



Discussion Guide

Discussion Guide

DSL Language Research Prepared by Jonathan Yardley

The objective of the Discussion Guide is to provide a loose outline of the conversation for the interviews. Questions are not meant to be read word for word, but rather a guide to ensure all relevant points are discussed during the time allotted.

Technology Notes

This will be in person, and sessions will be recorded. PiCode demonstration and interaction will happen on Rosie's machine.

Background & Purpose

PiCode is a domain specific language created for the use of developers who are creating the Pi Engine. The initial effort in defining PiCode has been focused around creating a language that is expressive enough for specifying payroll while remaining parsable. We have used this first iteration of PiCode to implement payroll for a subset of SIKa, an actual ADP client. Now that we have defined the two future users of PiCode (Customer Service Representatives and PiCode Developers), we want to tailor PiCode specifically for these users. The result

of these tests should reveal the direction we need to take to make PiCode as usable as possible.

Intended Audience

- Potential Future PiCode Developers ,

1. Intro:

First off, thank you for agreeing to meet with me today. My name is Jon, and I'm a researcher here at ADP. Today I'd like to spend about an hour talking with you. Before we get started, I would like to remind you that I am recording today's session, I hope that's ok.

Today we're going to spend some time talking about you and your work life, and I am going to present you with a scenario and ask you to evaluate some code.

This is in no way a test; the only "right" answers are your opinions, so I hope you will share your thoughts openly with me.

Do you have any questions before we get started? Great!

2. User Background

Tell me a little about yourself?

- *Your 90 second elevator pitch (prompt as necessary)*
- What kind of work do you do?
 - How long have you been doing that?
 - Have you always worked in the same industry?
- What tools/software/programming language do you use everyday
- What kind of person is successful in your work?

3. Any questions for me?

PiCode Intro and Simulated training scenario (10 mins)

- **Intro to PiCode 2.0**
 - **The Nature of Payroll**
 - **Two Places to Get Data**
 - **Policy Instance**
 - **Employee Data**
 - **Three Pieces of PiCode 2.0**
 - **Pay Classification Types**
 - **Global Aliases**
 - **PiCode Modules**
- **PiCode 2.0 in Action – Base Pay**
 - **Two Rules of Base Pay - PCT**
 - **Implement Base Pay – PiCode Module**

PiCode Developer Scenario Context:

Today, you are a PiCode Developer. This code drives the Pi payroll engine. You write PiCode to add client specific content during implementation and to fix any problems that the payroll practitioner runs into during every day use.

We are currently implementing a new client, and today we have found that we are calculating some of the employee's non-statutory deductions incorrectly. So far, we have only the two general rules for non-statutory deduction implemented for this client: to calculate a non-statutory deduction, you can either use an amount, or a percentage and a calculation basis. Clearly, we need a third, client specific rule to solve these errors. You have researched the problem and realized that the general rule uses the percentage from the policy instance (which is the business rule with client inputs). This client has some deductions that use a percentage from the employee data. You need to add this rule.

Follow up questions will include:

- What's your initial impression of what you see here?
- What do you expect to do from here?

- **(Free Explore)** Talk me through what you'd do next...what are you thinking?
- One adjective to describe what you have seen here today?

PiCode 1.0 vs. 2.0 Compare and Contrast

Show differences in eclipse editor.

Follow up questions will include:

- Which of the 2 code versions is clearer and easier for you to understand?
- Why do you say that?
- If we were to ask you to join the PiCode team would you be excited or.....?