Murdoch University

CourseLoop - Callista Parser Executive Summary

ICT302 IT Professional Practice Project,
Team (10) Black Widow

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Project Description

Murdoch University has a manual process in place in which staff communicate information between two applications, CourseLoop to Callista. Due to the likelihood of human error, the University has assigned Black Widow to create an application that manually parsers the information of the two systems to reduce such mistakes and to provide efficient and timely information to students.

Black Widow purposes the extraction of the course structural information from CourseLoop curriculum management system via parser software and transform the payload into course and unit set rule strings for use in the Callista student management systems, utilizing Callista standard rules syntax. The software will translate the data extracted from CourseLoop and will parse and transform it into a Callista string.

This project is needed in order to automate and facilitate the correct communication between CourseLoop and Callista. This will assist in providing a better understanding of the Handbook by students, University staff and users in general. It will also provide a better procedure in terms of managing the communication between both systems, as the software will be designed to try to avoid human errors in the processes executed. This software will be oriented towards the simplification of the communication processes between CourseLoop and Callista, avoiding human interaction as much as possible.

Present and future practical applications

The present applications for this software solution is only one: translate a payload extracted from the CourseLoop system into a string following the syntax and rules of the Callista system.

As for future practical applications, this solution has been designed exclusively for this matter as the systems are nowadays. If any structure in CourseLoop or Callista changes, this solution will need to be changed as well.

Innovations

The main innovation of this software will consist in an automation of a process which was formerly done manually by a person of the Murdoch's University staff. The actual process required a person to extract the information from the json files coming from CourseLoop and then manually convert it into a Callista string. Our software solution will allow anyone operating it to be able to create Callista strings by simply dropping the corresponding json files for courses and majors into the areas designed for it.

Effectiveness of the solution

The effectiveness of the solution will depend on the structure of the json files extracted from CourseLoop. It that data structure changes, the entire algorithm designed to translate the CourseLoop payload into a Callista string would need to be modified or in a worst-case scenario, re-written.

Methodology and documentation

The methodology that has been adopted for use with the project is Agile Methodology. This methodology would be the most appropriate type for the project due to the software requiring constant iterations to achieve an optimal product. By breaking tasks (stories) into smaller tasks (activities) will allow the team to react to immediate feedback set by both supervisor and client.

Documentation regarding the project is stored and maintained on local and online cloud drives. The Google drive will be available for group members to download information locally to their personal computers.

Complexity

The objective of the project is to take course structural information from CourseLoop Curriculum management system as a json file via software solution on a web server and transform the payload into course and unit-set rule strings for use in the Callista student management systems utilizing standard rules syntax.

The front end of the project should not be complex for users as the basis of the application is reading a json file and outputting the contents in a string.

Final Summary

Murdoch University's current process to manually transfer data between two applications requires human interaction which is likely to result in human-error. To eliminate this time-consuming and error-prone process, Black Widow was brought in to automate the translation of data from Courseloop payload files to Callista strings. Black Widow aims to design an innovative software that will accurately translate the payload extracted from Courseloop to a string as per the Callista syntax. The proposed solution will only be valuable to the current system in place but will require modifications should there be changes to the CourseLoop-Callista systems. Due to the iterative nature of the software, Black Widow has chosen to adopt the Agile Methodology to ensure end-users receive a non-complex interface to interact with.