

# PROJECT PROPOSAL

## Temple Course Descriptor

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## **Project Abstract**

This document proposes a script that will take Temples course numbers and find all of the course information on Temples website as well as teacher ratings from Rate my professor. The script will take all of this information and store it on a database along with the student ID entered. On the screen, all of the information (course time, cost, professor, rating, description) will be displayed, and the user will be asked if they would like to be sent this information as well.

## **High Level Requirement**

The script will first prompt the user if they have an already entered student ID to display their previous data. If it is a first-time user the user will enter their student ID as well as the courses they want to find. This script will use webdriver from the selenium package. This is a package that allows the script to interact with a web browser, in the case of this project the browser will be Chrome. Once the script gets online it will find the necessary xpaths that are found by inspecting the page. Xpaths are the codes that designate the different parts, or controls, of the UI that users see on browsers such as buttons, textboxes to type etc. The script will pull the information from these xpaths, and store the info on a hashmap. The information will be stored in a different class where all general information about the course will be stored (besides the course ID). This class will be used as the value in the hashmap while the course ID will be used as the key. Following this, the script will fill in a record in a database so the user can have their information saved in case they want to revisit it. The information will be displayed on the screen, and if the user wants, they can be sent the information through a bot.

## **Conceptual Design**

Around 4 classes should be present (main/GUI interaction class, database communication class, communication with school website class, communication with SMS/email class). Done either in C#(easier to work with GUI) or Java(more familiarity) depending on the level of comfort with the team. Knowledge of SQL commands and Access will also be useful and can be improved on with this project. How to properly use the inspect tool on browsers as well as being able to break down what is information is being given in HTML will also be a skill that will be necessary and can be improved on.

## **Proof of Concept**

<https://github.com/cis3296s22/ArthurKozhevnikProject>

## **Background**

This project has will be built from scratch with no resources taken from any open sources.

## **Required Resources**

Research will need to be done on how to pull information from a website using Selenium webdriver. Chrome will need to be installed as well as a package for Chrome that allows scripts to interact with the browser. Know Research needs to also be done to fully understand how to use SQL to work with databases like Access. If the decision is made to use Java instead of C#, well designed GUI will need to be fully understood as well, since Java lacks a easily buildable GUI.