

MICHIGAN STATE

UNIVERSITY

Alpha Presentation

Universal Guided Web Editor

The Capstone Experience

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

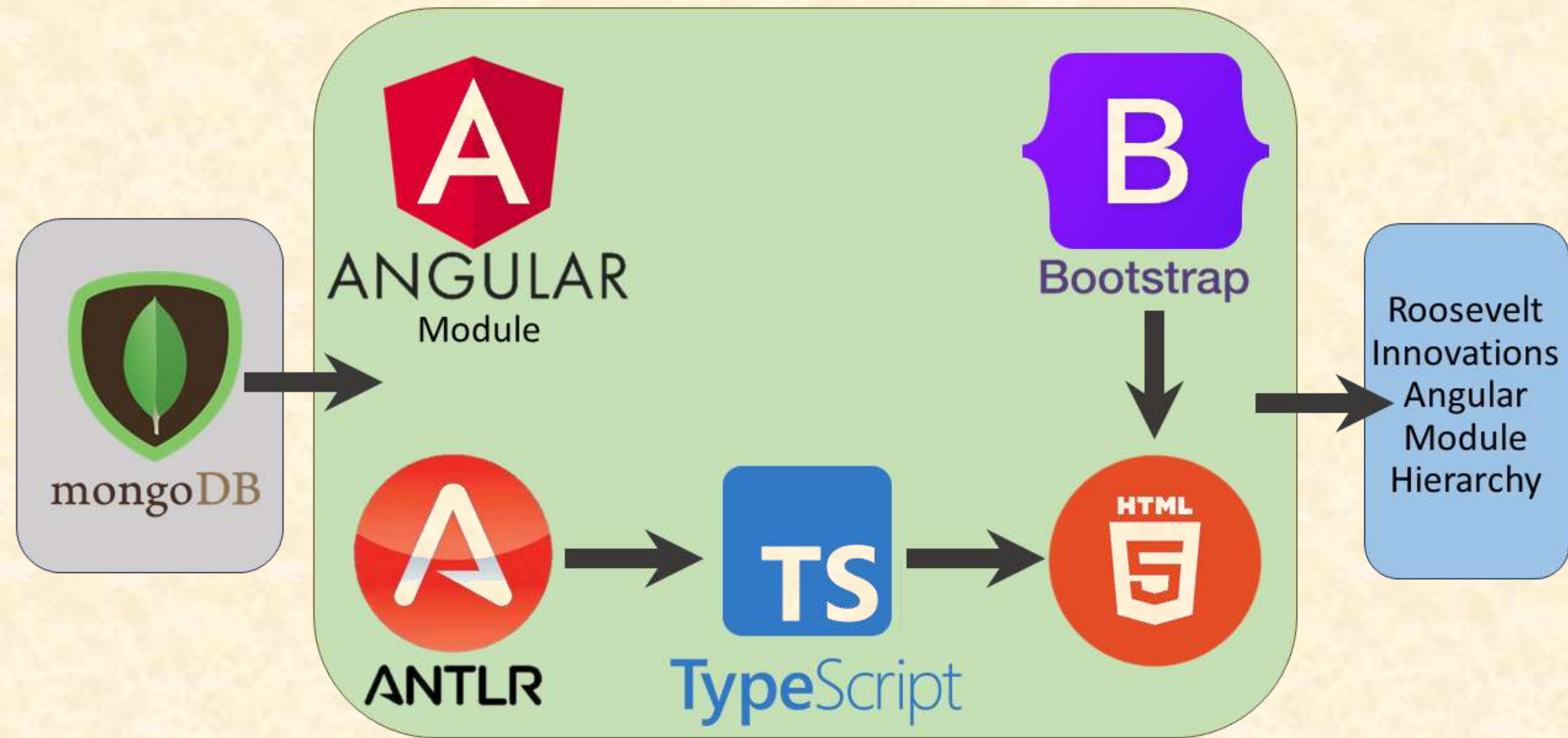
Project Overview

- Subsidiary of Delta Dental
- Deliver simple, smart automation for business
- Business Rule Management System (BRMS)
- Create intuitive, non-technical online rule editor
- Develop, test, deploy, and maintain business logic

