactory;
import java.lang.management.OperatingSystemMXBean;
import java.math.BigDecimal;

import org.javact.net.rmi.CreateCt;
import org.javact.util.StandAlone;

/**
 * Behaviour for the actor Recherche
 */
class RechercheBeh extends RechercheQuasiBehavior implements StandAlone {

    String[] itineraire;
    int position;
    String firstPlace=null;
    String bestPlace=null;
    double bestLoad=1;

    public RechercheBeh() {
        itineraire = JavActProbe.probe(2000);
        position = 0;
    }

    @Override
    public void run() {
        System.out.println("Je suis sur " + myPlace());

        if (firstPlace==null) {
            firstPlace=myPlace();
        }

        /* cas d'arret */
        if (position == itineraire.length - 1) {
            become(new SuperviseurBeh(firstPlace));
            go(bestPlace);
        } else {
            /* cas de base */
            OperatingSystemMXBean bean =
ManagementFactory.getOperatingSystemMXBean();
            double load = bean.getSystemLoadAverage();
            System.out.println(load);
            if (load<bestLoad) {
                bestLoad=load;
                bestPlace=myPlace();
            }
            go(itineraire[position++] + ":2000");
        }
    }
}

```

```java
/**
* Behaviour for the actor Superviseur
*/
class SuperviseurBeh extends SuperviseurQuasiBehavior {

    private String firstPlace;

    public SuperviseurBeh(String firstPlace) {
        this.firstPlace=firstPlace;
    }

    public void run() {
        System.out.println("Je fais mon calcul sur la machine "+myPlace());
        BigDecimal result=new Pi(10000).call();
        become(new AfficheurBeh(result));
        go(firstPlace);
    }

}

/**
* Behaviour for the actor Afficheur
*/
class AfficheurBeh extends AfficheurQuasiBehavior implements StandAlone {
    private BigDecimal result;

    public AfficheurBeh(BigDecimal result) {
        this.result=result;
    }

    @Override
    public void run() {
        System.out.println("Je suis rentré à la maison ! "+ myPlace());
        System.out.println(result);
    }
}

public class Skeleton1 {
    public static void main(String[] args) {
        CreateCt.STD.create("localhost:2000", new RechercheBeh());
    }
}


fin code : AgentPi
************************************************************

```

```
hello_correction.java

************************************************
Hello.java

import org.javact.util.ActorProfile;
import org.javact.util.BehaviorProfile;

/**
* Behaviour for the actor Hello
*/



***************************************************
HelloQuasiBehavior.java

import org.javact.lang.*;
import org.javact.local.CreateCt;
import org.javact.local.SendCt;
import org.javact.util.StandAlone;

public abstract class HelloQuasiBehavior extends QuasiBehavior implements Hello
{
}


********************************************************************

public class JAMstop implements org.javact.lang.Message
{
    private int signatureNumber ;


    public JAMstop()
    {
        signatureNumber = 0 ;
    }

    public final void handle(org.javact.lang.QuasiBehavior _behavior)
    {
        switch (signatureNumber)
        {
            case 0 :
                if (_behavior instanceof Hello)
                    ((Hello) _behavior).stop() ;
                else
                    throw new org.javact.lang.MessageHandleException() ;
                break ;
            default :
                throw new org.javact.lang.MessageHandleException() ;
        }
```

```java
    }
}

*******************************************************************************

public class JAMhello implements org.javact.lang.Message
{
    private int signatureNumber ;


    public JAMhello()
    {
        signatureNumber = 0 ;
    }

    public final void handle(org.javact.lang.QuasiBehavior _behavior)
    {
        switch (signatureNumber)
        {
            case 0 :
                if (_behavior instanceof Hello)
                    ((Hello) _behavior).hello() ;
                else
                    throw new org.javact.lang.MessageHandleException() ;
                break ;
            default :
                throw new org.javact.lang.MessageHandleException() ;
        }
    }
}
```

```

code Mobile chat
*************************************************************************
Mobile Chat.java

import org.javact.lang.Agent;
import org.javact.util.ActorProfile;
import org.javact.util.BehaviorProfile;

public interface MobileChat extends BehaviorProfile, ActorProfile{
    public void speak(String m);
    public void setDest(Agent a);
    public void move(String p, String text);
}


