

# Functional Required Document

The project  a way

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# Product Description



## **Product description:**

For newcomers such as immigrants, international students, and visitors who move to the countries such as Australia, Canada, UK, USA, this platform helps them get familiar with the unknown territory and guides them during their initial days by giving information about various topics as well as allows users to discuss in the forum. Besides, they can also seek advice from experts on different topics.

In the discussion forum, people can select threads, or create threads if they can not find a specific question, and they can leave messages. There will be some experts belonging to a particular country who advise the users.

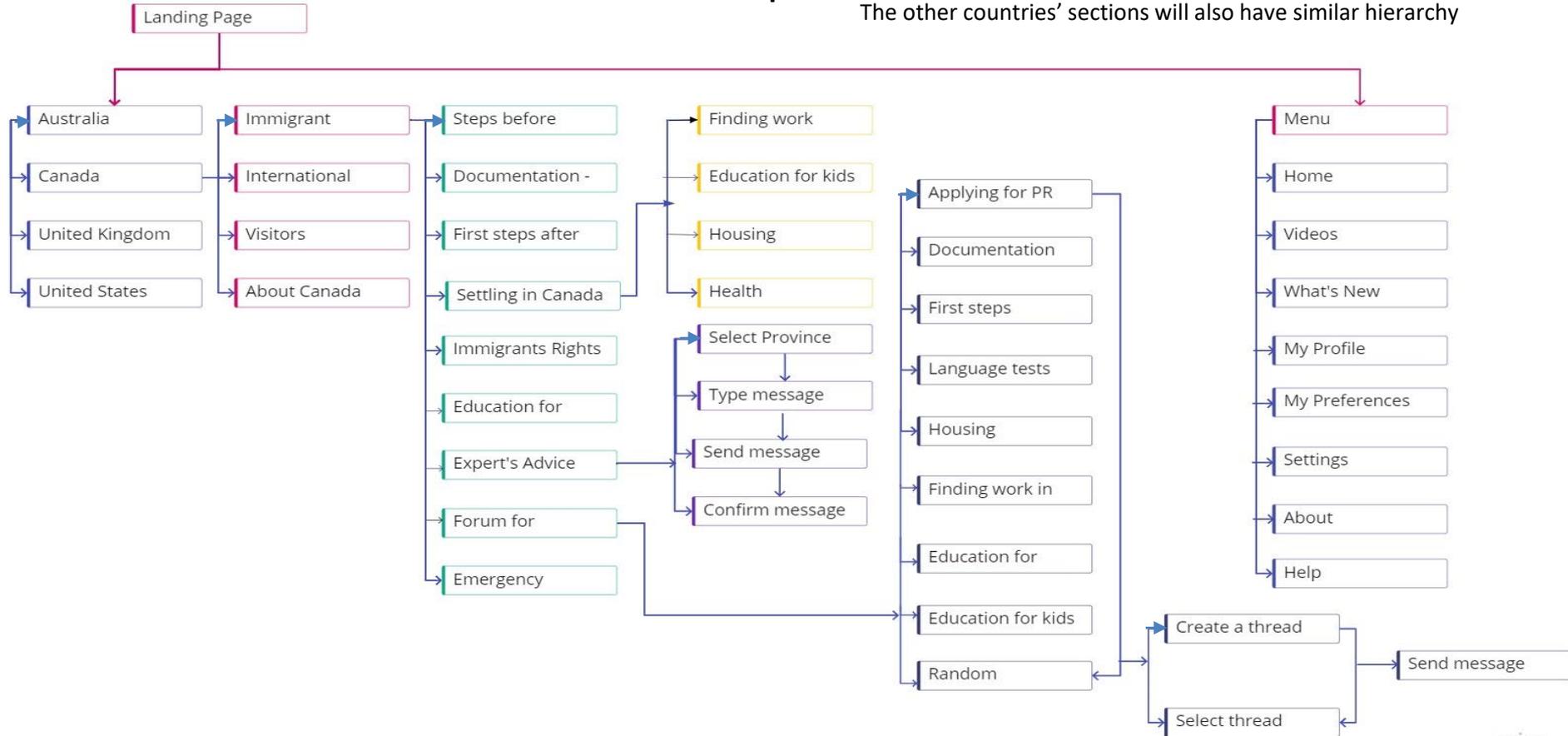
Users can watch videos, read the latest articles, and updates related to different topics related to four countries that are useful for newcomers.

# Sitemap and Feature list



# Sitemap

This diagram shows about Canada section only.  
The other countries' sections will also have similar hierarchy



