**Other Recommended Courses Model**

The Other Recommended Courses Model aims at generating a set of suggested courses for the user based on the courses searched and surfed by the user. These can also be used and the frequently bought solution to the course.

The Code is elaborated in an extensive way as follows:

**Input**

The code takes input in the form of a json file(input\_orc.json). This file must contain every feature the user wants to put in, in a detailed format:-

{

"\_id":{"$oid":"5ecea1b690cfa44a44f83139"},

"user\_id":"Caramel\_1",

"courseId": "1"

}

Since all the user data has been already gathered in previous iterations and at the start of the courses they completed, there is no need to get access to more data. This is done to reduce redundancy.

This program was initially made in IPython compiler and for converting to a .py file a lot of dependencies have to be installed.

Since this is an autonomous Process and no user input is required. The data from this model will be showed as suggestions after the user has completed a course

**Code**

* Data is taken from the json input of CourseName.
* Every course is firstly indexed inside the dataset. In practical use this has to be done only once.
* All features are saved as tags into a list and empty data slots are filled and handled. This tags list is then added to the initial dataframe for better referencing.
* A CountVectorizer() object is created. This converts a collection of text documents to a matrix of token counts. Where in the tokens are the “tags”. The count matrix created by this operation is feeded into cosine similarity function. Cosine similarity is a measure of similarity between two non-zero vectors of an inner product space. So it will measure the similarity between the vectors found by the tags in the matrix.
* Two functions are created to call the course names and to find their indices - get\_Course\_Name\_from\_index(index) and get\_index\_from\_Course\_Name(Course\_Name)
* Finally, a list is enumerated with the help of the above two functions. This list is sorted. From this list, elements are called in a loop and saved onto a dataframe. And this dataframe is converted into json format.

**Output**

The final dataframe is then converted to json format and saved into a separate file with the name as 1orc.json

Example output

[

96, 97, 98, 99, 100, 101

]

This provides QID of courses which are suggested.