Java Day 3

1. Create a Task Tracker

1) Create the following GUI using Android Framework

1) Task Name
2) Due Date
3) Project Name
4) Notes
5) Add Task Button
6) View Tasks Button

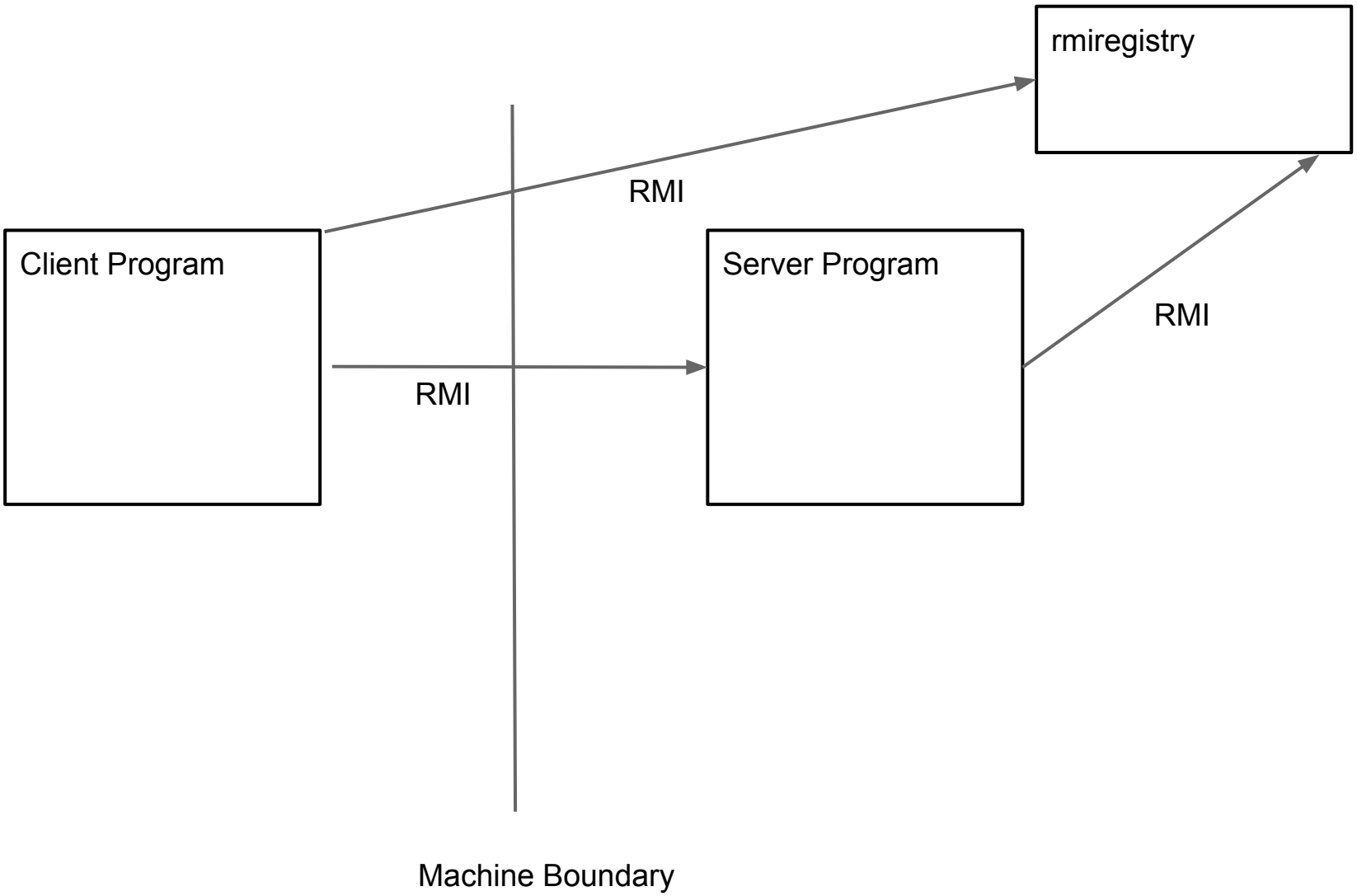
2. Java Remote Method Invocation (RMI)

- Distribute Java object instances across the network on different machines

- Can invoke them from our local machine in a way that's semantically equivalent to invoking a Java object instance that's right within our local address space

- In this example, we'll go over the basics of using Java RMI to remote part of a Java program across the network

3. RMI : Architecture



6. GUI application in Eclipse

- Install WindowBuilder plugin in Eclipse (http://download.eclipse.org/releases/juno) -> General Purpose Tools -> Swing Design, SWT Designer, WindowBuilder

Create a simple program with the following code :

```
public class App
{
	public static void main(String[] args)
	{
		SwingUtilities.invokeLater(new Runnable()
		{
			@Override
			public void run()
			{
				JFrame frame = new JFrame("Hello World Swing!");
				frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

				frame.setSize(500, 400);

				frame.setVisible(true);
			}
		});
	}
}
```

7. Create a sub-class of JFframe

```
public class MyFrame extends JFrame
{
	public MyFrame(String title)
	{
		super(title);
		// Set layout manager
		setLayout(new BorderLayout());
		// Create Swing component
		final JTextArea textArea = new JTextArea();
		JButton button = new JButton("Click me");
		// Add Swing components to content pane
		Container c = getContentPane();
		c.add(textArea, BorderLayout.CENTER);
		c.add(button, BorderLayout.SOUTH);
		// Click handler
		button.addActionListener(new ActionListener(){
			@Override
			public void actionPerformed(ActionEvent arg0)
			{
				textArea.append("Hello\n");

			}
```

8. GUI : Panels, Forms, GridBagLayout

- Create a sub-class of JPanel called DetailsPanel and add it to your MyFrame

```
detailsPanel = new DetailsPanel();
        c.add(detailsPanel, BorderLayout.
WEST);
```

9. GUI : DetailsPanel

```
public class DetailsPanel extends JPanel
{
	public DetailsPanel()
	{
		Dimension size = getPreferredSize();
		size.width = 250;
		setPreferredSize(size);
		setBorder(BorderFactory.createTitledBorder("Personal Details"));
		JLabel nameLabel = new JLabel("Name : ");
		JLabel occupationLabel = new JLabel("Occupation");
		JTextField nameField = new JTextField(10);
		JTextField occupationField = new JTextField(10);
		JButton addBtn = new JButton("Add");
		setLayout(new GridBagLayout());
		GridBagConstraints gc = new GridBagConstraints();

	}

}
```

10. GUI : Add to GridBagLayout

```
public class DetailsPanel extends JPanel
{
	public DetailsPanel()
	{
		Dimension size = getPreferredSize();
		size.width = 250;
		setPreferredSize(size);
		setBorder(BorderFactory.createTitledBorder("Personal Details"));
		JLabel nameLabel = new JLabel("Name : ");
		JLabel occupationLabel = new JLabel("Occupation");
		JTextField nameField = new JTextField(10);
		JTextField occupationField = new JTextField(10);
		JButton addBtn = new JButton("Add");
		setLayout(new GridBagLayout());
		GridBagConstraints gc = new GridBagConstraints();
		gc.weightx = 0.5;
		gc.weighty = 0.5;
		gc.gridx = 0;
		gc.gridy = 0;
		add(nameLabel, gc);
		gc.gridx = 0;
		gc.gridy = 1;
		add(occupationLabel, gc);
	}
}
```