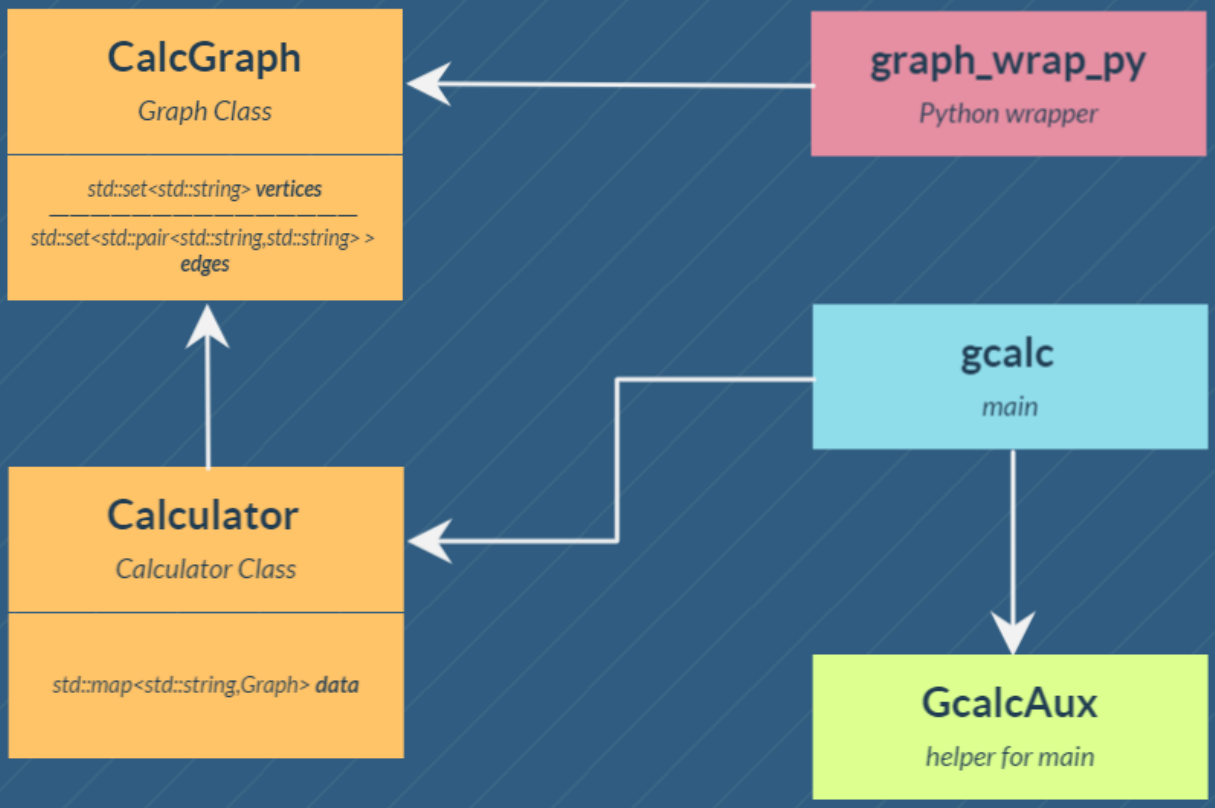
Matam Final Project



MATAM FINAL PROJECT DESIGN

CalcGraph:

GRAPH CLASS

This file contains the Graph class, which represents a graph where the vertices are strings, and the edges connect 2 vertices.
The Graph class consists of 2 fields, a set of strings which represents the vertices, and a set of pairs, where each hold two strings representing vertices.
This class is used by the Calculator class, hence it is named CalcGraph.

Calculator:

CALCULATOR CLASS

This file contains the Calculator class, which represents a calculator.
The Calculator class is a data structure which consists of a map, that connects between a string and a Graph.
This class is used by the main gcalc program, as a way to save graph variables.
This class is also used by the GcalcAux as a way to help the main gcalc program.

Gcalc:

MAIN

This file contains the main program.
The gcalc program is running in a shell like way, and is capable of handling graphs, doing complex operations between graphs, saving and loading graphs from files, while using the Calculator data structure as a way to save and handle the graph variables.
The gcalc program also has both a manual and an automatic mode, depends on the input.
This file contains the main and complex functions for the program.

GcalcAux:

AUXILIARIES FOR GCALC

This file contains useful functions for the gcalc main program, mostly ways to check and handle the names of the eligible graphs, edges and vertices, handling the graph variables used in gcalc, and supporting the main program in different ways.

graph_wrap_py:

GRAPH FOR PYTHON

This file creates a convenient and easy way to use the Graph class in the Python environment, capable of creating and deleting graphs, and doing simple operations between them. Relies on CalcGraph for the Graph class.

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