

Coursework

This coursework for PUSL3111 is worth 60% of the module marks and contains two deliverables: A working API web application and a report. You may form in to groups of maximum six members by yourself and enroll the groups in the DLE.

A scenario for the project

Sri Lanka Bureau of Foreign Employment (SLBFE) has a vision of making “Sri Lanka to be the best choice for competent human resources for overseas market.” The bureau 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.

- i. Any citizen can become a member through a free online registration.
- ii. The citizens who seek jobs, must be able to update their qualifications and upload their birth certificates, CVs, copies of the passports through the system.
- iii. The bureau officers must be able to see and validate information provided by the job seekers.
- iv. The foreign companies should be able to find workers based on the qualifications.
- v. The citizens who have gone for foreign employment must update their current location as soon as they visit the foreign company.
- vi. Any citizen can make a complaint and the bureau officers should be able to see the content and reply accordingly

Deliverable 1

Develop a RESTful API web application to address the above scenario. You should alter the path examples below according to the situation (e.g.: just like adding members [or in other words registering themselves]) but all the functional requirements must be satisfied. According to the scenario you should also **suggest** then **implement** APIs to address item (i) to (vii).

Minimal Required APIs

- POST /citizens
Citizens and officers can register themselves with details including a national ID, name, age, address, current location (latitude and longitude), profession, email, affiliation, password, etc.
- PUT /citizens/:nid
Job seekers should be able to update their qualifications and upload certificates.
- GET /citizens/:nid
Officers should be able to access any citizen's information by their national id
- PUT /citizens/:nid
Officers should be able to verify the information
- GET /citizens/find(:qualifications)
Company officers should be able to find candidates based on qualifications
- DELETE /citizens/:nid
The SLBFE staff can deactivate an individual's account if the citizen is deceased.
- GET /citizens/:nid/contacts
The SLBFE staff should be able to collect information about contacts of any citizen.

It is very important that your APIs work, the public interfaces you create should conform to industry good practices (security, paging, documentation, ease of understanding, etc.) for creating web APIs. The web API should be developed using **Java, C#, PHP, React JS, or Ruby on Rails**. The interface must use the **REST** architecture and deliver the data in both **XML** and **JSON** formats. You must also develop **two example client applications**, a mobile app and any other client such as a web application, standalone application, etc. that consume your own API.

Deliverable 2

Write a comprehensive report containing documentation for your API, tools and technologies, individual contributions, and certificates. You must also **include the controller classes as an appendix** of the report.