*************************************************************************
MobileChatSwing.java

import javax.swing.BoxLayout;
import javax.swing.JComboBox;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JTextArea;
import javax.swing.JTextField;

import org.javact.lang.Agent;
import org.javact.net.rmi.SendCt;

/**
 *
 * @author leriche - @ENAC - 2017
 */
public class MobileChatSwing {

    private JTextArea ta;
    private Agent myAgent;

    /**
     * @param beh
     *            le comportement de l'agent mobile
     * @param list
     *            le domaine de places accessibles
     * @param text
     *            l'état du texte
     */
    public MobileChatSwing(MobileChatBeh beh, Agent myAgent, String[] list, String text) {
        this.myAgent = myAgent;
        JFrame frame = new JFrame("Mobile Chat @ ENAC");

        frame.setSize(300, 400);
```

```java
        frame.setResizable(false);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setLocationRelativeTo(null);
        JPanel panel = new JPanel();
        frame.setContentPane(panel);

        ta = new JTextArea(text);
        ta.setEditable(false);

        JTextField field = new JTextField();

        JComboBox<String> box = new JComboBox<>();
        if (list != null) {
            for (String s : list) {
                box.addItem(s);
            }
        }

        panel.setLayout(new BoxLayout(panel, BoxLayout.PAGE_AXIS));
        panel.add(ta);
        panel.add(field);
        panel.add(box);

        field.addActionListener((ActionListener) -> {
            ta.insert("\nMoi : " + field.getText(), ta.getText().length());
            if (beh!=null) {
                beh.send(field.getText());
            } else {
                System.err.println("Behavior not set (yet?)");
            }
            field.setText("");
        });

        box.addActionListener((ActionListener) -> {
            JOptionPane.showMessageDialog(panel, "Je vais me déplacer sur " + box.getSelectedItem().toString());
            SendCt.STD.send(new JAMmove(box.getSelectedItem().toString(), ta.getText()), myAgent);
            frame.dispose();
        });

        frame.setVisible(true);
    }

    /**
     *
     * @param msg
     *            le message à ajouter dans le textarea
     */
    public void receive(String msg) {
        ta.insert("\n" + msg, ta.getText().length());
    }

    /**
     * pour tester en statique seulement
     *
     * @param args
     */
    public static void main(String[] args) {
        String[] l={"localhost"};
        new MobileChatSwing(null, null, l, null);
    }

}


***********************************************************************************
Skeleton1.java


/*
* ###########################################################################
* JavAct: A Java(TM) library for distributed and mobile actor-based computing
* Copyright (C) 2001-2007 I.R.I.T./C.N.R.S.-I.N.P.T.-U.P.S.
*
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* along with this library; if not, write to the Free Software Foundation,
* Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307, USA
*
* Initial developer(s): The I.A.M. Team (I.R.I.T.) - SMAC Team (IRIT) since 2007
* Contributor(s): The I.A.M. Team (I.R.I.T.) - SMAC Team (IRIT) since 2007
* Contact: javact@irit.fr
* ###########################################################################
*/

import org.javact.lang.*;
import org.javact.net.rmi.CreateCt;
import org.javact.net.rmi.SendCt;
import org.javact.util.StandAlone;

/**
* Behaviour for the actor MobileChat
*/
class MobileChatBeh extends MobileChatQuasiBehavior implements StandAlone
{

    private Agent dest;
    private String text;
    private transient MobileChatSwing ihm;
    private String[] list = JavActProbe.probe(1099);

    @Override
    public void run() {
        System.out.println("sur "+myPlace());
        ihm = new MobileChatSwing(this, ego(), list, text);
    }

    public void setDest(Agent dest) {
        this.dest=dest;
    }

    public void move(String place, String text2) {
        text=text2;
        go(place);
    }

    public void send(String msg) {
        send(new JAMspeak(msg), dest);
    }

    public void speak(String msg) {
        ihm.receive(msg);
    }

}

public class Skeleton1 {

    public static void main(String[] args) {
        Agent a1= CreateCt.STD.create("localhost",new MobileChatBeh());
        Agent a2 = CreateCt.STD.create("localhost",new MobileChatBeh());
        SendCt.STD.send(new JAMsetDest(a2),a1);
        SendCt.STD.send(new JAMsetDest(a1),a2);
    }

}

fin code Mobile chat
  *****************************************************************
```