QML'ify Amarok Context View

About the Project:

The goal of the project is to convert the Context View of Amarok to QML. Currently, the context view relies heavily on Plasma, which is an added dependency to Amarok. By forming data models that are written in Pure Qt, we can remove this dependency. The core of this project is Data Models written in Qt, which will then be used by QML widgets. Another aim is to implement a mechanism for distribution of the context view widgets.

Implementation Details:

I will be focusing on forming Data Models for the following widgets:
• Current Track
• Lyrics
• Wikipedia Information
• Videoclip
• Info
• others, if time permits

The required models will be implemented completely in Qt. These models will be based on QAbstractItemModel, and will be exposed to QML widgets using the QDeclarative framework. Fetching of information from the internet for the Video, Wikipedia and Lyrics applets will be done using SPARQL.

For the distribution of the applets, I plan on using the Open Collaboration Services (OCS) content module, using libattica. I am planning on using something like KDE Hot New Stuff. The applets will be packaged as a zip file. I am thinking of using the KhotNewStuff download dialog, to achieve the distribution. The Context will then scan the downloaded applets from the applet directory, and will show them as available. The applets selected by the user will be shown in the QML Context.

Current Status:

I am currently studying the code of Amarok, mainly focusing on the Context module, EngineController, and the current dataengines, and familiarising with the design patterns used in Amarok. I am also going through the implementation of MVC in Qt. For Proof of Concepts, I have written a class that retrieves the current track details, and have been able to form a model, based on QstringList, and also one with QabstractItemModel, and have build it with Amarok. I have also tried exposing the model to a QML view, which I am displaying as a widget (for Proof of Concepts). For distribution, I am going through the examples of libattica, and familiarising with 'KDE Hot New Stuff' at the moment. I am also familiarising with Sparql queries, and using them using QSparql.

Timeline:

Pre Proposal Phase:
Go through present Amarok code, and try to implement the current track module using QAbstractItemModel. Also, get a good know on how to use libattica and Qsparql.

Community Bonding Period:
I would be having exams just after the community bonding period. I would concentrate on designing the classes required, and would like to write the base context view class, which would be used to display the applets, and would also be responsible for managing them. The context class would then be integrated into the existing Amarok code.

May 30 – July 1:
In this time frame, I would like to get started on the data models (with emphasis on the ones I mentioned earlier). This should take around a month to implement.

July 1 – July 20:
In this phase, I would work on the QML views, which would be used to display the relevant data. Also, I would implement the framework required to distribute the applets, based on KhotNewStuff.I would not focus too much on the design of the views, but still caring about aesthetics.

July 21 onwards:
In this time period,I would focus on testing and fixing bugs. I would also get feedback on the code, and make relevant changes wherever required.

About Me:

I am a Third Year student of Computer Science & Engineering at Manipal University. I have been using Linux for the past three years. openSUSE has been the choice of distribution for me for the past two years. KDE is my preferred Desktop Environment. From the coding perspective, I am familiar with C/C++, Java, Python. I have also worked on the Qt Framework for building GUI applications. I worked last summer on building Plasma Widgets for the Open Build Service (OBS). I implemented the widgets in QML, and also made the dataengine for the same. I am a member, and ambassador of the openSUSE community.

Contact Details:

IRC Nick : saurabhsood91 (on Freenode)
Email : saurabhsood91@opensuse.org
Github Profile : https://github.com/saurabhsood91