**Course name: Open source Development for Google Applications**

**Course Code: EXC1081**

**Name of the Project:** Create an API using Flask or any framework you are comfortable with (Flask is easy to learn) and scrape the GSOC website to fetch details of all the organizations in Google summer of codes and in the API send their name, link to their website, description (which comes on clicking learn more), The technologies they use and their contact email.

**Name: Aziz Muslim**

**Registration number: 16BCI0075**

**Abstract:**

In this project, we create a basic REST API in Python with the Flask Framework. REST APIs are pretty much everywhere. They are the standard method to expose databases to clients and knowing how to develop a REST API is a necessity at all layers of the stack. REST (Representational State Transfer) is an architectural style, and an approach to communications that is often used in the development of Web services. The use of REST is often preferred over the more heavyweight SOAP (Simple Object Access Protocol) style because REST does not leverage as much bandwidth, which makes it a better fit for use over the Internet. The SOAP approach requires writing or using a provided server program (to serve data) and a client program (to request data).The stuffs we require to build REST API are Python, Flask, Flask-SQLAlchemy,Flask-Restful, SQlite3 and Jsonify. We will scrap the website https://summerofcode.withgoogle.com/organizations with BeautifulSoup. BeautifulSoup is a Python library for pulling data out of HTML and XML files. It works with your favorite parser to provide idiomatic ways of navigating, searching, and modifying the parse tree. It commonly saves programmers hours or days of work.

**Methodology:**

GSoC organisations website is web scraped using beatifulsoup.

The content is then properly systemised and organised in the required manner in an JSON format

Then the API is created using JSON extraction on a localhost using flask framework

**Result of the execution:**

The API displays output as a list of organisations and all their details.

Details contain name, website, topics, technologies used, description, and mailing list

**Conclusion:**

The API created gives easy access to content of the website. One can easily draw stats from it and derive an overall analysis.

**References:**

https://medium.freecodecamp.org/how-to-scrape-websites-with-python-and-beautifulsoup-5946935d93fe

https://medium.com/python-pandemonium/build-simple-restful-api-with-python-and-flask-part-2-724ebf04d12

https://impythonist.wordpress.com/2015/07/12/build-an-api-under-30-lines-of-code-with-python-and-flask/

https://medium.com/python-pandemonium/build-simple-restful-api-with-python-and-flask-part-1-fae9ff66a706

https://www.youtube.com/watch?v=3xQTJi2tqgk&t=647s