From Students…

…to Professionals

Alpha Presentation

General Rate Calculation Environment Shell

The Capstone Experience

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Project Overview

• The multitude of factors to consider make rate calculation a very convoluted process

• Solution architecture General RAte Calculation Environment (GRACE) and its DSL are aimed to tackle these challenges

• Create a REPL shell to add console level support for GRACE so that anyone can use the tool effectively
System Architecture
Starting and Help Command

```
david@Davids-MBP GRACE-Shell % ./grace
GRACE>>> label

Usage:

label [-hv] [COMMAND]

Description:
Handles a label command and its various options

Options:

- `h`, `--help` Displays this message.
- `v`, `--verbose` Output more command information.

Commands:

delete, --delete, -d Deletes the label with the given name
list, --list, -l Lists all current labels
spec, --spec, -s Creates or updates a label depending on whether the name exists
```

GRACE>>>
Some Example Commands

```bash
[david@Davids-MBP GRACE-Shell %] ./grace
GRACE>>> let DentalProcedure [Premier, Cleaning] = 60.0
DentalProcedure [Premier, Cleaning] = 60.0
GRACE>>> labelmapper list
All label mappers:
PPO ➞ Cleaning
PPO ➞ X-Ray
PPO ➞ Tooth Extraction
Premier ➞ Cleaning
Premier ➞ X-Ray
Premier ➞ Tooth Extraction
GRACE>>> label spec Crown 1000.0 1200.0
Creating label: Crown with values:
  1000.0
  1200.0
GRACE>>> exit
[david@Davids-MBP GRACE-Shell %]
```
Importing files

```java
> label -l
let CreatedLabel [val1, val2, val3] = 5
CreatedLabel[val1, val2, val3] = 5
> label spec AnotherNewLabel val4 val5 val6
Creating label: AnotherNewLabel
with values:
  val4 val5 val6
> label -l
AnotherNewLabel: [val4, val5, val6]
> label -d AnotherNewLabel
Deleting label: AnotherNewLabel
> label -l
```

```vim
program ls
label -l
let CreatedLabel [val1, val2, val3] = 5
label spec AnotherNewLabel val4 val5 val6
label -l
label -d AnotherNewLabel
label -l
```
Errors

GRACE>>> exit
[david@Davids-MBP GRACE-Shell % ./grace
GRACE>>> label spec
Missing required parameter: '<labelName>'
Usage: label spec <labelName> [[<label_values>]...]
Creates or updates a label depending on whether the name exists
If no label values are included, displays the label
   <labelName>
       [[<label_values>]...]

GRACE>>> program -i -e file
Error: expected only one match but got [[-f] file to import/export (-i | -e)]={
   --import} and [[-f] file to import/export (-i | -e)]=[{params[0]}=file --export]
Usage: program [-v] [[-f] file to import/export (-i | -e)] [COMMAND]
   file to import/export
   -e, --export
   -f, --force
   -i, --import
   -v, --verbose
Commands:
   clear, cls
   ls, -l
GRACE>>>
What’s left to do?

• GRACE core integration for the GRACE commands
• Improve parsing capabilities
• System commands (program, script)
• Javadoc
• Undo/Redo functionality
• Enhancing UI (help/error messages)
Questions?