



ElectroBits **Elaboration Document**

Solo Solar

Team Members:

214262324, F-Jay Scholtz

214136043, Kevin Olver

210055189, Ferdi Swemmer

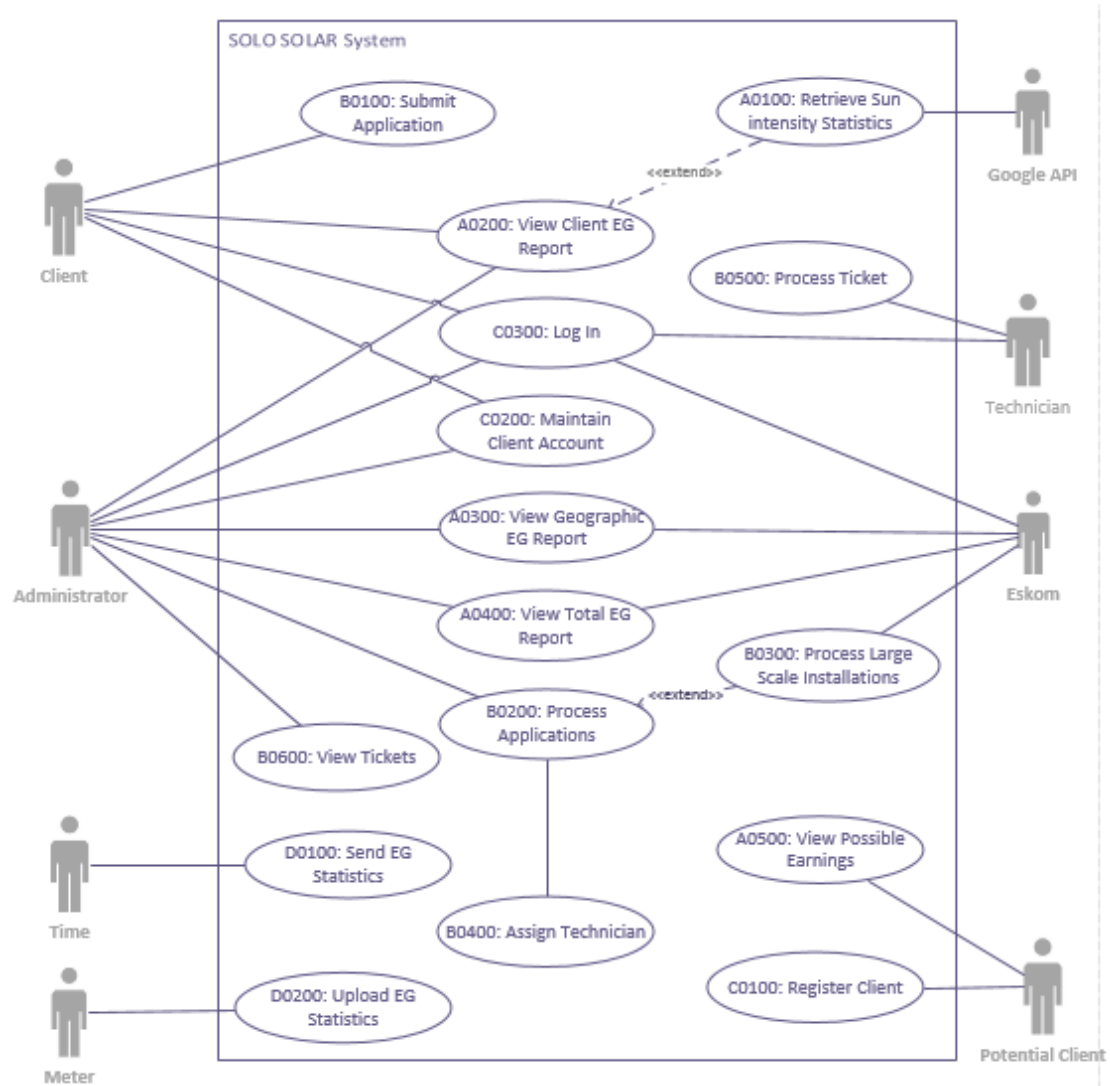
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1 FUNCTIONAL REQUIREMENTS

1.1 Analysis Use Case Model



1.2 Use Case Glossary and Responsibilities

Package Id: A Package Name: Report Package Team Member Responsible: Kevin		
Use Case Id	Use Case Name	Actors
A0100	Retrieve Sun intensity Statistics	Google API
Queries/Reports		
A0200	View Client EG Report	Client, Administrator
A0300	View Geographic EG Report	Administrator
A0400	View Total EG Report	Eskom, Administrator
A0500	View Possible Earnings	Potential Client

Package Id: B Package Name: Applications package Team Member Responsible: Ferdi		
Use Case Id	Use Case Name	Actors
B0100	Submit Applications	Client, Administrator
B0200	Process Applications	Administrator, Client
B0300	Process Large Scale Installations	Eskom
B0400	Assign Technician	Administrator
B0500	Process Ticket	Technician
Queries/Reports		
B0600	View Tickets	Administrator

Package Id: C Package Name: Account package Team Member Responsible: F-Jay		
Use Case Id	Use Case Name	Actors
C0100	Register Client	Potential, Client
C0200	Maintain Client Account	Client, Administrator
C0300	Log In	Client, Administrator, Eskom
Queries/Reports		

