Assumptions:

1. The file name must be of the form name_version_extension. The allowed extensions for images are - jpg, jpeg, png and for bulk images are zip.
2. Input images will contain only one face, else the first face will be considered.

API Endpoints:

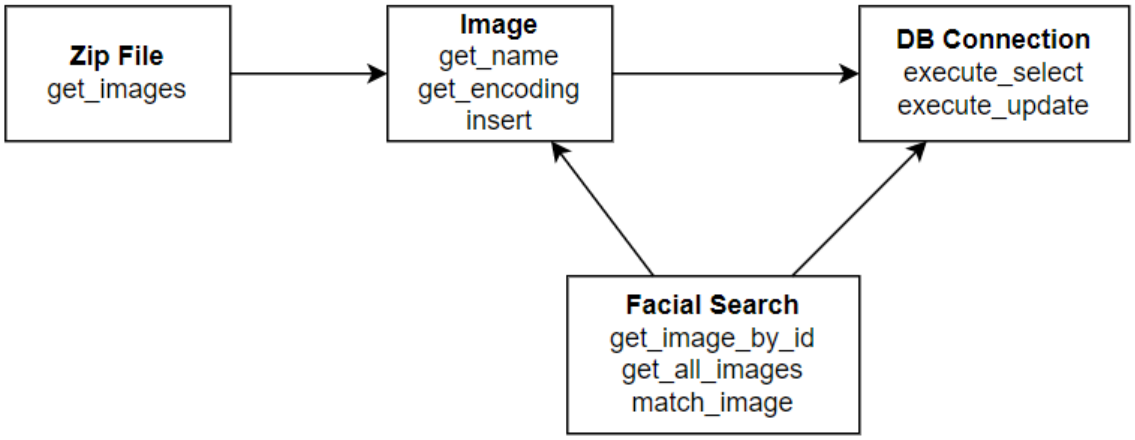
add_face: This endpoint will take an image as input. It will perform error handling and validate if the file is of the correct format. If everything is fine, it will insert the file into the database.

add_faces_in_bulk: This endpoint will take a zip folder as input perform validations on it. If everything is fine, it will insert all the images in zip folder to the database.

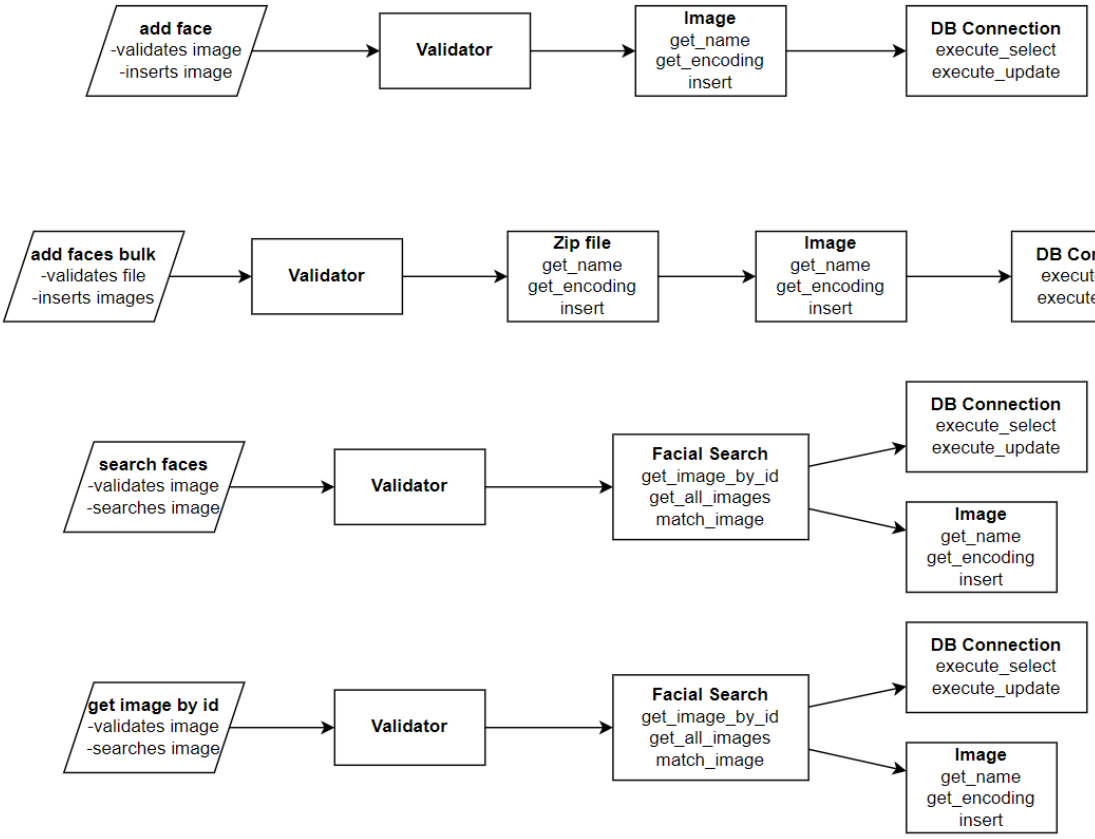
search_faces: This function will take an image, confidence and K as input. It will return top K matches having confidence >= given confidence. If there are multiple faces in input, it will return top K matches for every face.

get_face_info: This function will take image id as input. It will return the corresponding image from the database. If id is incorrect, it will report it.

Interaction between classes:



Working of functions:



Testing:
I have tested my code using pytest and unit testing and got a testing coverage of 93%.

Coverage report: 93%

Module	statements	missing	excluded	coverage
main.py	234	18	0	92%
test_main.py	74	4	0	95%
Total	**308**	**22**	**0**	**93%**

coverage.py v6.3.2, created at 2022-03-09 22:43 +0530