SEMINAR 3

Contents

1. OBJECTIVES

- Use function and class templates – DynamicVector.
- Get familiar with functions and types in the Standard Template Library.
- Set up and use OpenCppCoverage for code coverage analysis.

2. PROBLEM STATEMENT

You love music! (Hey…who doesn't?) But even more than music, you love programming, while listening to music. You therefore need an application that allows you to manage your songs and create playlists. The application will have a *database* (stored as a text file) of songs. For each **song**, you know the artist, the title, the duration (minutes and seconds) and you have a youtube link. The application will have a console-based user interface, allowing you to do the following:

- Add songs to your song database;
- See all the songs in your database;
- Create a playlist and play the songs in it:
    - Add songs from your database to the playlist (by artist and title);
    - Add all the songs from your database, by a certain artist, to the playlist;
    - Play the songs in the playlist, one by one. Playing implies that the current song will be played by your browser, using the youtube link.

Design the solution to this problem using the object oriented programming paradigm. Write the application in C++ and use layered architecture.

Source code is in project "Playlist_template.zip".

Please check the document at www.cs.ubbcluj.ro/~iuliana/oop/Tutorials/Code_coverage.pdf for installing and using the OpenCppCoverage tool.