

MICHIGAN STATE
UNIVERSITY

Alpha Presentation

Microsoft Excel Data Extractor/Modeler

The Capstone Experience

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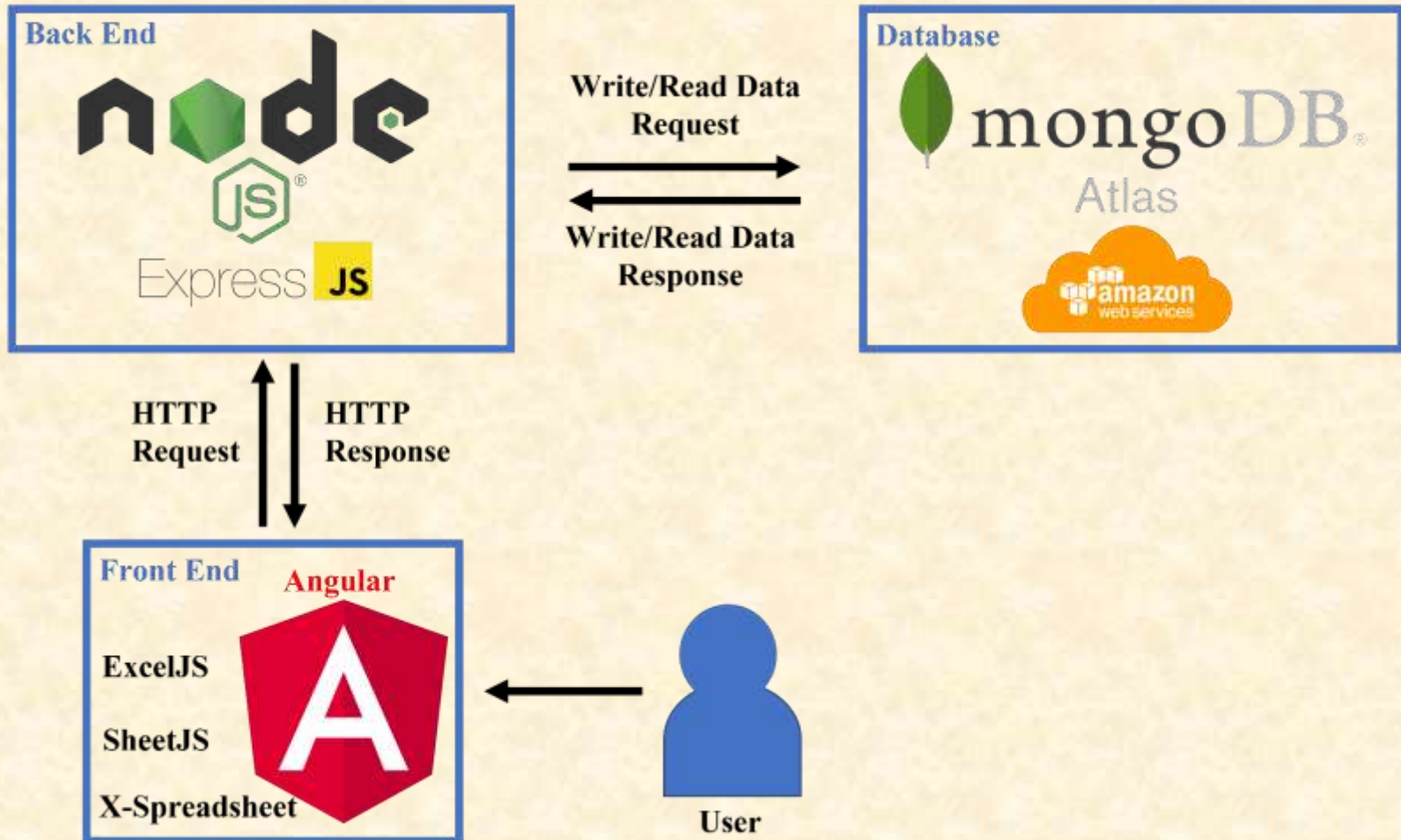
From Students...
...to Professionals