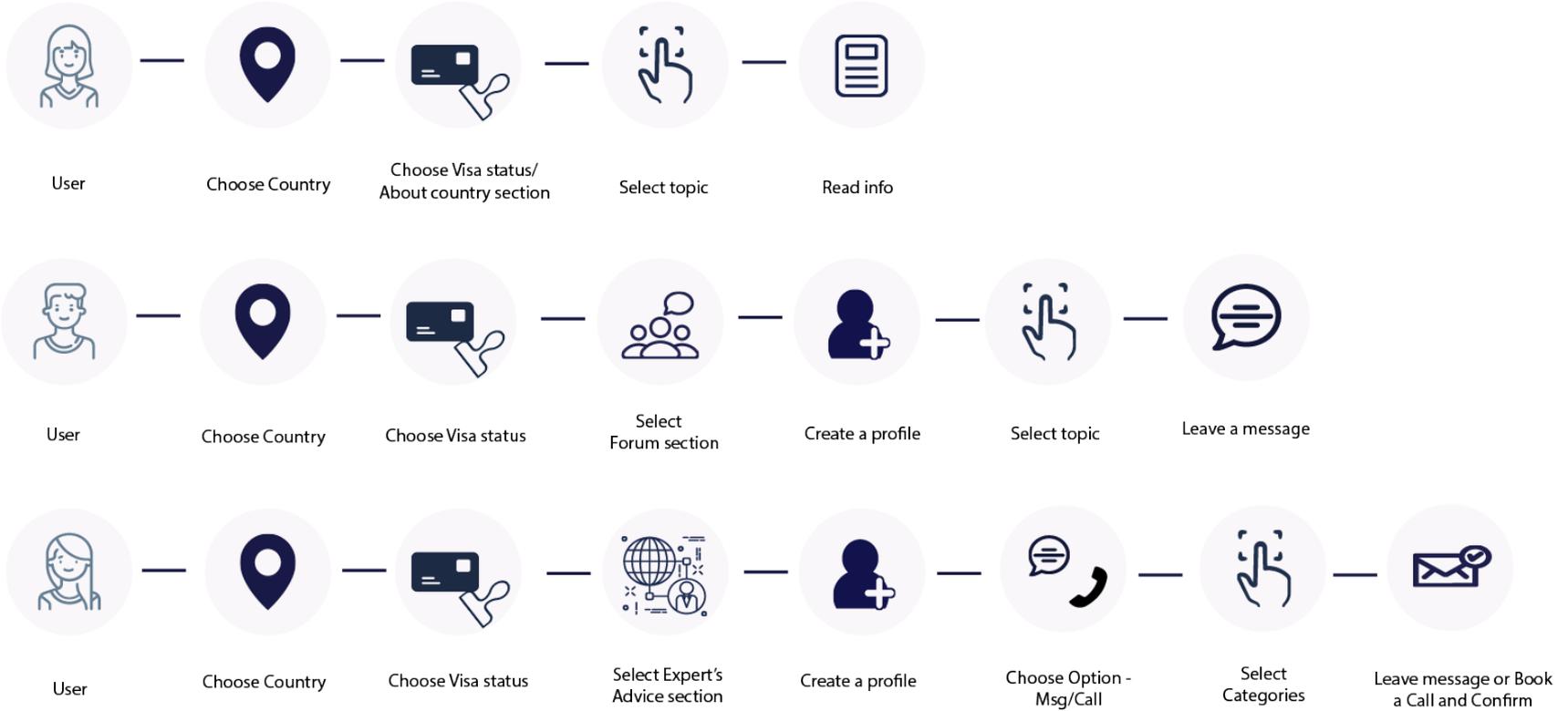
## Major Functionalities:

Users should be able to

- Read information and watch videos through browsing the sections (selecting the topic or by searching for a topic).
- Create profile to participate in the forum or to utilize the expert's advice section
- Leave messages in the discussion forum and discuss further by selecting a topic
- Select a topic from the 'select category' list and ask questions by leaving messages in the expert's advice section
- Filter the categories based on their preferences such as topic, threads, trending threads, latest posts.
- View posts with date and time, view read and unread messages
- Color codes to differentiate user's message from the other users' (this is for the users who create profiles in the site)
- Save and pin messages
- Receive notifications to their email id if they set to notifications on in the settings or a check mark in the message box
- 'Switch to the country' option to allow users to enter the forum of other countries – (this is for the users who create profiles in the site). This feature is to allow users not to confuse while leaving a message. For instance, sometimes, users may confuse and leave a message related to one country in the other country's forum. They can change this in their profile settings

# Major Functionalities:

User Journey/Flow to understand the major functionalities the platform offers



## Feature List:



They can save messages in the forum. This will allow them to see those messages whenever necessary. As well as Users can save their preferences to prevent selecting the country and visas status every time the enter the platform



They can share messages with the helps of share feature. Using different social media channels, users can send messages to others



Users can pin messages



Users can like the comments



There is an option called 'Report'. When someone finds any reply or comment abusive or not trustworthy, they can report the comment



Users who created profile can use some features such as allow email notifications; they can change the color codes of their messages to identify them



They can filter forum for more accurate results. For example, if they need any specific topic or information, they can select the options available in the filter section



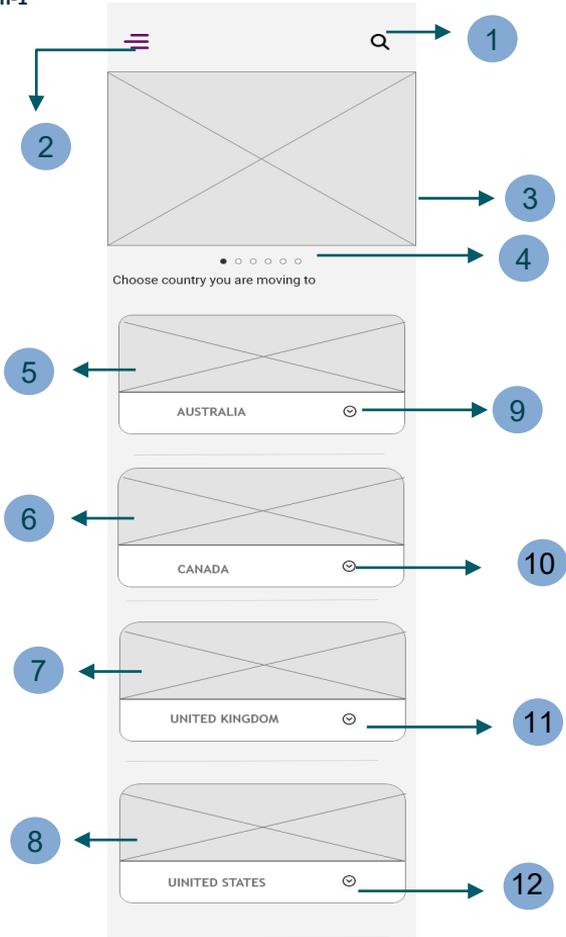
Users can view other's profile by clicking on the profile icon

