

# ITHD by Ulysses

**Team T\_06**

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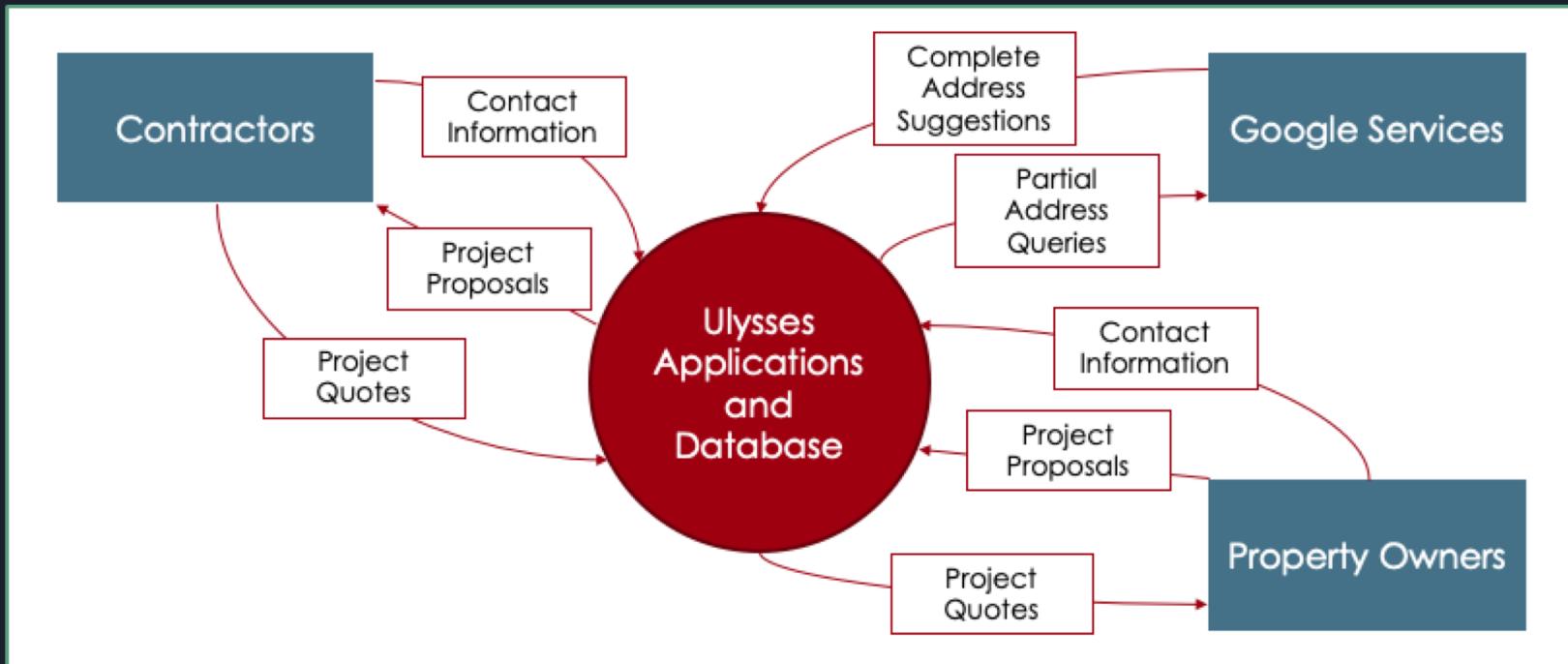


# Project Overview

## ITHD Customer Relationship Management Tool Solution:

- Stakeholder's company is in need of becoming more tech-savvy
- Client records are not stored digitally
- Customers cannot review documents for their work orders
- Submission of client documents is currently a hassle

# Project Overview





# Implementation

- 1) Web-based application for clients
- 2) Desktop application for the company
- 3) Database