Project Overview

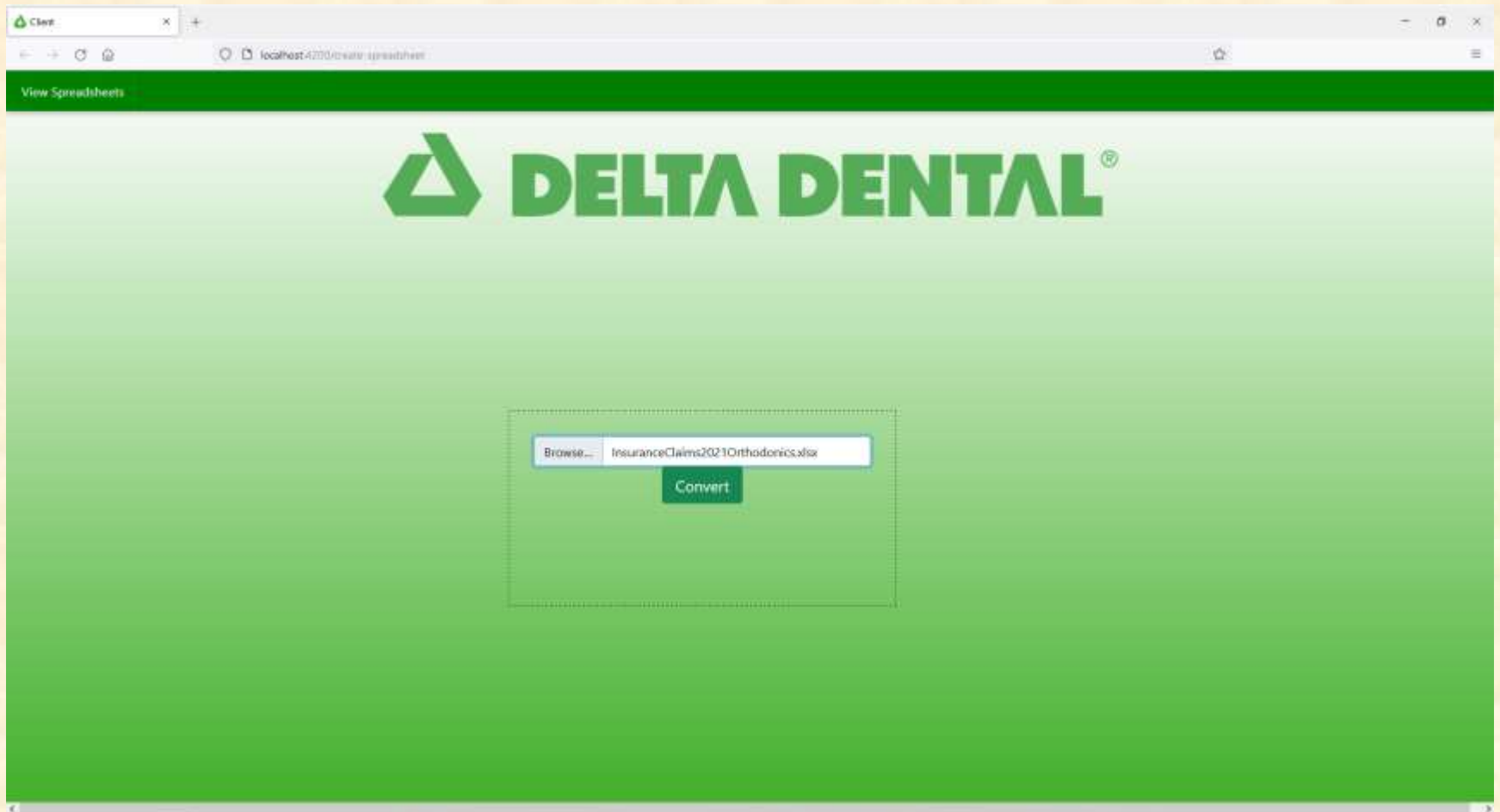
- Intuitive web application
- Adds implied context to Excel data
- Labels data based on user input
- Improve efficiency of Delta Dental employees
- Remove reliance on code developers
- Dynamic, functional for all data models



