

**MICHIGAN STATE**  

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**UNIVERSITY**

# Beta Presentation

## General RATE Calculation Environment Shell

### The Capstone Experience

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*From Students...  
...to Professionals*

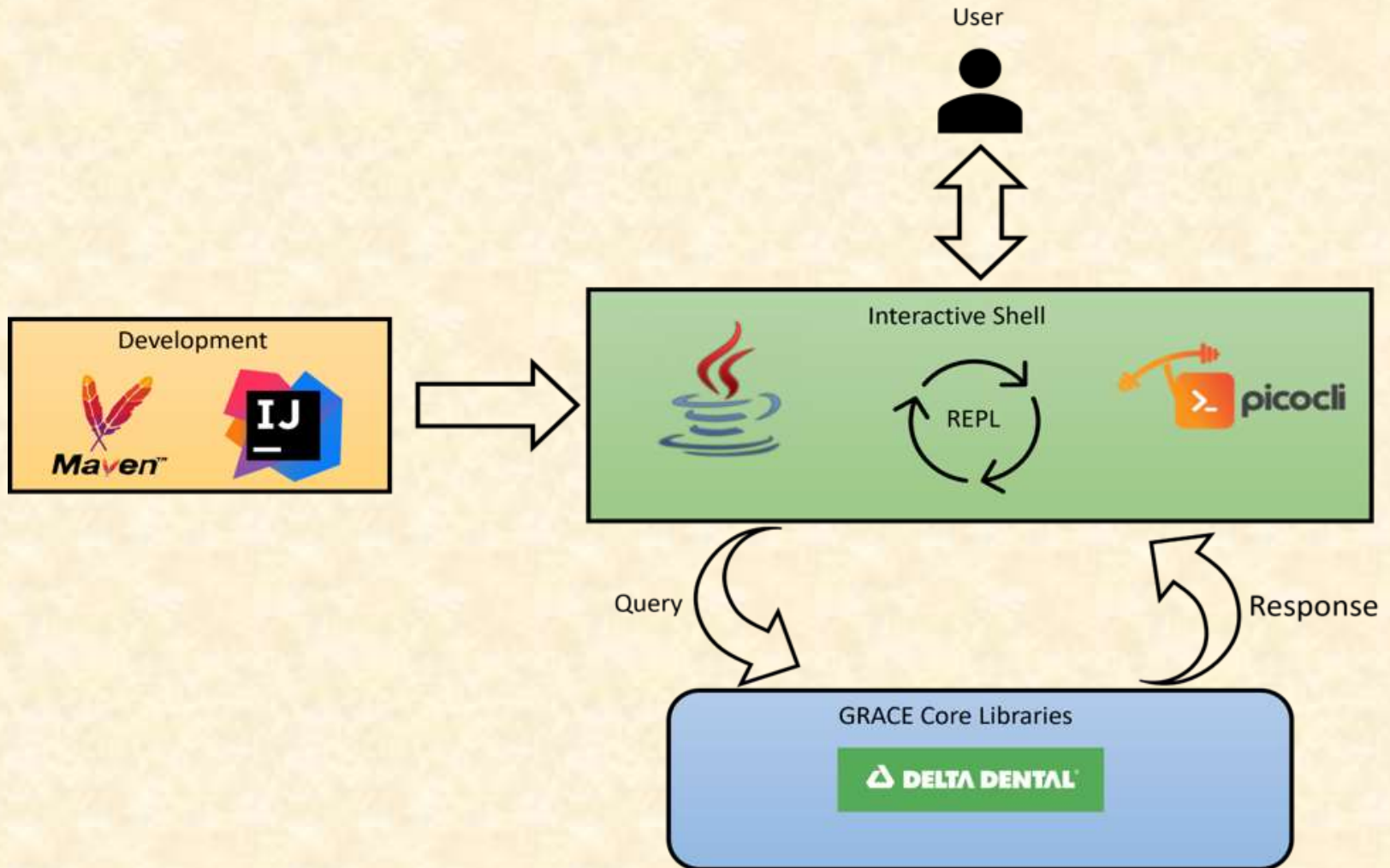
# Project Overview

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- 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

```
GRACE-Shell — java ◀ grace — 95x23
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

```
GRACE-Shell — -zsh — 95x23
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 %
```





# Errors

```
GRACE-Shell — java • grace — 79x25
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?

- Features
  - Function and Script collisions
- Stretch Goals
  - Intercepting and interpreting Picocli/GRACE errors
- Other Tasks
  - Document non-command functions
  - Clean up codebase
  - Fix deployment issues on windows
  - Consistent output styling (format and coloring)





# Questions?

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