# Process

- Weekly team meetings in the library:
  - Sprint planning
  - Sprint adjustments
  - Issues, questions, ideas
- Meetings with Stakeholder: questions, planning, lunch :)
- Trello: sprints, planning, videoconferences
- Trello: communication with Stakeholder and his team
- Slack: communication within Ulysses team

# Trello Board

The image shows a Trello board titled "ITHD Management Tool". The board has the following structure:

- To Do:**
  - Phase 5 (Due Mar 17)
  - Phase 6 (Due Mar 31)
  - Phase 7 (Due Apr 14)
  - Phase 8 (Due Apr 29)
  - + Add another card
- In Progress:**
  - Phase 4 (Due Mar 3)
  - Phase 5
  - Phase 6
  - Phase 7
  - Phase 8
  - + Add another card
- Done:**
  - Phase 1 (Due: Jan 20)
  - Phase 2 (Due Feb 3)
    - AR JP MG
  - Phase 3 (Due Feb 17)
    - AR JP MG
  - + Add another card
- Additions / Changes:**
  - Phase 1
  - Phase 2
  - Phase 3
  - Phase 4
  - Phase 5
  - Phase 6
  - Phase 7
  - Phase 8
  - + Add another card

The board is set against a background image of a residential neighborhood with houses and trees.



# What has been done

## Phase I: Jan 10 - Jan 20

- Database:

- create an initial schema

- Website:

- have all the basic outline pages (25 pages) uploaded to Git

- have basic authorisation and redirection implemented and uploaded to Git

- implement basic security storage of credentials

- Desktop:

- make a basic dashboard page + project page

- login for employees



# What has been done

Phase II: Jan 21 - Feb 3

- Website:
  - authorisation, guards, authentication
  - redirection
  - migrations
- Desktop:
  - the user controls: Dashboard, Admin Dashboard, Project Page
  - local copy of the database, connecting it to the app



# What has been done

Phase III: Feb 4 - Feb 20

- Meeting with the Stakeholder:
  - discuss content related questions:
    - required questions for proposal
    - data algorithms for proposal calculation
  - demo the created parts of the application and receive a feedback
- Adjustment of the application based on received feedback and comments:
  - Desktop: add required fields to Project Page
  - Web: modify Project Proposal submission form
  - Database: add required schemas and data members

# Inputs from stakeholder:

Slight modification of the Clients' registration process

**Andrii Golovnia** 14 Jan at 08:31 (edited)

(User = CLIENT= Company's customer accessing the website)

LOGIN (NO REGISTRATION ON THE WEB SITE IT WILL BE JUST FOR EXISTING CLIENT)

