Integration Documentation

1. **System Components – High level**
   a. Desktop Application – Developed using PyQt5 for monitoring video and face recognition, detection activities.
   b. Web Application – Developed using Asp.NET core MVC and deployed on azure.
   c. Azure Cosmos DB for database management and web application hosting.
   d. Project – [Github](#)

2. **Software Requirements**
   a. Runtime Requirements
      i. Python 3.6.1 or above
      ii. face_recognition package
      iii. dlib software
      iv. .NET Core Runtime 3.1 or above (Only to run the web application locally)
   b. Development Requirements
      i. Python distribution (Preferably Anaconda as it has a lot of bundles pre-installed)
      ii. [face_recognition](#) package
      iii. dlib software
      iv. .NET Core 3.1 SDK or above
      v. Microsoft Visual Studio Professional (Only if you want to debug the web application)

3. **Installation and Running**
   a. Desktop Application

i. To **install** the project, navigate to the VWCDesktopApp folder in the codebase.

ii. **Mandatory**. To install dlib and face_recognition software follow the steps mentioned [here](#).

iii. Open command line from this location and type pip install requirements.txt to install all the necessary packages required for this project.

iv. If there any other packages missing on your system. Open the command line and do pip install <package_name> to install it.

v. To **run** the application open VWCDesktopApp from the code base and type "<path_to_python>\python.exe Run.py"

b. Web Application (Optional)

i. It is not mandatory to run the web portal as we have deployed both the application and the database on Azure.

ii. However, to understand the web application flow you can open the Solution VisualWecomeCenter.sln in the codebase. This step needs the visual studio to be installed on the system.

iii. If you don't have a visual studio you can open the folder and type dotnet run <project-name.csproj> to run the application from your system locally.

4. References

https://github.com/ageitgey/face_recognition/issues/175

https://github.com/ageitgey/face_recognition

https://nitratine.net/blog/post/python-guis-with-pyqt/

https://stackoverflow.com/a/46667864