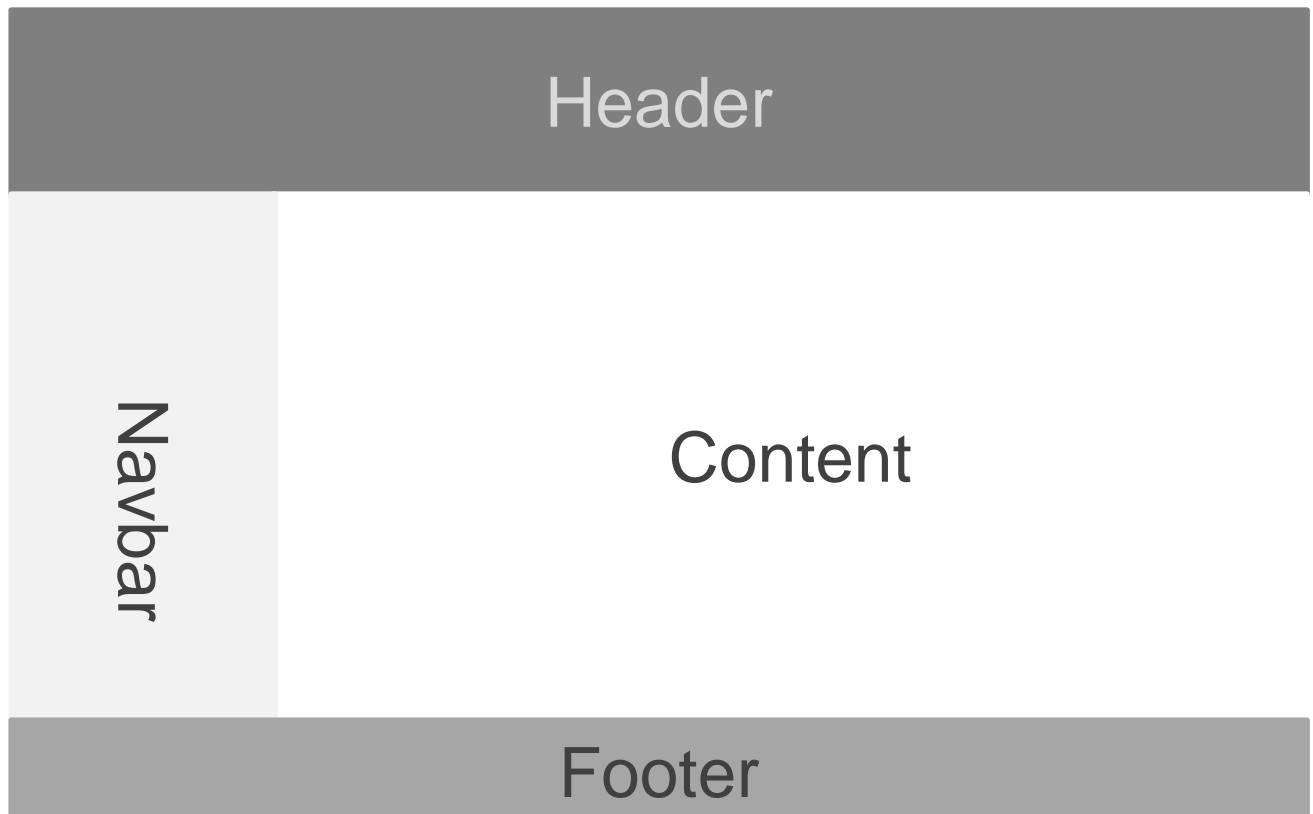
Package Id: D Package Name: Statistics Package Team Member Responsible: Kevin		
Use Case Id	Use Case Name	Actors
D0100	Send EG Statistics	Client
D0200	Upload EG Statistics	Meter, Time
Queries/Reports		

2 UI Prototypes

2.1 Team UI Guidelines

The design and layout of our web pages are of a minimalistic nature and therefore only the template we used is extremely simple and allows for a large degree of freedom to put content anywhere within the template guidelines.

This is a high-level template for all types of content and all pages:



The following template is more detailed than the previous template however it still allows for a lot of designer freedom. This template begins to show the very beginning forms of aspects of the navigation control, user efficiency, recognition and aesthetic design.

These are of the aspects from the template explained.

Logo – This forms part of both the navigation control and consistency aspects. It serves as a reference point for any page that you are indeed still on the Solo Solar website. Not only that but it also serves as a quick way back to the homepage. A user will always be able to get back to the homepage within one click, and this logo will be consistent in its placement at the top right where it is clearly visible.

Dashboard – A link to a user's dashboard will always be available as it will be the most visited page on the website. The dashboard serves as a hub to all a user's functions on the website and therefore it is important to remain in a consistent location which is clear for users to identify and navigate to.

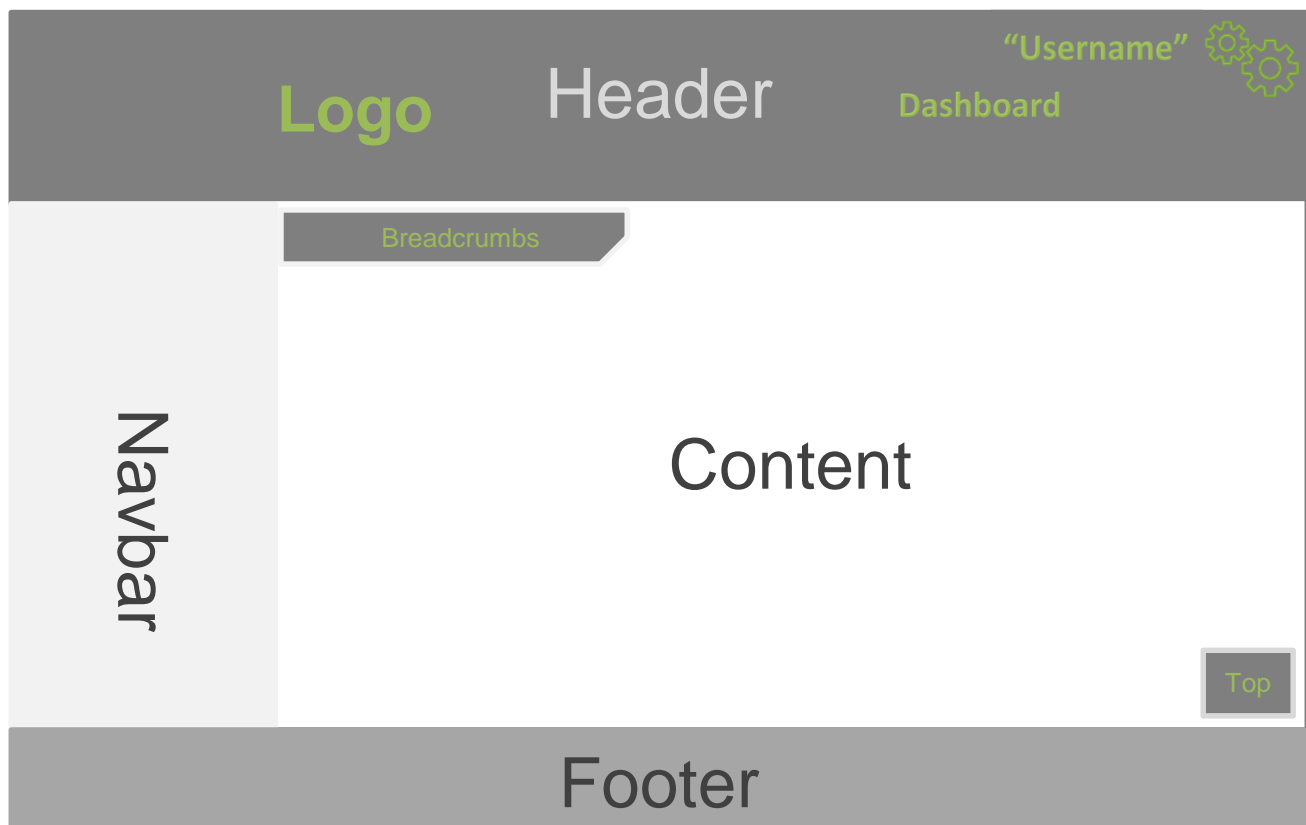


This cog icon symbolizes the current user's settings. From this button the user can view/edit his personal information and logout.

Breadcrumbs - allows the user to always be aware of where they are in the website, how they got there and where they came from.



This button allows users to quickly navigate to the top of the page.