Along with the above features, users can edit or delete their messages. They can change the country using a 'switch to other country' feature in the settings to participate in the relevant section's forum

# Annotated Wireframes



Screen-1



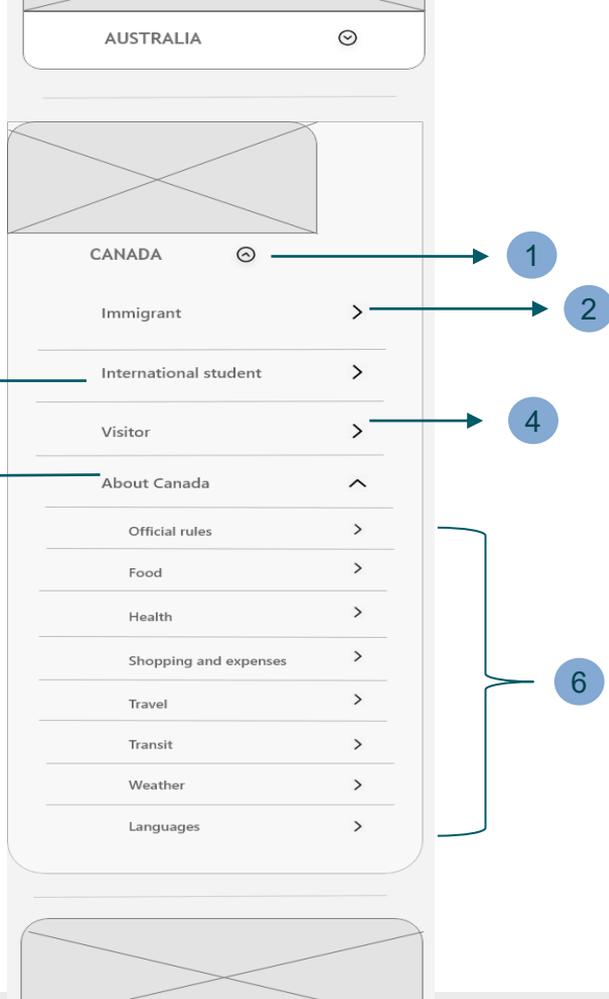
- 1 Search Navigation Bar – Users can search for topics
- 2 Menu – where users can find other options to browse such as home, profile, settings, about, help, my preferences, what’s new, videos
- 3 This is an image showing updates of each country with titles. When users click this image, it takes them to the particular page where they can find related article
- 4 carousel-indicators – which shows the number of images/articles



Images representing countries



Drop down feature, when clicked shows sub categories. The description on this section is in next page



1 When user clicks the drop down icon, the sub categories such a Immigrant, International students, Visitors, About Canada appears under the Canada section by minimising the image. About Canada has its own sub sections.

2 Immigrant section – this consists of different topics related to immigrants. Here users can read information about different topics. Also, it has other sections such as Discussion forum to chat with other users and expert’s advice

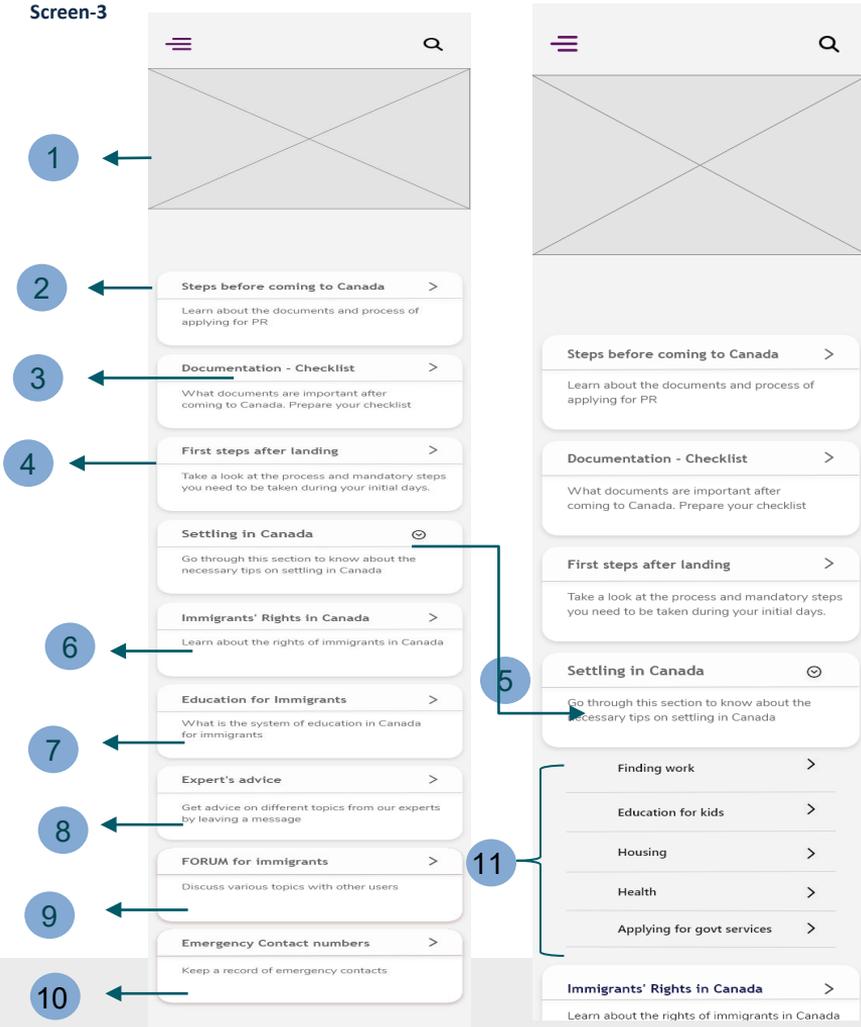
3 International student – same as immigrant section where users can find relevant topics that help students during their initial days as well as forum and expert’s advice.

