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Software Engineering

PWA Scope

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# **Client and Problem:**

**Client:** Trevor Monaghan, middle aged man who has expertise’s in designing and building PWAs and accounting. He understands what a PWA is and what is needed to design and build one which will make the requirements straightforward and detailed.

He is the owner of **Climax Valuations and Forensics**, a business located in Belmont NSW, specialising in business valuation and forensic accounting reports, predominantly for court matters such as divorce, shareholder disputes and economic damages. He has no accessibility requirements, but they will be included because the project is SaaS allowing multiple users to use it.

Trevor is seeking a PWA solution to manage all his client’s details, files, valuation reports and communication. His current CRM is increasing their pricing which is why he needs a free solution to ensure his overheads are kept to a minimum. This will help him have easier access to his client's needs and details while also making him more productive and efficient.

# **Why is the project a PWA:**

A PWA (Progressive Web App) is an efficient and easy using way of sourcing software on the internet. The following reasons why I’ve selected a PWA as the most suitable choice for the project:

## Cross-Platform Compatibility

PWAs are web-based applications that combine websites and apps together on the internet, because they are on the web this allows anyone to access the application given that they have a web browser. This enables faster development and removes the need for multiple different versions of the application to be made to suit the devices requirements.

## No App Store Dependency

Since PWAs are on the web this removes the need for the application to be downloaded and installed on the device. This streamlines user to access the application allowing for quick access given the user has an internet connection.

## Automatic Updates

Unlike software installed on a device, PWAs can push updates to the application without the user even realising. This accelerates the users productivity and accessibility to the application while ensuring new features are automatically updated when a user revisits the site.

## Security

PWAs use security by design to ensure that user’s information is secure for unauthorised personals. Since the application is on the web, HTTPS encrypts all data that’s received and sent ensure man-in-the-middle attacks are avoided. Everything in the database is also stored on a secure server, not on the user’s device, which increases the security for all users.

## **Social, Legal and Ethical Implications:**

### **Social Implications**

##### Customer Privacy

asdsad

##### Trust and Transparency

Asdasd

##### Loss of Human Interaction

Asdasd

### **Legal Implications**

##### Data Protection Laws

asdasd

##### Customer Consent & Data Usage

asdsad

##### Intellectual Property Concerns

Asdasd

### **Ethical Implications**

##### Data Ownership

##### Marketing Practices

##### Customer Interactions

## **Application Requirements and Boundaries:**

[*Initial Requirements for Software by Climax Valuations and Forensics Pty Ltd*](file:///C:\Users\User\Downloads\Initial%20Request%20for%20Software%20by%20Climax%20Valuations%20and%20Forensics%20Pty%20Ltd.pdf)

### **Companies**

* Ability to store company details, including business name, address, industry, size, and contact details.
* Each company must have at least one primary contact.
* Categorisation of companies as prospect or customer.
* Ability to assign internal users to manage the relationship of companies.

### **Contacts**

* Ability to store individual contact details, including name, job title, email, phone number, and associated companies.
* A contact can be associated with one or more companies or exist independently without a link to any companies.
* Ability to mark a contact as a primary contact for a specific company.

### **Leads**

* Leads are created when there may be a current or future opportunity to provide a quote to a company.
* Each lead must be associated with a company and may also be linked to a specific contact.
* Status tracking for leads (e.g., In Progress, Won, Lost).
* Ability to assign internal users to manage leads.

### **Quotes**

* Quotes are generated for leads when a pricing estimate is provided.
* Standard fields for quotes, including quote number, date, associated company, contact, and lead etc.
* Ability to add line items to quotes, including description, quantity, price per unit, and tax code. Software needs to calculate and display the total and any tax.
* Ability to amend and resend quotes.
* Status tracking for quotes (e.g., Draft, Sent, Accepted, Rejected).

### **Invoices**

* An invoice is created when a quote is won
* The invoice will initially contain the same line items as the corresponding quote but must be editable so that it can be different to the quote.
* Standard fields for invoices, including invoice number, issue date, due date, and payment terms.
* Ability to add and edit line items like quotes.
* Status tracking for invoices (e.g., Draft, Sent, Partly Paid, Fully Paid).

### **Payments**

* Ability to record one or more payments against an invoice.
* Calculation of outstanding balance on each invoice.
* Automatically change the status to paid when payments are equal to the invoice total.

### **Reporting**

* Users must be able to generate reports for Companies, Contacts, Leads, Quotes, and Invoices.
* Reports should be filterable by date, status, company, or other relevant fields.
* Ability to export reports to formats such as CSV or PDF.

### **User Management & Security**

* Each business subscriber will have its own internal users.
* Role-based access control to restrict functionalities based on user roles.
* 2-factor authentication for all users.
* Secure login system with password recovery options.

### **Additional Considerations**

* The CRM will be web-based and must support access from different devices.
* The user interface should be intuitive and easy to navigate.
* The system should be scalable to handle multiple businesses efficiently if we decide to make it a SaaS product.
* Data security and encryption should be implemented for sensitive information.

### **Boundaries**

This project is to be built over a 10-week span, so time management is crucial so not all requirements asked by the client can be met. After reviewing the requirements, some are not feasible and to ensure that the project is finished and tested thoroughly I won’t be including the requirement below:

**Sync the invoice with the invoicing business’s Xero account.**This requirement would involve setting up an API service with Xero, this won’t be possible in the time I’ve been given considering I would need to learn how to while also making it secure.

**Provide a Stripe link on each invoice so that the customer can pay the invoice using their credit card.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Task Achieved | Difficulties and Solutions | Ideas and Thoughts | Reflection |
| 15/03 | Identify what my project would be and who my client is. | Trying to find a project that would cover all areas in web development. | Unsure if the project is too large to finish in the time frame provided | I have a client and project which is a good starting point. |
| 16/03 | Create GitHub Repository. | None | None | None |
| 16/03 | Wrote about the client and the project. | Only problem was I had not received any requirements. | I knew that I needed requirements before I started the other parts. | Good start but need requirements asap. |
| 18/03 | Received Requirements | None | Now that I had the requirements, I was able to complete the rest of the report. | Need to start the rest of the report now. |
| 19/03 | Application Requirements and Boundaries |  |  |  |
|  |  |  |  |  |
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# Logbook