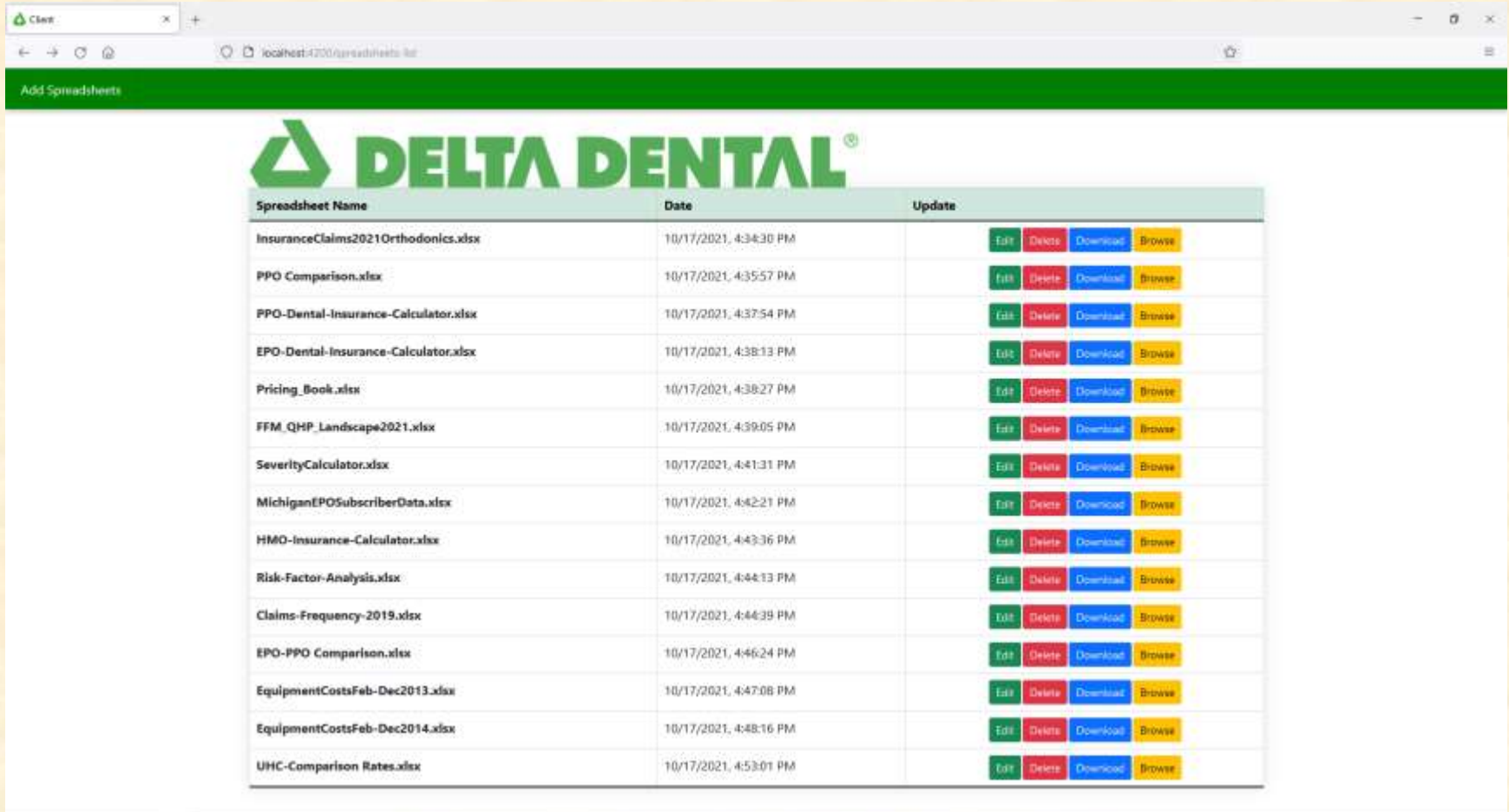
System Architecture



Upload



View



Delta Dental

Spreadsheet Name	Date	Update	
InsuranceClaims2021Orthodontics.xlsx	10/17/2021, 4:34:30 PM		Edit Delete Download Browse
PPO Comparison.xlsx	10/17/2021, 4:35:57 PM		Edit Delete Download Browse
PPO-Dental-Insurance-Calculator.xlsx	10/17/2021, 4:37:54 PM		Edit Delete Download Browse
EPO-Dental-Insurance-Calculator.xlsx	10/17/2021, 4:38:13 PM		Edit Delete Download Browse
Pricing_Book.xlsx	10/17/2021, 4:38:27 PM		Edit Delete Download Browse
FFM_QHP_Landscape2021.xlsx	10/17/2021, 4:39:05 PM		Edit Delete Download Browse
SeverityCalculator.xlsx	10/17/2021, 4:41:31 PM		Edit Delete Download Browse
MichiganEPOSubscriberData.xlsx	10/17/2021, 4:42:21 PM		Edit Delete Download Browse
HMO-Insurance-Calculator.xlsx	10/17/2021, 4:43:36 PM		Edit Delete Download Browse
Risk-Factor-Analysis.xlsx	10/17/2021, 4:44:13 PM		Edit Delete Download Browse
Claims-Frequency-2019.xlsx	10/17/2021, 4:44:39 PM		Edit Delete Download Browse
EPO-PPO Comparison.xlsx	10/17/2021, 4:46:24 PM		Edit Delete Download Browse
EquipmentCostsFeb-Dec2013.xlsx	10/17/2021, 4:47:08 PM		Edit Delete Download Browse
EquipmentCostsFeb-Dec2014.xlsx	10/17/2021, 4:48:16 PM		Edit Delete Download Browse
UHC-Comparison Rates.xlsx	10/17/2021, 4:53:01 PM		Edit Delete Download Browse



Label

The screenshot shows a Google Sheets spreadsheet with a 'Labeling' dialog box open. The spreadsheet has columns for 'Matagen', 'One', and 'Inlans' with sub-columns for 'Subscriber', 'Spouse', and 'Dependant'. A 'Label' column on the right lists dental procedures. The 'Labeling' dialog box shows 'Cell Range' as 'A2:A17' and 'Label' as 'Procedures'.