Navigation & Control

The user can navigate to 100% of the pages accessible to that user's role within 3 clicks from any page in the website (3 click rule). The way this is made possible is through the Logo serving as a link to the homepage, and from the homepage almost every page is accessible immediately. Secondly as was discussed above the dashboard is on the menu which links the current user to all their functions and pages within the website.

Support for User Efficiency

Before making an account, the website is very limited, offering only a few pages such as the gallery, about us and view savings pages from the landing page. This helps guide the user to their destination and avoid cluttering the website with links to other pages and functions. Users simply input the necessary information into the few forms (of which all fields are necessary so the total number of inputs needed from the user) and press the big calculate button to see what they came for.

Recognition rather than recall

Consistency in object and function placement is important to encourage familiarity between pages as well as to help users easily pick up where they left off in the event of a user not using the system for a long period. Drop down lists will be used to for some of the technical functions within the website such as selecting a ticket. There could be close to a dozen tickets to any technician at one point in time as such a method helps users to quickly sort and retrieve information.

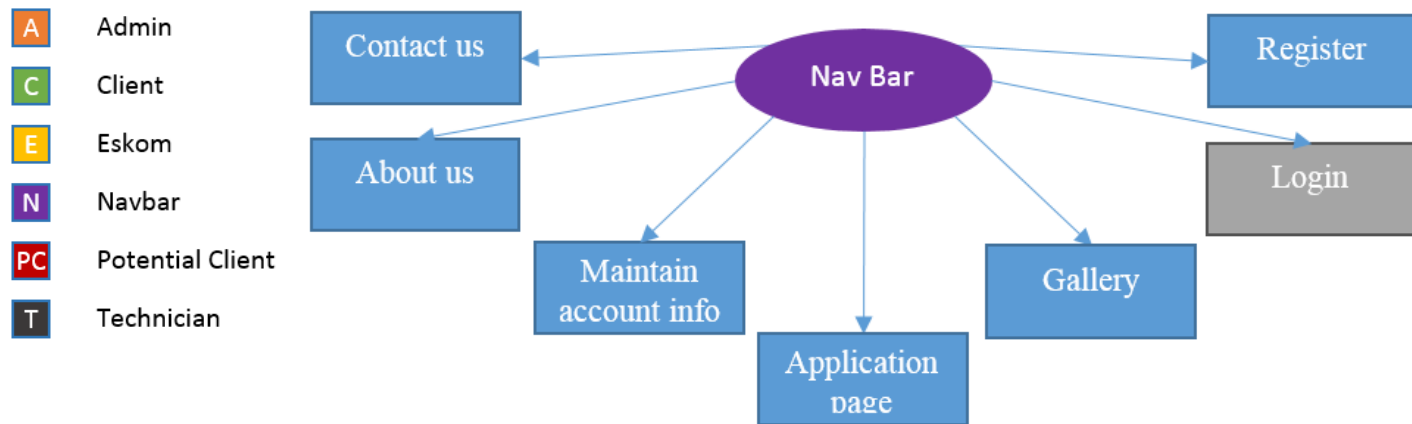
Aesthetic Design

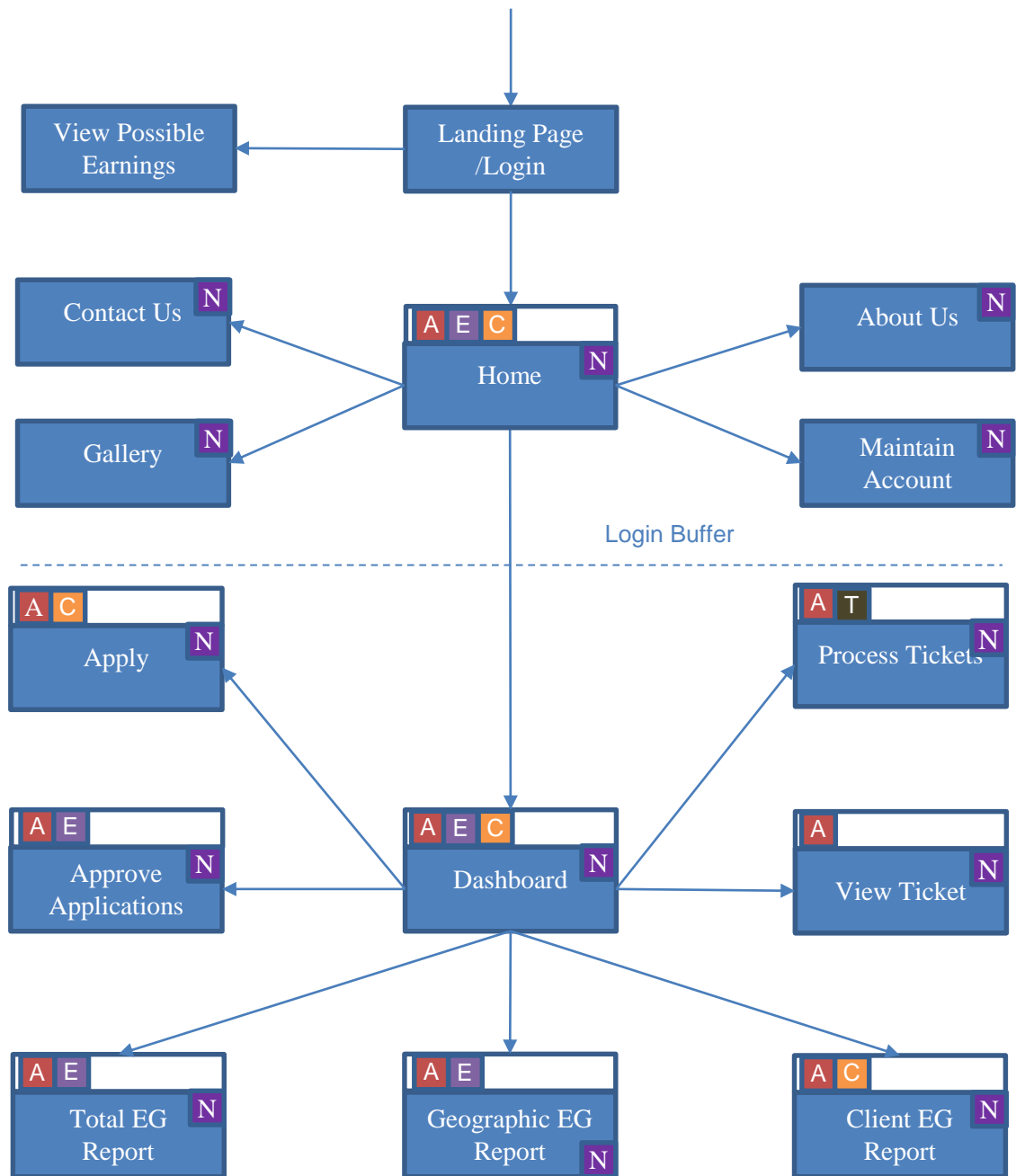
Our minimalistic design aids us in this regard as it helps focus the objective of the page. Our pages will only have information necessary to it so as not to clutter nor distract the user.