4 Visitor – same as above sections, users find relevant topics that help visitors and travellers after landing

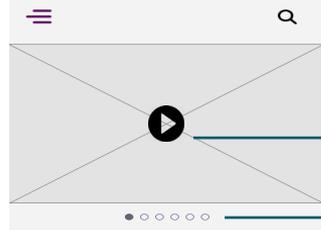
5 About Canada/Australia/UK/USA. It shows common topics and information related to the nation they choose ( 6 )

6 Different topics under about section – users can read info and watch videos related to the topics.

### Screen-3



- 1 Image showing a welcome message
- 2 A category that takes the user to the section where users can find info on steps before coming to the country
- 3 Here, users can find info on the documentation and can prepare their own checklist based on the checklist available in the section
- 4 This button takes to its page where users can go through the info related to the first steps after landing
- 5 Settling section consists of sub sections that takes users to the respective pages ( 11 ). The sub sections appear when the users click that section
- 6 Immigrants' rights in Canada section takes users to its page where they can read info related to the topic
- 7 Education for immigrants – users can read info related to the topic
- 8 Expert's Advice section – it takes users to the page where they can send message to the expert
- 9 This button takes users to the forum section where they can chat with the other users on different topics
- 10 Users can find info on emergency contacts
- 11 These sub sections consists of information related to that topic



1. Activate Canada PR at Port of Entry - Landing Procedure
2. Get Social Insurance Number (SIN)
3. Get a Public Transit card
4. Sign up for a Mobile Number
5. Open Bank Account
6. Register for a Health Card
7. Get Driving License
8. Sign Up with a Family Doctor

#### 1. Landing Procedure:

Please select the province for more detailed information on landing procedure

Select Province:

The information given below is common procedure at all airports in Canada

#### What to expect at the Airport:

Step-1:

You will enter the Immigration Landing or Voluntary Compliance (VC) room, follow posted signs to meet the Community Airport Newcomers Network (CAN) staff and get a number for your Immigration interview.

#### Documents you need for the Immigration interview:

1. Passport or travel document
2. Confirmation of Permanent Residence (CoPR)
3. CBSA Declaration Card

#### Primary Inspection Kiosks:

You can use kiosks at the airport, please read the steps below.  
How to use the kiosks

Step 1: Scan your travel document

Step 2: Take your photo

Step 3: Verify your fingerprints (only for select foreign nationals and permanent residents)

Step 4: Answer a few questions to complete your declaration

1

This is a video that contains a play button in the centre. User can watch a video here.

2

These are the carousel-indicators that shows the number of videos

3

These sections are links. When a user clicks on one of the link it takes to that section. It automatically, scrolls the page down.

4

'Select province' button with drop down icon – when clicked shows the list of provinces. When a user selects one of the province, it takes the users to that particular page where they can read the information related to that province.

5

This arrow takes the users to the top of the page



1 This is the back button that takes the users to the previous page

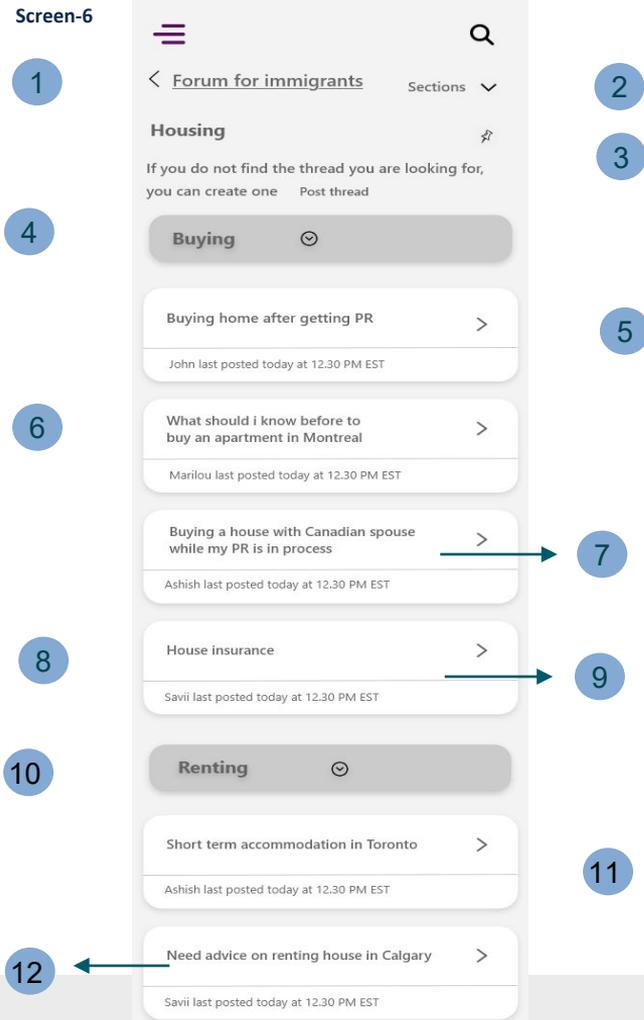
2 'Sections' option when clicked shows all the sub categories available in the immigrant section. Users can select any section/page that they want to visit from the existing page. This is to avoid them going back to the subcategory section with the help of back button as it takes time to move back because of the site has multiple sections

3 'Filter' section that allows users to filter based on their preferences such as topic, province etc.

