

# Lab 1: Design Document

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## **What class(es) did you design? What are the member variables and member functions for each of these classes?**

*Class:* playlist.cpp

- Main class that holds all methods to add songs to playlist\_obj vector

### ***Member Variables:***

- Contains playlist\_obj vector which contains the song, artist name

### ***Member Functions:***

- Void initialize\_song(string song\_artist):
  - o Pushes a new song into the vector.
  - o Checks if the song already exists, if it does, prints an error message.
  - o If the song doesn't exist, then it prints a success message.
- Void play\_song(int song\_number)
  - o Plays the song based on the song number in the vector
  - o If the song number exceeds the bounds, or is not a valid number, then an error message shows up
  - o Else, if the song exists at the song number, a success message is displayed.
- Void erase\_song(int song\_number)
  - o Erases the song based on the song number in the vector
  - o If the song number exceeds the bounds, or is not a valid number, then an error message shows up
  - o Else, if the song exists at the song number, a success message is displayed.
- Bool match\_checker(string song\_artist)
  - o Checks if there is a match (song\_artist) in the vector
  - o Returns true if there is a match and false if there is no match
- Void printnewvector()- prints the vector (unused)

**For each class, what are your design decisions regarding constructors?**

- Constructor: Empty constructor as the vector is already initialized as a member variable

**For each class, what are your design decisions regarding destructors?**

- Destructor: clearing the vector using `playlist_obj.clear();`