

P1- Design Document

CLASS DESIGN:

I have used one class in my design named “playlist”. This class stores the different songs in my playlist using a vector. My class has private and public sections. My private section only has the entry vector, and all other member functions, constructors and destructors are declared publicly in the class.

MEMBER VARIABLES:

Vector <string> entry

In my design, I use the vector named as “entry” of type “string” in the private section of the class playlist. This vector is used to hold the entries of the song: song name and artist’s name. The vector can resize automatically whenever an element is inserted or deleted.

MEMBER FUNCTIONS:

void addSong (string a):

- Function to enter the entries of a song into the entry vector.
- Function return type is void.
- Parameter type is string where the string a is given to add it into the entry vector.

void playSong (int p):

- Function to play a song number p from the entry vector.
- Function return type is void.
- Parameter type is integer (int) where p is the song number that needs to be played.

void eraseSong (int e):

- Function to delete / erase a song ‘e’ from the entry vector.
- Function return type is void.
- Parameter type is integer (int), where ‘e’ is of type int which is the song number that needs to be deleted or removed.

int searchEntry (string s):

- Function to find entries of a song inside the entry vector and compare it with another song.

- Function return type is int.
- Parameter type is int where 's' is the song number that needs to be played.

CONSTRUCTORS:

Constructor for my playlist class is left empty as there are no parameters given. My constructor will also be initialized by default in the program.

DESTRUCTORS:

Destructor in my program is used to clear the entries of the vector "entry" and clears the used memory. I used the entry. clear () function to clear the vector contents.

OTHER:

I haven't used any operators in my design and my implementation of the design is not expected to have any asymptotic upper bound.

BIBLIOGRAPHY:

<https://stackoverflow.com/questions/875103/how-do-i-erase-an-element-from-stdvector-by-index>

<https://ubuntuforums.org/showthread.php?t=992902>

<https://thispointer.com/c-how-to-read-a-file-line-by-line-into-a-vector/>