4 This is a heading

5 to 13

These are the topics that consists of threads where users can select or create a thread to discuss respective topics by leaving a message



1 This is the back button that takes a user to the previous page

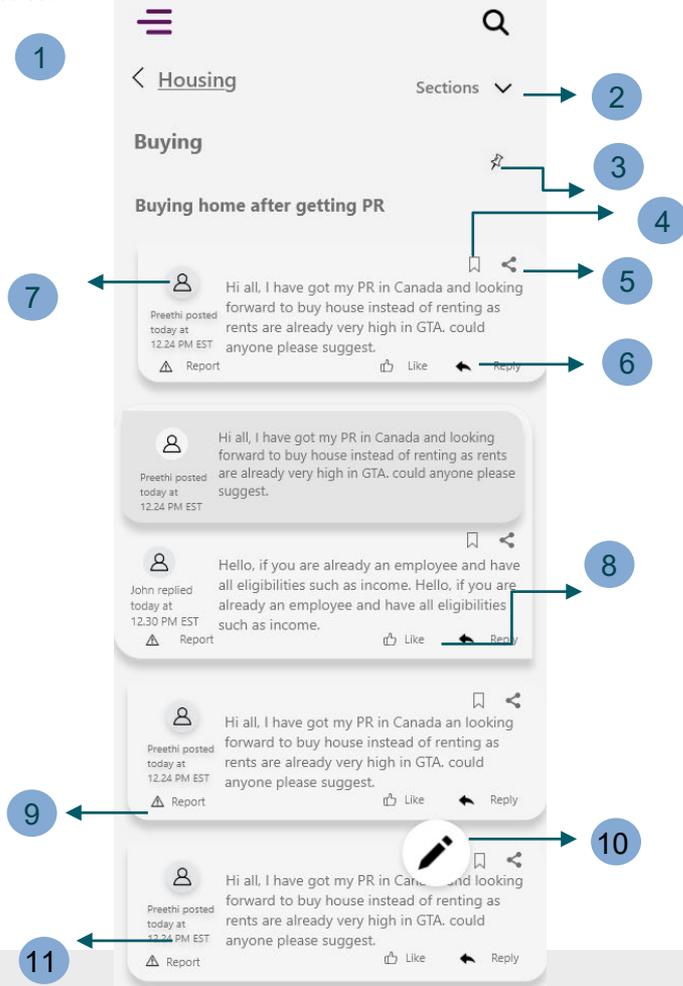
2 'Sections' option when clicked shows all the sections available in the immigrant section. Users can select any section/page that they want to visit from the existing page. This is to avoid them going back to the subcategory section with the help of back button as it takes time to move back because of multiple sections

3 Users can pin the sections/topics that they use regularly

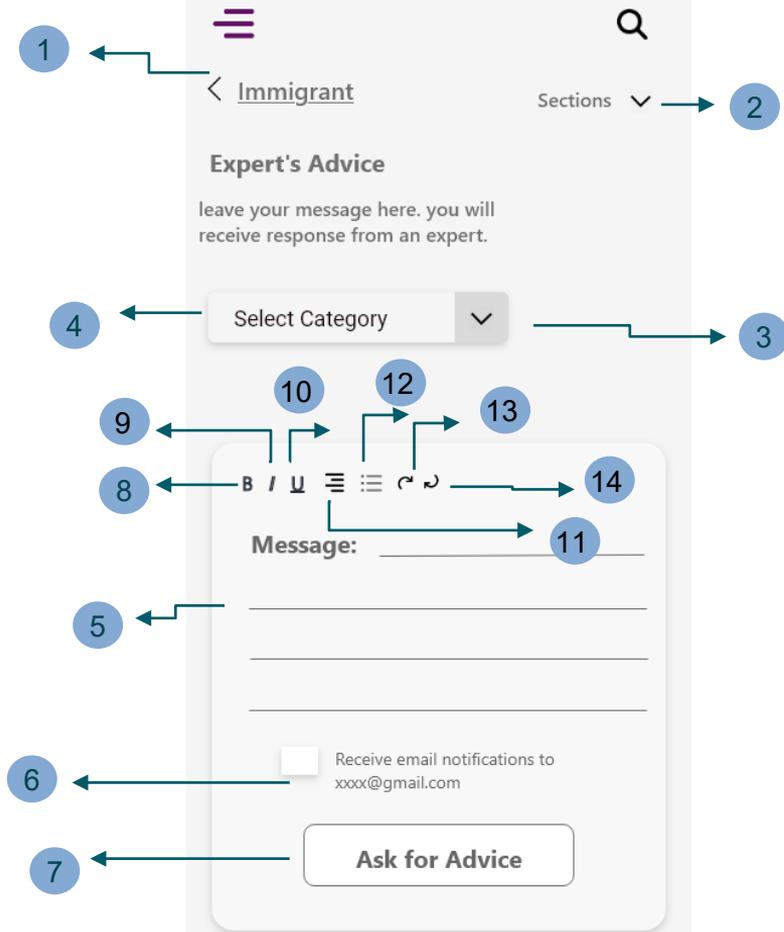
4 Users can click the button or drop down icon to minimise the section when not needed