Error prevention / recovery

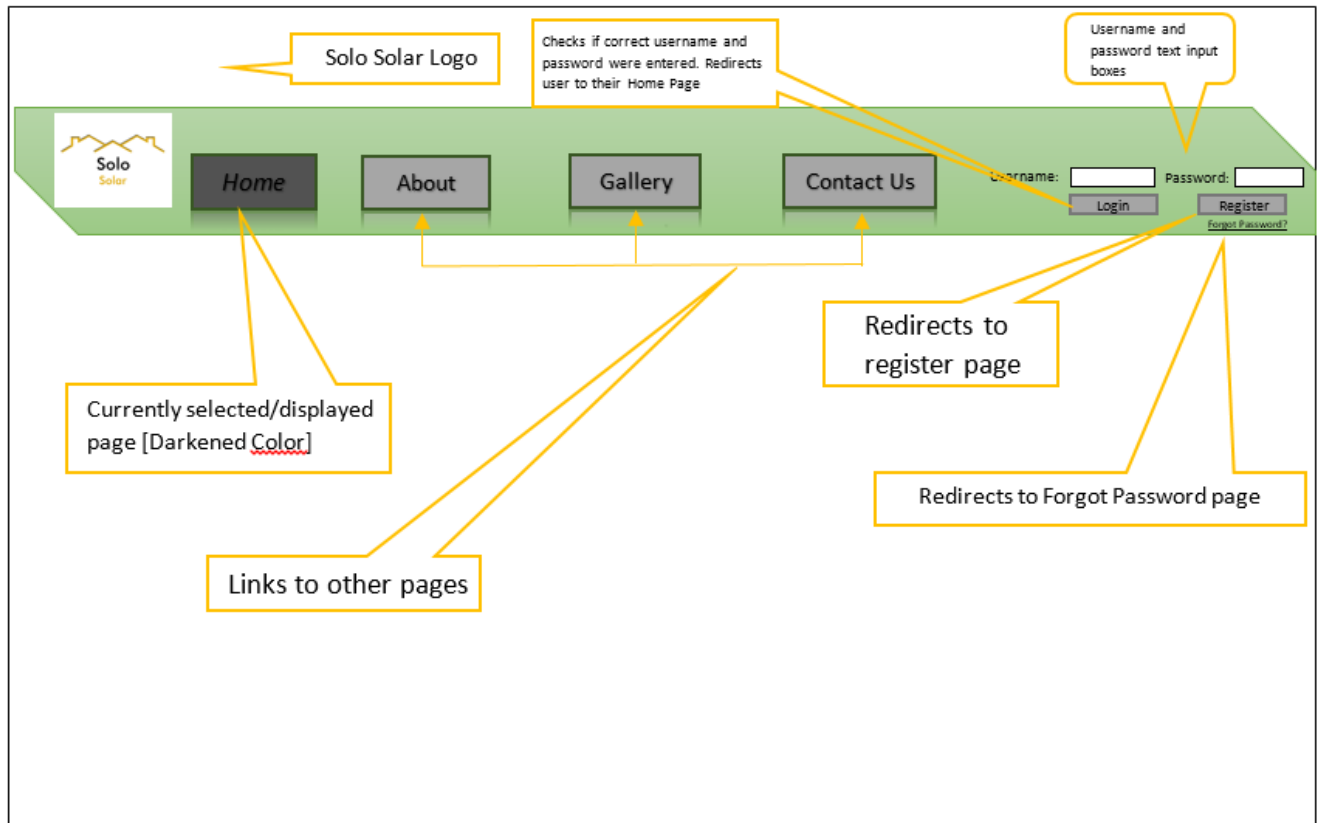
Popups, confirmation messages and spacing between two differing/important buttons are all methods used in our prototypes to avoid the event of a user making a mistake.