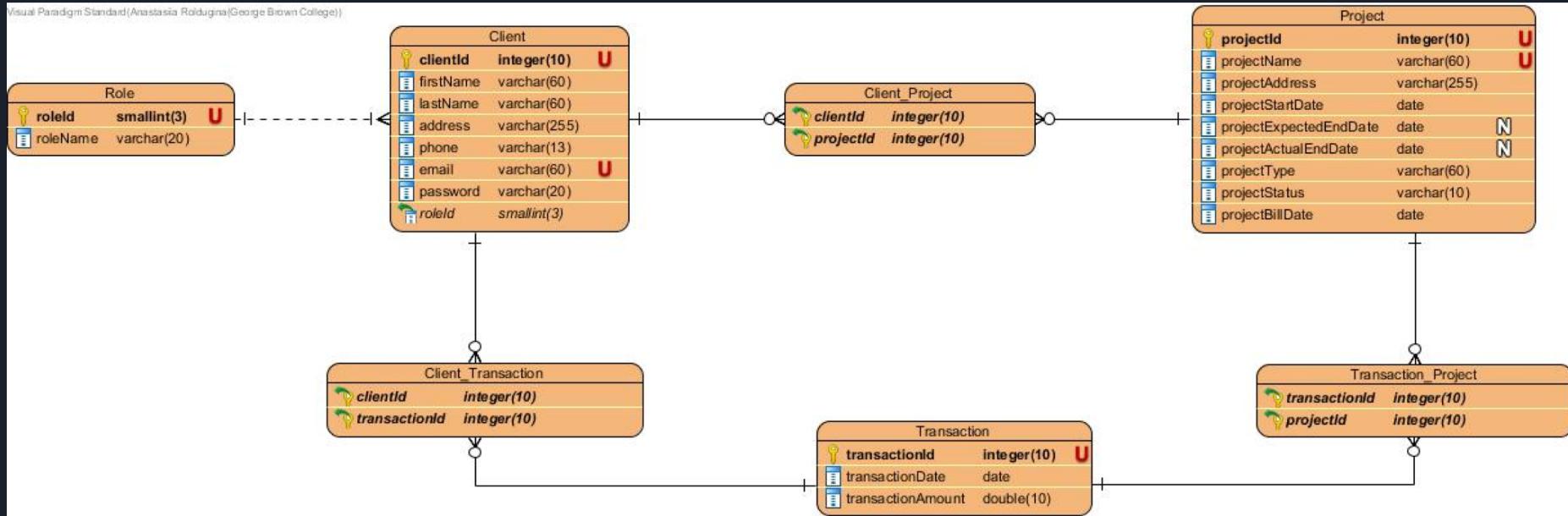
- 1) Employee gets to the CLIENT TO CREATE AN ACCOUNT
- 2) CLIENT gets username and a password, logs in
- 3) The first thing he sees is registration form
- 4) CLIENT fills it out with more detailed info
- 5) CLIENT fills out all the info and submits it
- 6) Employee check the submission and request additional information if required

# Inputs from stakeholder:

List of questions for Client at Proposal submission

Nº	List of main data and requirements	Project Data
1	2	3
1.	<b>Builder</b>	
2.	<b>Design Company</b>	In Tech House Design Corporation
3.	<b>Type of Construction</b>	
4.	<b>Architectural Style</b>	
5.	<b>General Contractor</b>	Will be decided by the client
6.	<b>Design Stages</b>	Preliminary design, Architectural Design, Zoning Drawings, Working Drawings, Structural Design, Grading Plan, HVAC Design, TRCA, Forestry, Heritage, etc.
7.	<b>Requirements for variant development</b>	_____ revisions
8.	<b>Data of special construction conditions</b>	
9.	<b>General information about the site (location, borders, area)</b>	Province_____ City_____ Street_____ Lot Area_____

# Current version of Database:





## Learning Strategies Used:

**Spaced Practice** - Spaced Practice or Distributed practice (also known as spaced repetition or spaced practice) is a learning strategy where practice is broken up into a number of short sessions – over a longer period of time. This proved most useful for us in our current academic circumstance. Small research or study sessions allow us to aggregate knowledge while also maintaining a work/life balance.

**Elaboration / Collaboration** - The Elaboration / Collaboration strategy involves the sharing and exchange of ideas amongst multiple members researching or studying the same subject matter. The many viewpoints, opinions, and different ways of thinking allow for the best ideas to be evaluated and chosen from a collective and inclusive environment.



## Technologies Used:

**U.I. Path Bots** - The incorporation of an address prediction bot via “U.I. Path Bots” will allow us to harness machine learning in order to aid in auto completion of address information provided by the user. This will alleviate the user of some of the input required, allowing them to save time while still being just as productive.

**Laravel (PHP)** - In order to handle server requests, responses and database queries that may be sent by clients or passed to the database by users of the desktop application. We chose Laravel largely based upon its “Model View Controller” architectural pattern. This makes it easier to integrate in a modular fashion which has the added benefit of easing the process of updating the system and providing on-going maintenance. Laravel also includes various interfaces through which we can build and access relational databases, providing even more freedom to development staff.



## Technologies Used:

**WPF** - Windows Presentation Foundation allows us to quickly and efficiently design and develop our desktop application, and provides compatibility with most versions of Windows. Its use of XML and C# bears some similarity to ASP.NET, which uses HTML and C#. This allows us to apply some of our previous experience in this program.

