AI - PROJECTS

Name: *Ashutosh Kumar*

Roll No.: *1812210035*

Attempted: *Question 2 & Question 3*

Question 2. Create a virtual assistant that will detect the input in the form of speech from the user and will give the output in the form of speech and include Wikipedia search also.

> *** Code :** Virtual Assistant.py

> *** File :** dataset_of_science.yml

This virtual assistant is an **Science Chatbot**. Its name is **Virtual Assistant**. And it understands the question patterns and responses, then it replies are taken from a json file named **"Intents.json"** provided with the code. Also, it can **search topics on Wikipedia** and give its summary, if a question asked starts with "What is".

The assistant uses **Google Recogniser** to recognise the voice and converts it into text, to be further used in condition check and to reply responses. Various modules are used and their features are commented in the code provided in **Virtual_Assistant.py**.

Question 3. Deploy a project which will detect the faces from video camera and label it as faces.

> *** Code :** Live Camera.py

> *** File:** haarcascade_frontalface_default.xml

This piece of software has the ability to use inbuilt video camera to detect a person's face. This is done with the help of image processing module named **opencv** or **cv2** as called in python and a file named **"haarcascade_frontalface_default.xml"** which is used to train cascade function with lots of positive images (faces, in this project). It provide the camera, the ability to detect faces and some coding is done in order to label the faces as Face1, Face2 and so on, depending on the number of faces present in the view area of the camera.