5 to 12

These are the threads that consists of chat section where users can discuss respective topics by leaving a message



- 1 2 Same as mentioned above for the screens 5 and 6
- 3 Users can pin the messages that they use regularly
- 4 Users can save messages in their account using this feature
- 5 Users can share messages using this feature though various social media channels
- 6 Users can reply to the messages using this feature
- 7 Users can view other's profile clicking on the profile icon
- 8 Users can like messages using this feature
- 9 Users can report messages using this feature if they found any unreliable info, or content meant to be abusive
- 10 Pencil icon when clicked shows a pop up message, where user can type and leave a message.

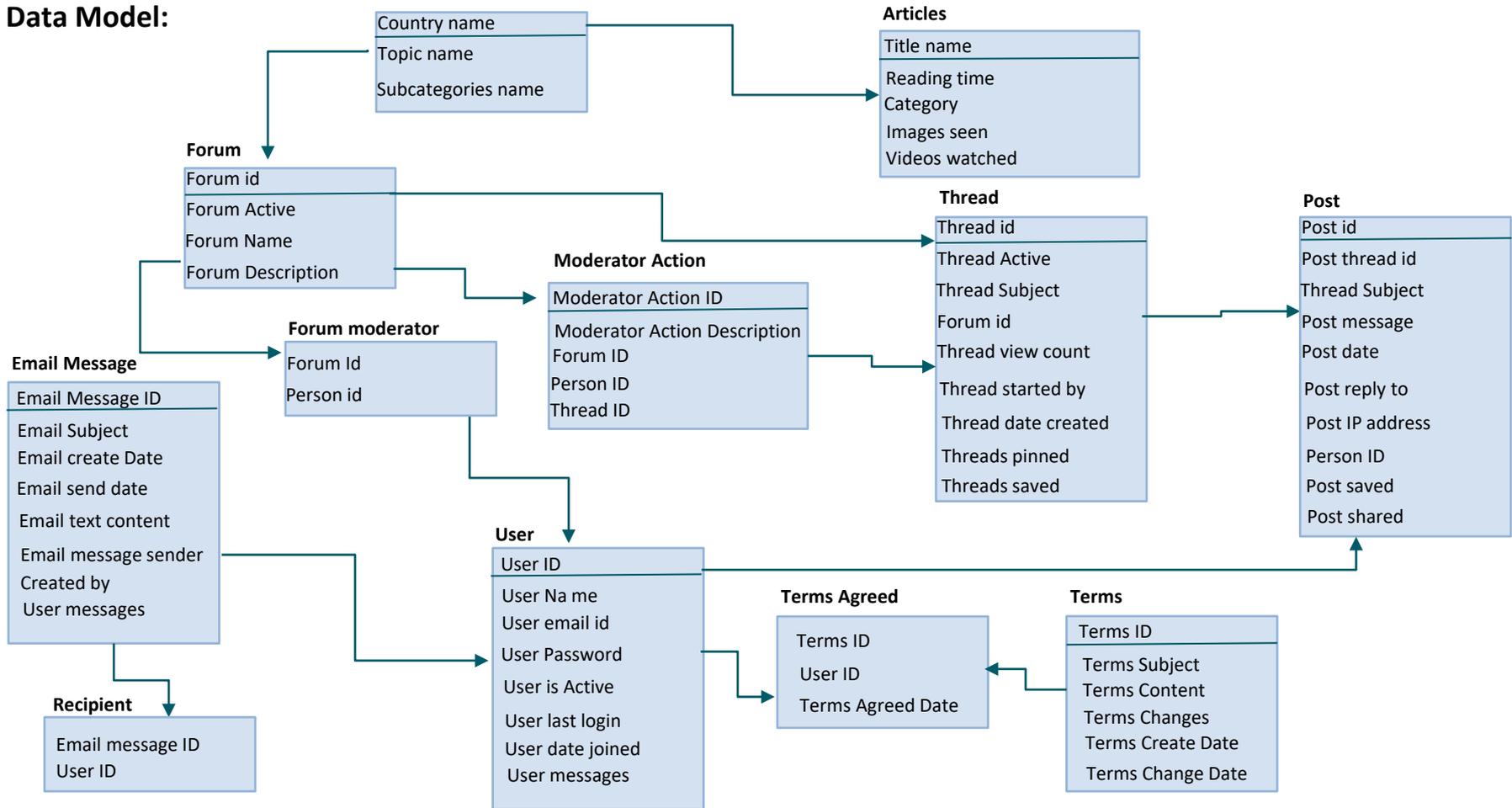


- 1 Same as other screens
- 2 Same as other screens
- 3 Dropdown icon that shows different topics when clicked and the users can select one of them
- 4 Users can see the name of the categories where they can select a topic from the list
- 5 Users can type a message here
- 6 Users can choose to receive notifications using this feature. When they click on the box the right mark appears to let users know that they receive notifications to their email.
- 7 When this button is clicked, a pop up message appears asking users to send message
- 8 When this button is clicked, a pop up message appears asking users to send message and later they can see a confirm message pop up with undo message feature.
- 9 Users can use this features to convert letters into bold
- 10 Users can use this features to convert letters into italic
- 11 This is a feature that can be used for text alignment.
- 12 This feature can be used to apply bullet points or numbers to the text
- 13 These are the undo and redo buttons respectively
- 14 These are the undo and redo buttons respectively