Roosevelt®



System Architecture



Filling out a Rule

The screenshot displays the BRIDE Web Editor interface. A 'Rule Content' dialog box is open, showing the configuration for a rule. The dialog is divided into three main sections: 'Definitions', 'If', and 'Then'.
- In the 'Definitions' section, there is a 'set' action. The first dropdown menu is set to '<select variable>' and the second is set to '<select variable>'. A dropdown menu is open, showing three options: 'Billing Cycle', 'Billing Subscriber', and 'Billing Subscriber Adjustment'.
- The 'If' section is currently empty.
- In the 'Then' section, there is a 'set' action. The first dropdown menu is set to '<select variable>', the second is set to '<select target>', and the third is set to '<center text>'.
- At the bottom of the dialog, there is an 'Expand' button.



Filled out Rule

The screenshot displays the BRIDE Web Editor interface. The browser address bar shows 'localhost:4200'. The page title is 'Roosevelt' and the editor title is 'BRIDE Web Editor'. The main content area is titled 'Rule Content' and contains the following configuration:

- set** Eligibility Reinstatement to a Billing Subscriber Adjustment
- set** Coverage type to a Billing Subscriber Adjustment
- If**
 - Adjusted Billing Cycle of Eligibility Reinstatement is annual
- Then**
 - set** Adjustment Reason of Coverage Type Change to ELIGIBILITY_REINSTATE
 - set** Coverage Type of Eligibility Reinstatement to Adjusted Coverage
- and record rule name as** Eligibility_Rule

A 'Collapse' button is visible below the 'Then' section. On the right side of the editor, a vertical toolbar contains the following buttons: File, Save, Copy, Close, Move, and Edit Tags.



Displaying Grammar

The screenshot shows a web browser window with the URL `localhost:4300`. The page title is "Roosevelt" and the browser tab is "BRIDE Web Editor". A modal window is open with the title "Expression.g4" and several tabs: "Expression.g4", "Meta1.g4", "AST", "Line Arrangement", and "Identifiers Dictionary". The main content of the modal is a text editor displaying a grammar definition for "expression".

```
grammar expression;
prog: (line)* EOF; //head of AST
line: |line comment //can't handle comments in the middle of multi-line "line"
    | ITEM CD(ON (expr)+ SEPI //able to handle concat
    ;
expr: |item //concat item
    | leaf //user input
    | choicelist //dropdown box
    | expr MULTIPLE //+ button
    | expr OPTIONAL //optional
    ;
choicelist: STRING (CHOICE STRING)*; //any amount of choices for a string. (Maybe should allow leaves?)
leaf: |LEAF "text" '(' (ITEM COLON STRING ')'; //only needs to handle text. Other types are a "legitimate concern down the road"-Charlie
item: |ITEM //items in a concat
    | STR //one apostrophe string
    | STRING //two apostrophe string
    ;
comment: '/' '/' expr;
CHOICE : [[]]+ ;
MULTIPLE: [*]+ ;
OPTIONAL: [?]+ ;
LEAF : [#]+ ;
COLON : [:]+ ;
SEPI : [;]+ ;
COMMA : [,]+ ;
STR : [''] (-["'\r\n"])* [''];
STRING : "" (-["\r\n"])* "" ;
ITEM : [a-zA-Z0-9-]+ ;
```

Below the text editor, there is a small text input field with the placeholder text "and record rule name as" and a button labeled "verify rule name".



Module Integration

The screenshot shows a web browser window with the address bar at localhost:4200. The page title is 'Test App'. A modal window titled 'Rule Content' is open, displaying a rule editor. The editor has the following sections:

- Definitions**: A line with a dropdown menu labeled '<select variable>' followed by 'to a' and another dropdown menu labeled '<select variable>'.
- If**: A line with a dropdown menu labeled '<select variable>', 'of', a dropdown menu labeled '<select variable>', '<select expr>', and a dropdown menu labeled '<center value>'.
- Then**: A line with 'set', a dropdown menu labeled '<select variable>', 'of', a dropdown menu labeled '<select target>', 'to', and a dropdown menu labeled '<center text>'.
- A yellow 'Collapse' button.
- A line with 'and record rule name as' followed by a dropdown menu labeled '<center rule name>'.



What's left to do?

- Create lineconfigs with Antlr
- Saving rules
- Finish database functions
- Finalize UI
- Rule history



Questions?

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