2.2 UI Designs

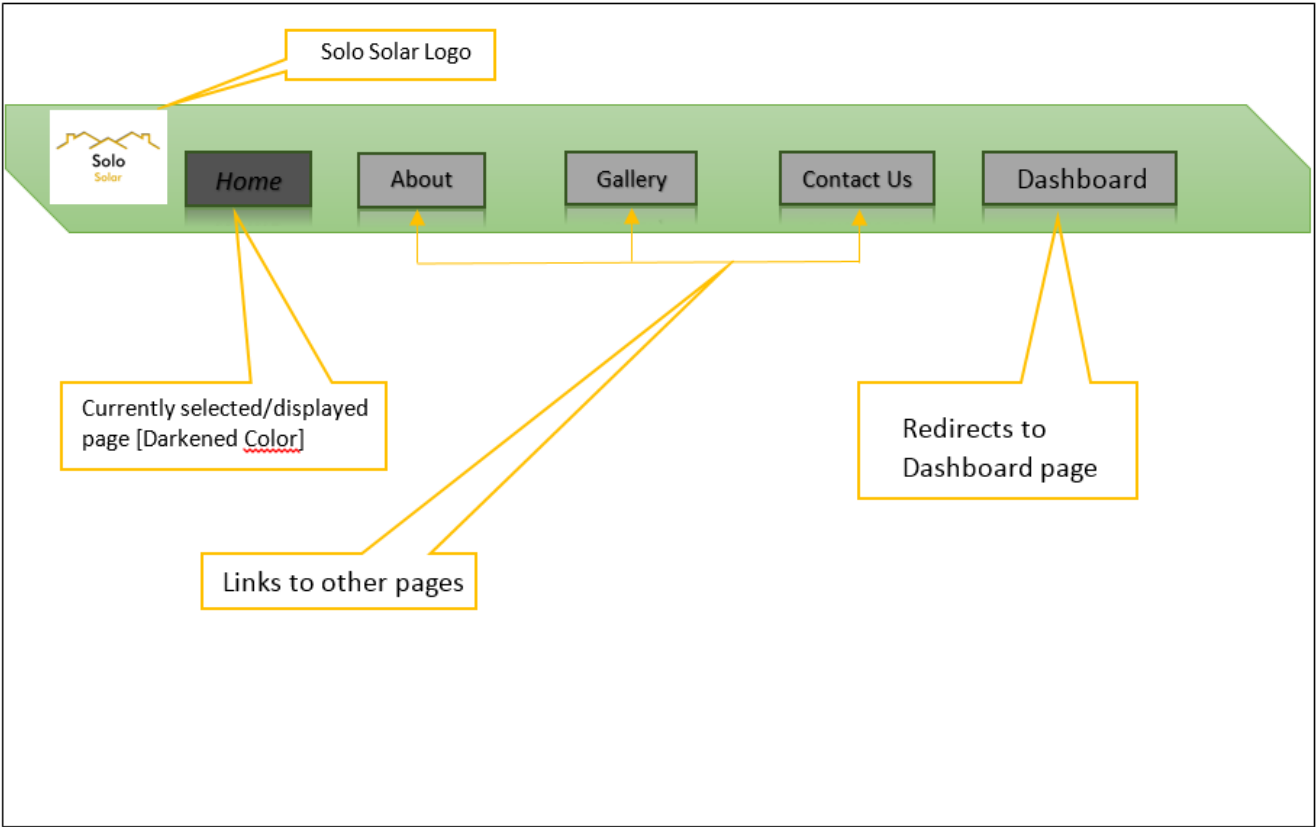





Navigation Bar [NavBar] – Potential Client View



Navigation Bar [NavBar] – Client View



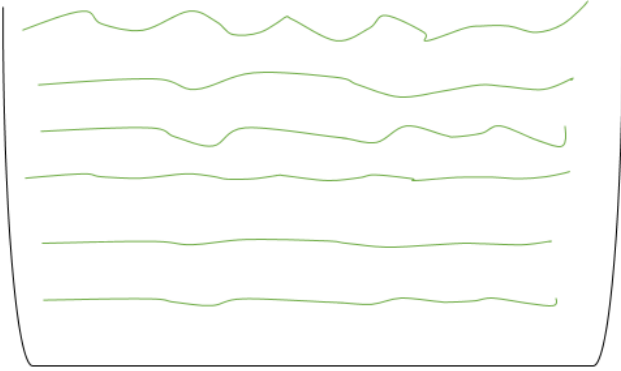
About Us




Login: [Forgot password?](#)

Home [About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

About Us



How Solar Works




[Learn more...](#)

Share your business ideas with us [Contact us ->](#)

Redirects user to a page explaining how solar panels work.

Redirects user to 'contact us' page.

Contact Us



Home

About usGalleryContact UsDashboard

Login:

[Forgot password?](#)

Get in Touch

First Name:

• Surname:

Email:

• Phone:

Your message to us...

Send

Phone Us

PE: 041 365 9891

Cape Town: 041 248 1686

Our Address:

PE

26 Crescent Street
Central

Cape town

32 Millbury Street
Green point

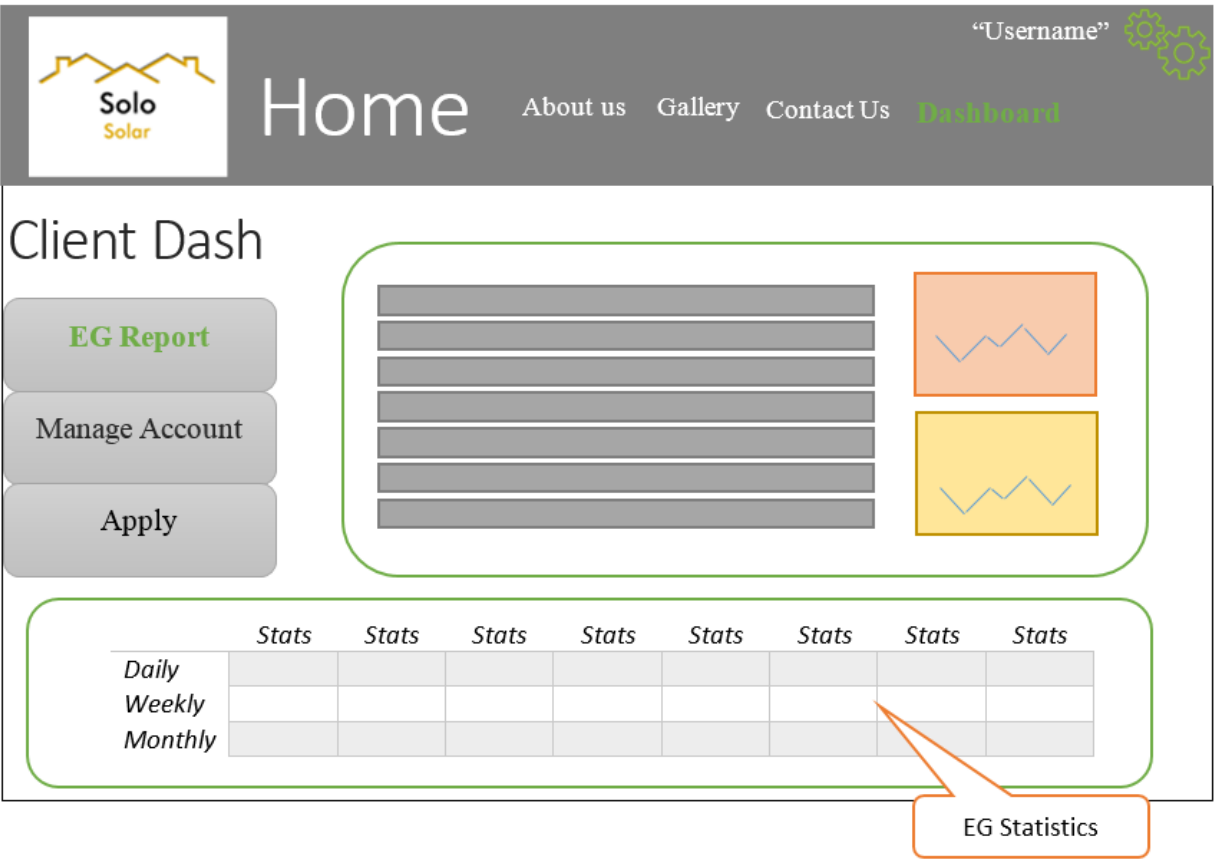
Send button cannot be clicked
until required fields have valid
data

Gallery

Examples of houses with
our solar panels installed



2.2.1 Kevin
A0200: View Client EG Report



A0300: View Geographic EG Report



Home

“Eskom”



[About us](#)

[Gallery](#)

[Contact Us](#)

[Dashboard](#)

Eskom Dash

Evaluate
Applications

**Geographic EG
report**

Total EG report



	Stats	Stats	Stats	Stats	Stats	Stats	Stats	Stats	Stats
Daily									
Weekly									
Monthly									

Geographic
representation of
nationwide EG statistics

A0400: View Total EG Report



"Admin"



Home

[About us](#)[Gallery](#)[Contact Us](#)[Dashboard](#)