# Data Model



# Data Model:

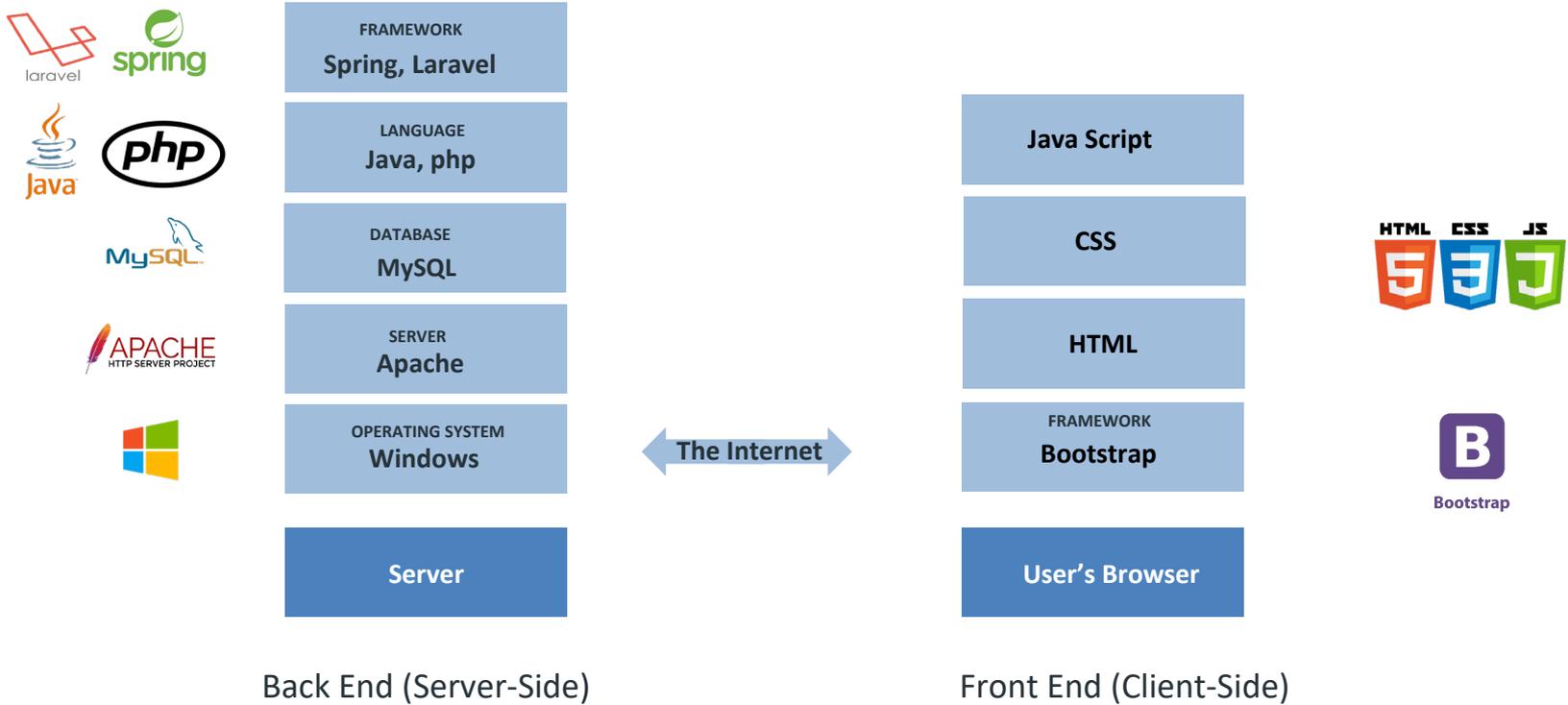


# Tech Stack and Cost



# Tech Stack Diagram

## Mobile First (Responsive web app)



## Mobile First (Responsive web app)

I am choosing mobile first responsive web application for the following reasons:

- This will be a platform with discussion forum, and it contains extensive information with multiple sections. Generally, discussion forum works well on website
- Many information platforms similar to this are responsive web applications. Also, I want people to find my website through keyword search on google
- No need to download or install to use the platform. Simply they can browse on any device
- And web browser is the most common as it is compatible with any device on any browser

## Tech Stack

- **Front end language –**

HTML, CSS, JavaScript

The above three languages are common for front end and easily available.

- **Framework –**

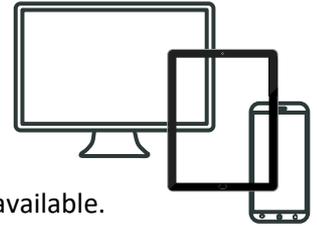
- **Bootstrap**

- It is one of the best frameworks for responsive web applications. It is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.
- It gives supports for JavaScript plugins

- **Back end language –**

- **Java and PHP**

- **Java** is one of the most popular programming languages used to create Web applications and platforms. It was designed for flexibility, allowing developers to write code that would run on any machine, regardless of architecture or platform.
- **PHP** is open-source and free of cost, which helps developers to install it quickly and readily available for use and the language is very logical and well-organized. To run the discussion forum on the website, we need PHP



# Tech Stack

- **Frameworks –**

- **Spring for Java** – The Spring Framework provides a comprehensive programming and configuration model for modern Java-based applications. It helps in creating high performing, easily testable, and reusable code
- **Laravel for php** – Laravel is free and open source framework. It makes common development tasks easy such as routing, authentication, sessions, and caching. It is one of the most popular PHP frameworks for building web applications. With its various useful features, it lets developers build their websites fast and without the struggle. Also, it's very fluent, user friendly and easy to learn and understand.

