Block-chain Immigration

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Block-chain Immigration

“The number of international migrants — people living in a country other than where they were born — reached 244 million in 2015 for the world as a whole, a 41 per cent increase compared to 2000, according to new data presented by the United Nations. This figure includes almost 20 million refugees. (United Nations Sustainable Development, 2018)”

In Australia alone, we have 68% skilled migrants and 32% from family visa stream (Homeaffairs.gov.au, 2018). If we consider skilled migration visa (189 Skilled - Independent), 75% of the application were processed in 9 months and 90% of the application were processed in 12 months (Homeaffairs.gov.au, 2018). And this time do not include the time take by the applicant to prepare for all the documents to satisfy the visa conditions and guideline.

We believe that using a block-chain based solution we can make the process less painful for both the applicant and the immigration agency. We aim to use the block-chain to store immigration related documents which can then be verified by the third-party agencies and accessed by the immigration department in safe, secure and effective manner. With the help of block-chain we hope to streamline and fast track this entire process from months to days.

# Objective

* Ability for the applicant to upload the immigration documents on the block-chain
* Ability for the applicant to check the status of her application.
* Ability for the verification agencies to access and verify the applicant documents
* Ability for the immigration department to access and process the immigration application

# Scope

The end-result will be a block-chain based application, which will be used to store the immigrant’s application and all the related documents. The applicant can check the status of the application any time by exploring the block chain from their mobile devices and personal computers. These documents will be accessible by verification entities, which are authorized by immigration department. The verification entities, will verify the applicant documents and upload the verification details on to the block chain. Once the verification is finished, the immigration department and user will be notified of the completion of the verification. Thereby, allowing the immigration department to review the immigration application. The outcome of the review, will be uploaded to the block chain as well, by the immigration department and will be notified to the applicant.

# Timeframe

|  |  |  |
| --- | --- | --- |
| ACTIVITY | PLAN START  IN DAYS | PLAN DURATION  IN DAYS |
|
| Inception | 1 | 10 |
| Project Outline | 6 | 5 |
| Project Proposal | 11 | 1 |
| Design - Use Case | 12 | 3 |
| Design - Data Flow Diagram | 15 | 3 |
| Design - Entity Relationship Diagram | 18 | 3 |
| Design - Sequence Diagrams | 21 | 3 |
| Design - UI Prototyping | 24 | 10 |
| Development - Smart Contract | 34 | 10 |
| Development - Desktop Application | 44 | 10 |
| Development - Mobile Application | 54 | 10 |
| Development – Testing | 44 | 20 |
| Project Presentation | 64 | 5 |
| Project Report | 69 | 10 |

# Monitoring and Evaluation

Weekly meetings will be held to gauge the progress of the application. Apart from that, we will also deliver some artifacts as described below at each phase completion.

The phase one will be evaluated by generation following artifacts

1. Use Case Diagram

2. Data Flow Diagram

3. Entity-Relationship Diagrams

4. Sequence Diagrams

5. UI Design

The phase two will be evaluated by generating following artifacts

1. Working desktop application

2. Working mobile application

The phase three will be evaluated by generating following artifacts

1. Project report

2. Working code base via GitHub

# Bibliography

Homeaffairs.gov.au. (2018). *Global visa and citizenship processing times*. [online] Available at: https://www.homeaffairs.gov.au/about/access-accountability/service-standards/global-visa-citizenship-processing-times [Accessed 9 Mar. 2018].

Homeaffairs.gov.au. (2018). *Migration programme statistics*. [online] Available at: https://www.homeaffairs.gov.au/about/reports-publications/research-statistics/statistics/live-in-australia/migration-programme [Accessed 9 Mar. 2018].

United Nations Sustainable Development. (2018). *Number of international migrants reached 244 million in 2015*. [online] Available at: http://www.un.org/sustainabledevelopment/blog/2016/01/244-million-international-migrants-living-abroad-worldwide-new-un-statistics-reveal/http://www.un.org/sustainabledevelopment/blog/2016/01/244-million-international-migrants-living-abroad-worldwide-new-un-statistics-reveal/http://www.un.org/sustainabledevelopment/blog/2016/01/244-million-international-migrants-living-abroad-worldwide-new-un-statistics-reveal/ [Accessed 9 Mar. 2018].