Admin Dash

Total EG Report

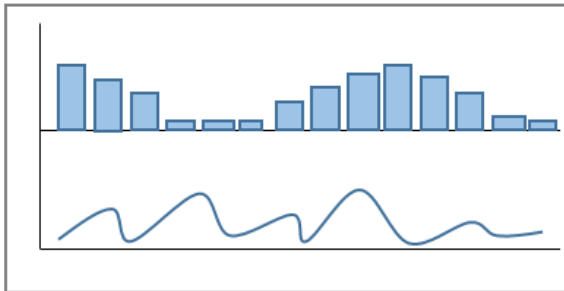
Evaluate Applications

Manage User Accounts

Geographic EG Report

Client EG Report

View Tickets



	Stats	Stats	Stats	Stats	Stats	Stats
Daily						
Weekly						
Monthly						

A0500: View Possible Earnings

View Possible Earnings

The screenshot shows the 'Home' page of the 'Solo Solar' website. The header includes the logo, the word 'Home', and navigation links: 'About us', 'Gallery', 'Contact Us', and 'Dashboard'. A login section has fields for 'username' and 'password', with a 'Forgot password' link. The main content area is titled 'Enter your details below:' and contains a form for calculating solar earnings. The form has two sections: 'Roof Dimensions' with 'Length' and 'Breadth' fields, and 'Location' with 'GPS co-ordinates' and 'Street Address' fields. A 'Calculate' button is at the bottom of the form. To the right, there is a 'How Solar Works' section with a wavy line graphic and a 'Learn more...' link. Below that is a 'Register and Apply HERE' link. Annotations with orange boxes and lines point to specific elements: 'These fields are required.' points to the 'username' and 'password' fields; 'Redirects user to Page about solar Panels.' points to the 'How Solar Works' section; 'Calculate button is not active until all required fields have valid inputs.' points to the 'Calculate' button; and 'Redirects user to the register Page' points to the 'Register and Apply HERE' link.

These fields are required.

Redirects user to Page about solar Panels.

Calculate button is not active until all required fields have valid inputs.

Redirects user to the register Page

2.2.2 Ferdi

B0100: Submit Applications

Submit Application

The screenshot shows the 'Client Dash' interface for Solo Solar. At the top, there's a navigation bar with the Solo Solar logo, a 'Home' title, and links for 'About us', 'Gallery', 'Contact Us', and 'Dashboard'. A user's 'Username' and a gear icon are in the top right. The main content area is titled 'Client Dash' and 'Application: A0012FS'. On the left, there's a sidebar with buttons for 'Apply', 'Manage Account', 'EG Report', and an empty button. The main form area is titled 'Details' and contains input fields for 'Length:', 'Width', and 'Preferred Date of Inspection'. The 'Preferred Date of Inspection' field is a calendar grid. A 'Submit Application' button is at the bottom right. Three callouts provide additional information: one points to the application ID 'A0012FS' stating 'This ID is autogenerated'; another points to the calendar field stating 'Clients may select a preferred date and time of day for our technicians to inspect their'; and a third points to the form fields stating 'To simply the application process, only width and length of the house is needed, the rest of the information is pulled from the data we received upon the client's registration'.

Home About us Gallery Contact Us Dashboard

Client Dash Application: A0012FS

Apply

Manage Account

EG Report

Details

Length:

Width

Preferred Date of Inspection

Calendar


Submit Application

This ID is autogenerated

Clients may select a preferred date and time of day for our technicians to inspect their


To simply the application process, only width and length of the house is needed, the rest of the information is pulled from the data we received upon the client's registration

B0200: Process Applications



Home

About usGalleryContact UsDashboard

“Admin”

Admin Dash

Evaluate Applications

Manage User Accounts

View Tickets

Geographic EG Report

Client EG Report

Total EG Report

APPLICATION

Approve

☐ Special Request

Decline

APPLICATION

Approve

☐ Special Request

Decline

APPLICATION


Approve

☐ Special Request


Decline

Approve Application

This marks the application as a large scale special request and is then forwarded to Eskom's applications after being approved.



“Eskom”



Home

[About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

Eskom Dash

Evaluate Applications

Geographic EG report

Total EG report

SPECIAL APPLICATION

More...

Approve

If Declined, Why & Recommendations...

Decline

SPECIAL APPLICATION

More...

Approve

If Declined, Why & Recommendations...

Decline

SPECIAL APPLICATION

More...

Recommendations for the owner of the property to solve the issue/s that caused the application to be declined.

Redirects User to page with Application details

Assign Technician

The screenshot shows the 'Admin Dash' interface for Solo Solar. On the left is a sidebar with buttons: 'View Tickets', 'Evaluate Applications', 'Manage User Accounts', 'Geographic EG Report', 'Client EG Report', and 'Total EG Report'. The main area is titled 'Re-Assign Technician' and contains a form. The form has a 'Ticket Selected:' dropdown menu with 'T001a1WC' selected. Below this, it states 'Current Technician Assigned: Tech007'. There is a 'Select Different Technician:' dropdown menu with 'Tech009' selected. An orange callout box points to this dropdown menu. In the top right corner, there is a user profile 'Admin' with a gear icon, and a 'Top' button in the bottom right corner of the main area.

Solo Solar

Home

About us Gallery Contact Us Dashboard

Admin

Admin Dash

Re-Assign Technician

View Tickets

Evaluate Applications

Manage User Accounts

Geographic EG Report

Client EG Report

Total EG Report

Ticket Selected: T001a1WC


Current Technician Assigned: Tech007

Select Different Technician: Tech009

Top


A drop-down list of available technicians

Process Tickets



Home

[About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

“Technician” 

Technician Dash

Select Ticket

T0012WC

Process Tickets

Ticket:

T0012WC

Type:

Maintenance

Status:

Open

Property:

PP0004EC

Admin:

Admin007

Outcome:

Client:

Name:

John Lane

City:

PE

Co-ordinates:

40.679856, -
73.966140747

Close ticket

Top

Current Ticket

Final outcome
of the ticket



Home

[About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

"Admin"



Admin Dash

Find Ticket:

[View Tickets](#)

[Evaluate Applications](#)

[Manage User Accounts](#)

[Geographic EG Report](#)

[Client EG Report](#)

[Total EG Report](#)

Ticket ID	Property ID	Client ID	type	Status	Outcome
T0011WC	PP0004WC	8604075258089	Maintenance	Closed	Resolved
T0012WC	PP0005WC	6209265258089	Installation	Closed	Resolved
T0013WC	PP0006WC	4904075258089	Installation	Closed	Resolved
T0014WC	PP0007WC	7304075258089	Installation	Closed	Resolved
T0015WC	PP0008WC	7104075258089	Maintenance	Open	Pending
T0016WC	PP0009WC	6904075258089	Inspection	Open	Pending
T0012WC	PP00010WC	6504075258089	Maintenance	Open	Pending

1 of 10

[Next...](#)

[Assign Ticket Manually](#)




[Top](#)

2.2.3 F-Jay

C0100: Register Client

Register Client



Home

[About us](#) [Gallery](#) [Contact Us](#)

Breadcrumbs

Account Registration

Name	<input type="text"/>	Address	<input type="text"/>
Surname	<input type="text"/>	City	<input type="text"/>
ID Number	<input type="text"/>	Postal Code	<input type="text"/>
Email	<input type="text"/>	T&C's	<input type="checkbox"/> Read more
Username	<input type="text"/>	<input type="submit" value="Submit"/>	
Password	<input type="text"/>		
Retype Password	<input type="text"/>		

Top



Home

[About us](#) [Gallery](#) [Contact Us](#)

Thank you for Registering!