	Matagen			One			Inlans			Label	
	Subscriber	Spouse	Dependant	Subscriber	Spouse	Dependant	Subscriber	Spouse	Dependant		
1	Teeth Cleaning	54.56	54.56	54.56	51.91	51.91	51.91	47.88	47.88	47.88	Rooting A12:J12
2	Teeth Whitening	86.8	86.8	86.8	77	77	77	72.8	72.8	72.8	Braces A10:J10
3	Extractions	473.8	473.8	473.8	547.4	547.4	547.4	473.8	473.8	473.8	Bridge A15:J15
4	Veneers	1057.28	1057.28	1058.08	1051.68	1051.68	1261.48	1038.4	1038.4	1037.4	Crowns A8:J8
5	Fillings	246.52	246.52	246.52	236.32	236.32	236.32	252.28	252.28	252.28	Dentures A13:J13
6	Crowns	427	427	427	385.48	385.48	386.48	486	486	486	Extractions A5:J5
7	Root Canal	1650.06	1650.06	1650.06	1626.27	1626.27					Fillings A7:J7
8	Braces	5756.48	5756.48	5756.48	5199.26	5199.26					OH_Dependant J2:J12
9	Implants	5338.51	5338.51	5338.51	4886.55	4886.55					OH_Spouse J2:J12
10	Banding	218.36	218.36	218.36	226.88	226.88					OH_Subscribe H2:H12
11	Dentures	5252.548	5252.548	5256.46	4714	4714					Indiana H1:J12
12	3-Flax	238.83	238.83	238.83	248.75	248.75					Michigan A11:J11
13	Bridge	476.68	476.68	476.68	439.56	439.56					OH_Dependant D2:D12
14	Sealant	286.5	286.5	286.5	386.25	386.25	386.25	276.84	276.84	276.84	OH_Spouse C2:C12
15	Whitening Teeth	2794.16	2794.16	2794.16	2846.44	2846.44	2741.44	2736	2736	2636	OH_Subscribe K2:K12



Browse



The screenshot shows a web browser window with a green header bar containing 'Upload', 'List', and 'Edit' buttons. The main content area displays a tree view of dental procedures on the left and a table of rates on the right.

Procedure List:

- Procedure
 - Teeth Cleaning
 - Teeth Whitening
 - Extractions
 - Veneers
 - Fillings
 - Crowns
 - Root Canal
 - Braces
 - Invisalign
 - Bonding
 - Dentures
 - Bridges
 - X-Rays
 - Sealant
 - Wisdom Teeth
- Base Rates
 - Subscriber Rate
 - Spouse Rate
 - Dependant Rate
- State Multiplier
 - MI_Multiplier
 - OH_Multiplier
 - IN_Multiplier
- Michigan
 - MI_Subscriber
 - MI_Spouse
 - MI_Dependant
- Ohio
 - OH_Subscriber
 - OH_Spouse
 - OH_Dependant
- Indiana
 - IN_Subscriber
 - IN_Spouse
 - IN_Dependant

Table of Rates:

Label	Code
Base Rates	L2:O17
Bonding	A12:F12
Braces	A10:J10
Bridges	A15:F15
Crowns	A8:8
Dentures	A13:J13
Dependant Rate	O2:O17
Extractions	A5:J5
Fillings	A7:J7
IN_Dependant	J2:J17
IN_Multiplier	T2:T17
IN_Spouse	I2:I17
IN_Subscriber	H2:H17
Indiana	H1:J17
Invisalign	A11:J11
Locations	B1:J1
MI_Dependant	D2:D17
MI_Multiplier	R2:R17
MI_Spouse	C2:C17
MI_Subscriber	B2:B17
Michigan	B1:O17
OH_Dependant	G2:G17
OH_Multiplier	S2:S17
OH_Spouse	F2:F17
OH_Subscriber	E2:E17
Ohio	E1:G17



Remaining Tasks

- Verification web page (Browse)
 - Error detection
 - Visual display of nested labels
- Minor bug fixes and styling flaws
- Downloaded file format (DSL script)
- Instructions page
- Label Map > Array[Array]
- ExcelJS X-Spreadsheet merge
 - Color visual styling
 - Cell styling



Questions?

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