- **Database –**

**MySQL:** It is an open-source relational database management system. It is the most popular language for adding, accessing and managing content in a database. MySQL works on many operating systems and with many languages including **PHP** and **JAVA**. And it is very friendly to PHP, the most appreciated language for web development.

- **Server –**

Apache HTTP server

The above technological components are useful for this product for the following reasons:

- **Operating system –**

Windows

- It is an Information website
- Contains Discussion forum
- Requires authentication and security
- Easy and better navigation
- Need free and open source components

# Cost

## Dev Team

- 1 Front end developer
- 1 Java developer
- 1 PHP developer
- 1 Database Developer

Team	Cost/Hour (CAD \$)	Duration	Total Cost
Front end Developer	\$46.5/hr	10 weeks	\$14,880
Java Developer	\$53/hr	15 weeks	\$25,440
PHP Developer	\$50/hr	12 weeks	\$19,200
Database Developer	\$48/hr	10 weeks	\$15,360
TOTAL			\$74,880

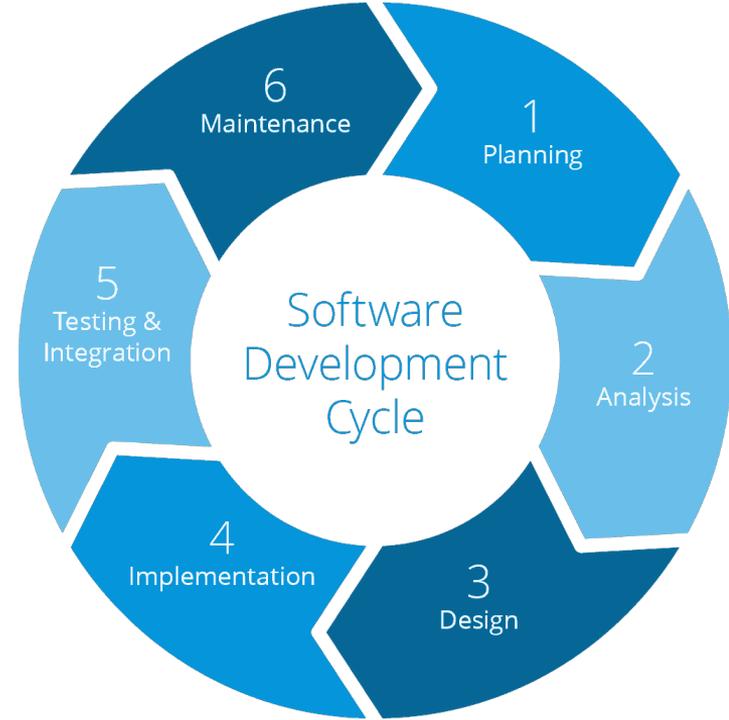
# SDL methodology



# Agile Methodology

I prefer Agile methodology for the development life cycle process because of the following advantages it has:

1. Changes can be made well in advance with time and within the budget.
2. Agile works well even if the scope is not defined in advance
3. Agile intends small or midsize dedicated teams with high coordination
4. It allows customers to be available throughout the project
5. Features are prioritized and issues are resolved according to priorities. It increases efficiency and evades complete failures
6. The Agile model provides continuous iteration of development and testing in the software development process.
7. In this methodology, development and testing activities are concurrent. It allows more communication between developers, managers, testers, and customers.



# Risk Zone



## **Risk 7 - Hateful & Criminal acts** (From the ethical OS design toolkit)

As the website consists of a discussion forum, if we do not take necessary steps and guidelines or any preventive measures, some users may spread violence across the threads. As this is a community where users chat in the section on different topics, some of them may leave hateful comments while replying to others' messages.

We have been reading hateful comments on social media channels where some people use unparliamentary language as well as spread negativity. Due to this, there were some circumstances where people felt embarrassed. Besides, some untrustworthy information may come from some users that give false info that may result in making users go on the wrong path.

If users find any irrelevant content or unreliable information or any abusive comments, there are 100 percent chances of users leaving the site. Users may not show loyalty because of some user's hateful and criminal acts.

To avoid this,

We will follow some guidelines and monitor the conversations frequently. There will be a mediator, who will check the messages and delete if there are any vulgar language or incorrect information that could lead to the pessimistic outcome.

We will use the filter method to restrict some abusive language.

We will block users' accounts.

Our approach uses unsupervised text style transfer to translate offensive sentences into corresponding non-offensive forms. All previous work addressing the problem of offensive language on social media has focused on text classification only. Those methods can thus be used mainly to flag and filter out the offensive content, but our proposed approach goes one step forward and produces an alternative non-offensive version of the content. This has two potential benefits for users. For those users who plan to post an offensive message, receiving an alert that the content is offensive and will be blocked, along with a more polite version of the message that can be posted, might encourage them to change their minds and avoid the profanity. Additionally, for users consuming online content, this allows them to still see and understand the message but in a non-offensive and polite tone.

# View Prototype



**Prototype Link -**

<https://xd.adobe.com/view/8b2d3926-2dde-4c79-be78-18ed7188f826-de7e/>