Intro:

The project DigitalFilmArchive is a C++ student project, based on the Simple Game Graphics Library (SGG) of Professor Papaioannou (SGG Main Page found at https://cgaueb.github.io/sgg/index.html). As so, you will need to download and install the SGG library as shown at https://cgaueb.github.io/sgg/pages.html .

The concept of the project is that of a digital library where you can search and find movies based on their genre and year of release. The thematic of this particular project is about the Tarantino movies.

About the program:

The program begins with the designing of the basic window and canvas. The rest of its operation is based on two functions, draw and update. As Mr. Papaioannou states at his own example (which applies to this project too): "*we provide two important callback functions for the library to invoke when the event processing loop starts (see startMesageLoop). The first one is responsible for determining the contents of the canvas and typically contains a series of draw functions or calls to other custom class members and functions, where the SGG drawing functions are invoked from. The other callback, the update function, is frequently called by the framework to give the user the oportunity to respond to user interface events and change the internal state of the application. This is typically the place where user interaction is handled and code for gameplay reactions and global state changes is called.*" You can find his example at: https://cgaueb.github.io/sgg/page_simple_app.html.

On main.cpp, we create an instance flowMaster of the FlowMaster class with which the rest of the functions will interact. Then we set up how the window and canvas will appear to the user (and at which the events -mouse clicking or keyboard press- will be appearing), the background music we may want to play, set up the behavior of our draw and update functions. After these, the startMessageLoop function starts the program (on the flowMaster) that appears to the user. In particular, it starts the message pump loop of the application window, processes all window and user interface events, calls the draw callback and invokes the update (when mouse state change or keyboard key press occurs or at regularly timed intervals). From here on, flowMaster draw and update functions are taking turns.

flowMaster draw draws the needed window based on the status of the program at the time (variable status of the FlowMaster class). Flow of the program, depending on the status, proceeds to drawing and updating the corresponding StartScreen, GalleryScreen, SearchScreen or MovieScreen.

At the drawing of the screens (draw methods), a temporary window instance is used (of class Window) which is drawn depending (again) on the status of the Flowmaster instance we use. The corresponding updating of screens (update methods) is used to store the user interaction (clicking on search buttons and movie images to see details of them).

The order of the screens appearing (flow of the program too) is: StartScreen→GalleryScreen→SearchScreen→MovieScreen. From there on it is a switching between the SearchScreen and the MovieScreen.

For a better visualization of the project you may see the "DigitalFilmArchiveCpp - Flow diagram" or the short video "DigitalFilmArchive video sample".