Please go to your email inbox and click on the link to confirm registration.

Ok

C0200: Maintain Client Account

The screenshot shows a web application interface for maintaining a client account. The header includes the 'Solo Solar' logo, a 'Home' link, and navigation links for 'About us', 'Gallery', 'Contact Us', and 'Dashboard'. A user profile section shows 'Username' and a gear icon. The main content area is titled 'Maintain Account' and is divided into two sections: 'Biographic Information' and 'Property 1 Information'. The 'Biographic Information' section contains input fields for ID (9523654785), First Name (John), Last Name (Philips), and Street Address (21 Kloof Street). The 'Property 1 Information' section contains input fields for Length (14) and Breadth (4). A 'Save Changes' button is located below these fields. To the right, there is a section for 'Apply for a second property' with a 'HERE' link, and a 'Notification settings' section with radio buttons for 'Email' (selected) and 'Cell', and a 'Notification Timer' section with checkboxes for 'Monthly' (checked), 'Weekly', and 'Daily'. A 'Delete your account' button is also present. Annotations with callouts provide additional context: 'Redirects user to Application page' points to the 'HERE' link; 'Default notification method is email is' points to the 'Email' radio button; 'Default timer is monthly' points to the 'Monthly' checkbox; 'Save button is not active until all required fields have valid inputs.' points to the 'Save Changes' button; and 'A pop-up form appears and confirms the deletion of the account.' points to the 'Delete your account' button.

Header: Solo Solar, Home, About us, Gallery, Contact Us, Dashboard, "Username", [Gear Icon]

Maintain Account

Biographic Information

ID: 9523654785
First Name: John
Last Name: Philips
Street Address: 21 Kloof Street

Property 1 Information

Length: 14
Breadth: 4

Save Changes

Apply for a second property
Apply [HERE](#)

Notification settings
☒ Email
☐ Cell

Notification Timer
Monthly ☒ Weekly ☐ Daily ☐

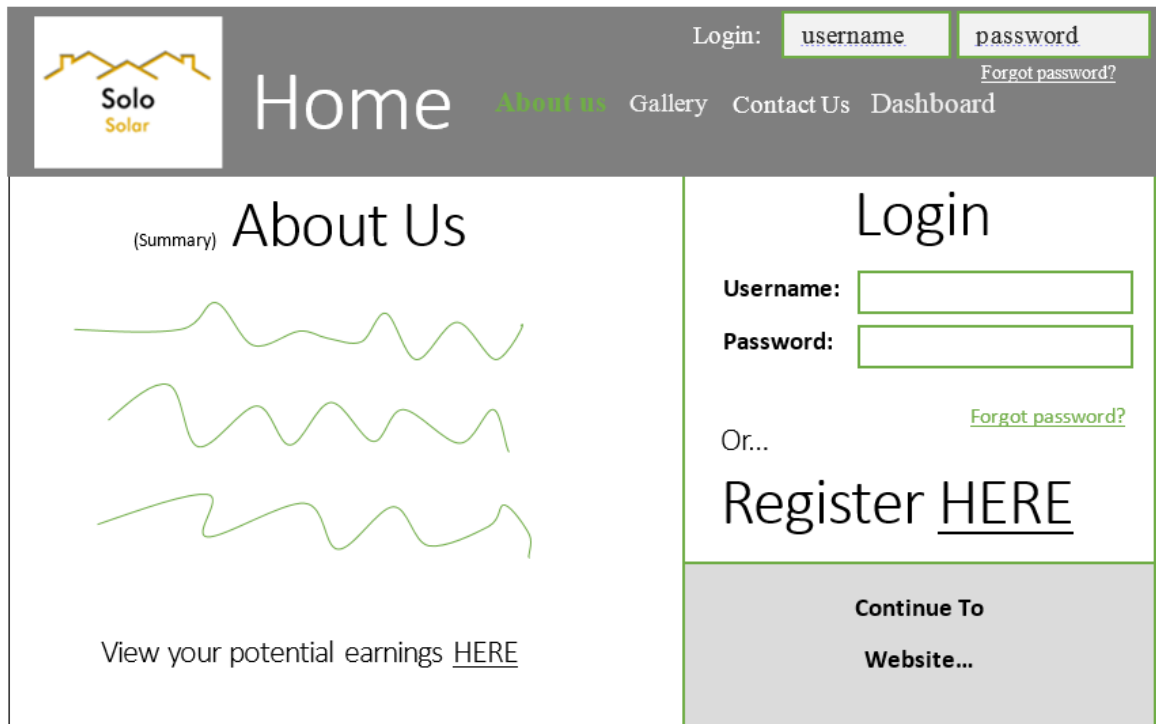
Delete your account

Annotations:

- Redirects user to Application page (points to [HERE](#))
- Default notification method is email is (points to Email radio button)
- Default timer is monthly (points to Monthly checkbox)
- Save button is not active until all required fields have valid inputs. (points to Save Changes button)
- A pop-up form appears and confirms the deletion of the account. (points to Delete your account button)

C0300: Log In

Landing Page



The screenshot shows the Solo Solar Landing Page. The header is dark grey with the Solo Solar logo on the left. Navigation links include Home, About us, Gallery, Contact Us, and Dashboard. A login section on the right has fields for username and password, with a 'Forgot password?' link. The main content area is split: the left side features an 'About Us' section with a '(Summary)' label and three green wavy lines, and a link to 'View your potential earnings HERE'; the right side features a 'Login' section with 'Username:' and 'Password:' labels and input fields, a 'Forgot password?' link, and a 'Register HERE' link. A grey button labeled 'Continue To Website...' is at the bottom right.

Solo Solar

Home [About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

Login: [Forgot password?](#)

About Us

(Summary)

View your potential earnings [HERE](#)

Login

Username:

Password:

[Forgot password?](#)