**SQL** - Our database will be comprised of an SQL relational database following a strict schema implemented through Laravel that follow the conventions of “3rd Normal Form” data storage doctrine. This will allow us to reduce data redundancy, saving space and resources on our database. This carries the additional benefit of increasing memory efficiency, reducing the amount of maintenance and additional supervision of the database while also enforcing data validation and consistency.



# Next steps:

## General:

- Update design and forms to follow provided templates.

## Web-app interface:

- Authentication guard.
- Implementing plugins and tools. (Google maps, Summernote... etc)
- Storing documents in the database.
- Dividing our forms for improved User Experience.
- Creating administrator access and views.



## Next steps:

### Desktop Application:

- Completing base design of the project overview view.
- Connecting application to database.
- Combining individual views into a single application.
- Authentication View.
- Administrator Dashboard.
- Improving User Interface design and experience.



# Risk Management:

Changes envisioned by the Stakeholder.	Medium	Be firm with the design decisions made thus far in order to reduce revisions.
Software or accessory incompatibility	Low	Employ Spaced Practice learning strategy in order to research new solutions.
Non-Disclosure agreement.	Medium	Negotiate fair terms and conditions in order for us to fulfil our academic expectations.
Poor weather disrupting meetings on campus.	Low	Use Voice over I.P. software to facilitate meetings over the internet.

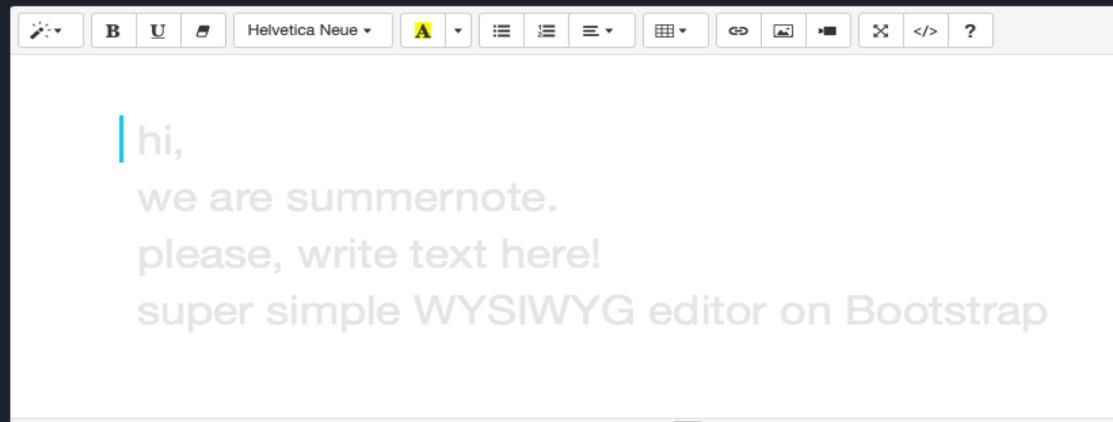
# Web application technologies

## Summernote plugin

### Features

- Supports Bootstrap 3.x.x to 4.x.x
- Lightweight (js+css: 100Kb)
- Smart User Interaction
- Works in all Major Browsers:
  - Safari, Chrome, Firefox, Opera, Edge and Internet Explorer 9+
- Works in all Major Operating Systems:
  - Windows, MacOS, Linux

<https://summernote.org>





# Web application technologies

## DOMPDF Wrapper for Laravel 5

### Using

You can create a new DOMPDF instance and load a HTML string, file or view name. You can save it to a file, or stream (show in browser) or download.

```
$pdf = App::make('dompdf.wrapper');
$pdf->loadHTML('<h1>Test</h1>');
return $pdf->stream();
```

Or use the facade:

```
$pdf = PDF::loadView('pdf.invoice', $data);
return $pdf->download('invoice.pdf');
```

You can chain the methods:

<https://github.com/barryvdh/laravel-dompdf>