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):
  + Pushes a new song into the vector.
  + Checks if the song already exists, if it does, prints an error message.
  + If the song doesn’t exist, then it prints a success message.
* Void play\_song(int song\_number)
  + Plays the song based on the song number in the vector
  + If the song number exceeds the bounds, or is not a valid number, then an error message shows up
  + Else, if the song exists at the song number, a success message in displayed.
* Void erase\_song(int song\_number)
  + Erases the song based on the song number in the vector
  + If the song number exceeds the bounds, or is not a valid number, then an error message shows up
  + Else, if the song exists at the song number, a success message in displayed.
* Bool match\_checker(string song\_artist)
  + Checks if there is a match (song\_artist) in the vector
  + 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();