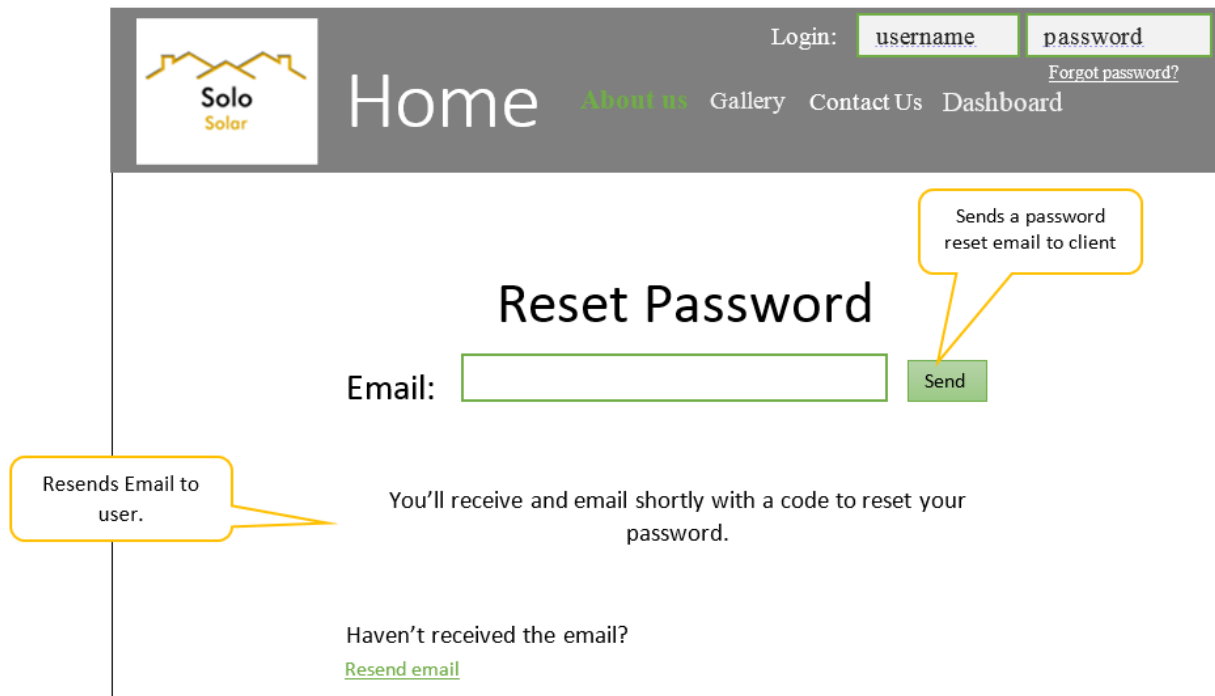
Or...

Register [HERE](#)

Continue To Website...

Landing Page [Alt Events – Invalid Login] Trigger –

User clicks the Forgot Password text on Landing Page



The screenshot shows the Solo Solar Reset Password page. The header is dark grey with the Solo Solar logo on the left. Navigation links include Home, About us, Gallery, Contact Us, and Dashboard. A login section on the right has fields for username and password, with a 'Forgot password?' link. The main content area is white and features a 'Reset Password' section with an 'Email:' label and an input field, and a 'Send' button. A callout bubble points to the 'Send' button with the text 'Sends a password reset email to client'. Below the 'Send' button, there is a message: 'You'll receive an email shortly with a code to reset your password.' and a link to 'Resend email'. A callout bubble points to the 'Resend email' link with the text 'Resends Email to user.'.

Solo Solar

Home [About us](#) [Gallery](#) [Contact Us](#) [Dashboard](#)

Login: [Forgot password?](#)

Reset Password

Email:

Sends a password reset email to client

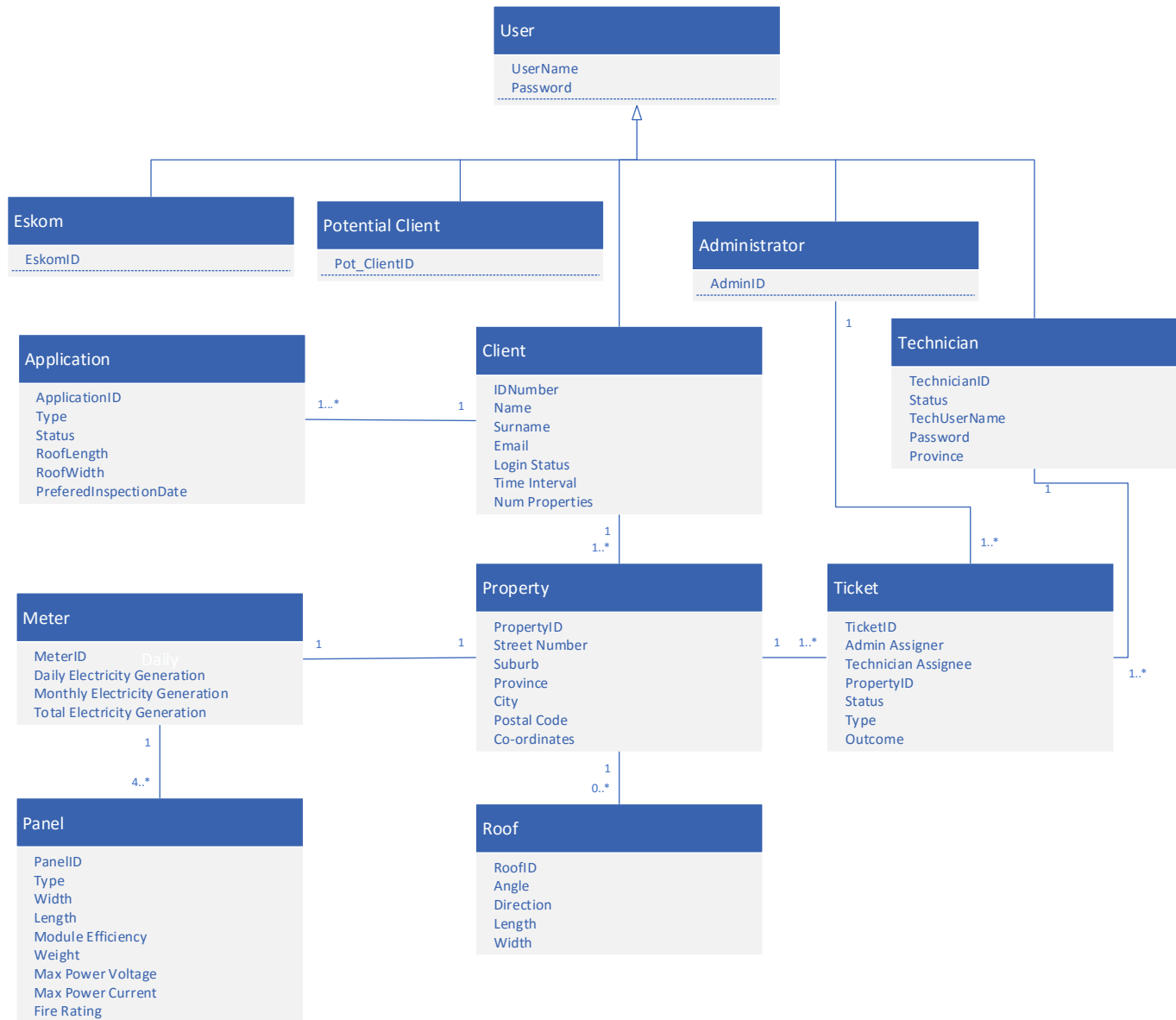
You'll receive an email shortly with a code to reset your password.

Haven't received the email?
[Resend email](#)

Resends Email to user.

3 DATA REQUIREMENTS

3.1 Domain Class Diagram



3.2 Implementation Ready Class Diagram

