

## Proposal for Google Summer of Code - 2013 to KDE community (Amarok)

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**Time zone:** Indian Standard Time (IST) [UTC + 05:30]

**Location (City, State, Country):** Gandhinagar, Gujarat, India.

**Proposal Title:**

### Unified CUE File and Audiobook support in Amarok.

**Brief Description:**

Amarok is a music player which has a very user-friendly interface and uses cue sheets which specifies track length and name. The aim of this proposal is to how I would go about in implementing Unified cue file and an audiobook chapter support feature in amarok.

**Motivation for project:**

Nowadays users are fond of hearing the book in an audio file and play music from local collection. In daily life, users are distracted with many other activities and tend to close the program or hibernate it, So we should provide a facility to user which can help him/her navigate in audiobook(via chapters) and resume it from where he/she had stopped before. Amarok does not provides the support for cue files for local collection and also does not allow viewing information of chapter metadata for audiobooks. This is one of the important feature that should be provided to make amarok one of the best music player.

**Implementation Detail:**

I intend to implement two main features for Amarok:

- Cue sheet support for local collection and also in Ums collection.
- Provide a TagLib extension which helps in extracting information of chapter metadata for audiobooks.

I have gone through amarok and found that embedded cue works for the music files but not for the files present in the local collection. I have studied the bug:

*Bug 187587: Cue sheet not working for files in collection (Very much similar to my project).*

It provides us the information about implementing the embedded cue sheet support for local collection (also in Ums collection).

There would be a metadata file which stores the chapter information of an audio book. This would help me to implement a class in taglib which extracts the chapter metadata and design a user interface which provides the facility to navigate through different chapters.

Due to my recent final semester exams and submission of ongoing projects, I could not contribute much to amarok. I would like to work and resolve following list of bugs:

Bugs that I observed:

**Bug Id: 318790** - Local collection not updating if set directly to C:\ [Windows]

**Bug Id: 319015** – Regarding displaying overall time of a song in a playlist.

Bugs related to my project:

**Bug Id: 187587** - cue sheet not working for files in collection.

**Bug Id: 240409** - Support for chapter navigation in M4B files.

**Bug Id: 286089** - failure to read the cue when spaces and other special characters in the name of the file.

**Bug Id: 233283** - Bumpy song transitions when listening to cuesheeted music.

### **Tentative Timeline:**

Before 25<sup>th</sup> May: Implement the support for Bollywood(Hindi Film Industry) song's lyrics and try to solve the bugs that I reported and are related to my project,

which in turn helps me to understand the source code and get me familiarize with amarok.

May28-June16: (Research phase) Understand the implementation of cue-sheeted music and how would I go about implementing the chapters feature in audiobook in amarok.

June17-July20: (Persistence phase) Implement the cue-sheeted music and chapter-enabled audiobooks for local collection before commencement of my next semester.

July20-August2 :( Mid-Term Evaluations) Evaluation of my work till now. Getting mentor advice and get the direction on how to go about further.

August2-August18: (Solving Bugs) Solve the bugs and implement other features if needed as suggested by the mentor.

August18-September1 :( Integration Phase) Testing the implemented feature and test other modules which are related to it.

September2- September8 :( Review process) Reviewing the whole code and make the product deployable.

September8- September15 :( Documentation Phase) Making necessary documents as required for understanding my work.

After September15: Discussing with mentor about the final submission and evaluation of code and talk about what other features we can add to make even better amarok.

**Q: Do you have other obligations in the GSoC period (school, work, vacation, etc.)? Please note that we expect the Summer of Code to be a full-time, 40-hr a week occupation. It is important to be clear and upfront about other commitments that you may have during that time.**

I am doing research internship from 13<sup>th</sup> may to 29<sup>th</sup> June which would take 1 hour a day dedication i.e. 7 hours a week. I can dedicate the following time for GSOC:

28<sup>th</sup> may-30<sup>th</sup> June: 6 hours a day i.e.  $6*7=42$  hours/week

5<sup>th</sup> July- 28<sup>th</sup> July: 7 hours a day i.e.  $7*7=49$  hours/week

As next semester commences. I intend to devote more time on weekends to keep up with the project.

From 28<sup>th</sup> July:

Weekdays: 4-5 hours a day i.e.  $5*5=$  25 hours

Weekend: 8 hours a day i.e.  $8*2=$  16 hours

41 hours/week

### **About me (Let us know who you are!):**

I am Hardik Dhimmar pursuing bachelor's degree (presently in 3<sup>rd</sup> year) from Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT). I am very eager to contribute to open source community.

I have decent understanding of amarok and its source code. I have already built its source code and played with it (make changes in the function) to know the impact of it on amarok music player. Following are the skills which will help me to pursue the project:

Languages Known	C,C++,Java, Python(basic), PyOpenGL
Operating Systems	Arch Linux, Ubuntu(11.04 and later),Linux Mint Windows: XP,7 and 8
Web Knowledge	HTML, CSS, JavaScript, PHP, Ajax

### **Why should you select me?**

I don't have too much contribution towards open source till now but have the required skills to complete the project. I have developed a full working website for a school located in Ahmedabad (in Gujarat, India) according to Software Engineering principals(making proposal, SRS {Software Requirement Specification}, SDS {Software Design Specification}, Test cases and necessary documents). This provided me with the experience of how to go along with the project and what difficulties are faced during the path of final delivering of the project.

I have learnt and applied necessary programming techniques needed for the project:

- Multithreading (Used in Kthread and Pthread) and Memory Management, C++, QtCreator, MySQL (Used in School Database).

I have been lately working on my ongoing college projects so couldn't contribute much to open source development:

- Website: Online debate website.
- Computer Graphics: A hierarchical model animation in PyOpenGL.
- Software Engineering: A website for Divine Child International School.
- Operating System: Disk Cache Scheduling- Implemented a Kernel level thread and also made a basic system call.

Now I am ready to implement my thoughts and in the upcoming days, I will submit my implemented feature in amarok by 25<sup>th</sup> may.

**I have submitted the following bugs in amarok:**

Description	Link
Regarding Local collection update	<a href="https://bugs.kde.org/show_bug.cgi?id=318790">https://bugs.kde.org/show_bug.cgi?id=318790</a>
For Video player(not been able to close) used by amarok	<a href="https://bugs.kde.org/show_bug.cgi?id=318813">https://bugs.kde.org/show_bug.cgi?id=318813</a>
Audio file with different extension is not displaying overall time of a song.	<a href="https://bugs.kde.org/show_bug.cgi?id=319015">https://bugs.kde.org/show_bug.cgi?id=319015</a>