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| Module Code: **PUSL3111** | Module Name: **API Software Development** | |
| Coursework Title: **API Coursework** | | |
| Deadline Date: **11th May 2022** | | Member of staff responsible for coursework: **Dr. Rasika Ranaweera** |
| Programme: **BSc (Hons) Plymouth Software Engineering** | | |
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| Group work: please list all names of all participants formally associated with this work and state whether the work was undertaken alone or as part of a team. Please note you may be required to identify individual responsibility for component parts.  **J.A. Mujeeb – 10707284**  **G.M.D.D. Ratnayake – 10707351**  **S.O. Perera – 10707315**  **N. S. De Alwis – 10707160**  **M. D. A. Medhavi – 10707278**  **P. P. L. Dilhani – 10709402**  ***We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.***  Signed on behalf of the group: **N. S. De Alwis** | | |
| Individual assignment: ***I confirm that I have read and understood the Plymouth University regulations relating to Assessment Offences and that I am aware of the possible penalties for any breach of these regulations. I confirm that this is my own independent work.***  Signed: | | |
| Use of translation software: failure to declare that translation software or a similar writing aid has been used will be treated as an assessment offence.  I \*have used/not used translation software.  If used, please state name of software………………………………………………………………… | | |
| **Overall mark \_\_\_\_\_% Assessors Initials \_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_** | | |

\*Please delete as appropriateSci/ps/d:/students/cwkfrontcover/2013/14

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| Name | Student ID | Contribution |
| J.A. Mujeeb | 10707284 | 16.7% |
| G.M.D.D. Ratnayake | 10707351 | 16.7% |
| S.O. Perera | 10707315 | 16.7% |
| N. S. De Alwis | 10707160 | 16.7% |
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# Acknowledgement -

First and foremost, we’d like to extend our sincere gratitude towards Dr. Rasika Ranaweera, our module lecturer. We are extremely humbled and grateful to have been able to receive his mentorship, guidance, and support.

The overall accomplishment of this project demanded a significant amount of guidance from many individuals. As a team, we are extremely fortunate to have had this from start to finish.

Finally, we wouldn’t have been able to successfully complete this assignment without the hard work and assistance of all the team colleagues itself. We all enjoyed working with each other.

# Abstract

This assignment comprises of a documented report on an API Web Application and Mobile Application, pertinent to the Sri Lanka Bureau of Foreign Employment (SLBFE).

**Coursework Supervisor:** Dr. Rasika Ranaweera

**Group:** Group No. 22

**Deadline:** 11th of May 2022

**Introduction**

The Sri Lanka Bureau of Foreign Employment (SLBFE) is a government owned foreign employment agency that assists its citizens in the procurement of global employment opportunities.

It is evident that labour is a fundamental asset that would greatly contribute towards substantial job creation, playing a key role in securing a stable source of foreign currency inflow. It also recognizes predicaments related unemployment, helping more Sri Lankans escape the risks of poverty, bestowing the potentiality to further enhance their prosperity and well-being.

is not only helping the public to work outside the country but also provide the companies to fine appropriate workers, monitor the wellbeing of the foreign employees, and handle family complains. The current web site has been out dated and the bureau is planning to open up their facilities so that the companies and other parties can use the large amount of data gathered over the years. SLBFE hired your team to develop a web API which can facilitate the below requirements.

Through the SLBFE, any citizen can hold the potentiality to acquire membership via free online registration. Those that are on the lookout for jobs can utilize the system to update and upload their qualifications, CVs, birth certificates, etc. Bureau Officers are authorized to view and validate the uploaded information. Furthermore, foreign companies can look for workers based on their respective qualifications.

Those who have left for foreign employment must update their real-time location once they go to the foreign company.

Citizen are also permitted to be able to post complaints, which bureau officers can parallelly view and respond to. We have developed a RESTful API web application to address the above scenario.

**2. PROJECT SCOPE**

The project scope mainly caters towards bestowing the Sri Lankan citizens with productive employment opportunities.

1. **Citizens –**
2. **Bureau Officers –**
3. **Admin -**

**3. SYSTEM ARCHITECTURE**

**3.1 Context Diagram**

**3.2 Data Flow Diagram Level 0**

**3.3 Data Flow Diagram Level 01**

**3.4 Use Case Diagram**

**4. API DOCUMENTATION**

* POST /citizens
* PUT /citizens/:nid
* GET /citizens/:nid
  + PUT /citizens/:nid
  + GET /citizens/find(:qualifications)
  + DELETE /citizens/:nid
  + GET /citizens/:nid/contacts

**4.1 JSON Requests and Responses**

**4.2 XML Requests and Responses**

**5. TOOLS AND TECHNOLOGIES**

In pursuance of securing a successful project outcome, we have contended in carefully choosing the most suitable tools and technologies.

* Web Application - PHP based Laravel
* mobile application - Java

PhpMyAdmin –

Laravel –

PHP –

Java -

**5.1 PhpMyAdmin**

**6.**

**6.1 Client Website Features**

**6.2 Client Mobile App Features**

1. J.A. Mujeeb (10707284) -
2. G.M.D.D. Ratnayake (10707351) -
3. S.O. Perera (10707315) -
4. N. S. De Alwis (10707160) -
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**7. INDIVIDUAL CONTRIBUTION**

**7.1 N.S.D.Alwis** (10707160) -

**7.2 G.M.D.D.Rathnayake** (10707351) -

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**7.5 J.A.Mujeeb** (10707284) -

**7.6 M.D.A.Medhavi** (10707278) -

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**8. APPENDIX**

**8.1 Controller Scripts and blade.php**

**8.2 Mobile App Main Classes**

**9. REFERENCES**