

Study of Existing

Medley Project

Summary

This paper intends to present existing projects whose subject is closed to ours, namely the field of musical creation.

It consists in a study of different websites and software with their strengths, weaknesses, user reviews, and a comparison with the functionalities provided by Medley.

Description of the document

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I) Context of the study

a) EIP

The EIP is a final project assignment which is realized as part of Epitech studies. The goal is to provide a finalized and marketable project. This project has to be done with 6 members minimum and the subject is free. It is in line with the Epitech pedagogy that promotes learning through experience. The EIP is the purpose of this teaching.

b) Medley

Medley is an EIP that is in the fields of music and computer sciences. At the end of two years of implementation, Medley will include a software and a website.

The software allows the user to enjoy music tools he has downloaded from the website. Easy to handle and ergonomic, it will be able to adapt to amateur musicians alike advanced musicians. This will be possible through a plugin system that will allow the user to customize their software.

On this website, we will also find a community that shares its creations and new plugins ideas. An API is available to users to enable them to develop their own plugins.

II) The existing

a) List of existing projects

There are many projects in the field of music. So we decided to make a selection.

First, we will study those websites:



UJam



AudioTool



JamStudio

And then we will see some softwares:



FL Studio



Musescore



Guitare Pro 6



Virtual DJ



Logic Pro

b) Description of the projects



UJam is a website that allows creating music thanks to UJam Studio application. This software, developed with flash, allows composing music from an uploaded or saved song, or from scratch. It is possible to change a lot of parameters.

Once the music is created, you can share it on the website. Everyone can listen, advise and note.

The site has some additional services such as Jam-a-Gram, which allows you to send texts to be sung and then set to music, or opportunities. The website has also a forum where the community can meet.

UJam also comes on tablet and mobile.



www.ujam.com

Strengths:

- Converts voice into an instrument
- Communal
- Easy to use

Weaknesses:

- Only one feature (song edition and creation)
- Users can not contribute to the improvement of the software



AudioTool is also a site to create your own music. The site itself is mainly used to share your music. However, it is possible to launch the application that allows you to create music from the site.

This application is very graphic, drag'n'drop system allows the use of new tools and add effects by connecting them to the existing ones.

This application is developed with flash, it requires no installation.

Strengths:

- Comprehensive, many professional tools
- Communal

Weaknesses:

- Complicated for beginners
- No management system for partitions or tablatures



www.audiotool.com



To use **JamStudio**, registration (fast and free) is required. Once completed, it will unlock for 10 minutes of music creation tool. It allows creating music by playing a series of lines with different virtual instruments.

A paid subscription must be taken to use the tool more than 10 minutes in order to have access to other features (sound library).

www.jamstudio.com

Strengths:

- Communal

Weaknesses:

- Paying



FLStudio is a music creation paying software. To purchase the full version, it costs 37 euros for the simplest version, the most complete version amounting to 680 euros.

There is a windows, iPad and iPod version. However, some plugins could run on Mac.

A free demo is available on site. It provides access to many plugins, create music and make many adjustments and settings on it.

Some plugins/instruments are chargeable. They can be used for free, but if you want to save your creations, you have to buy it.

It is a professional tool, not easy to pick up without tutorial or experience of this kind of software.

Strengths:

- Comprehensive
- Plugins system
- Communal

Weaknesses:

- Handling difficult
- Paying
- No management system for partitions or tablatures

www.fruityclub.net

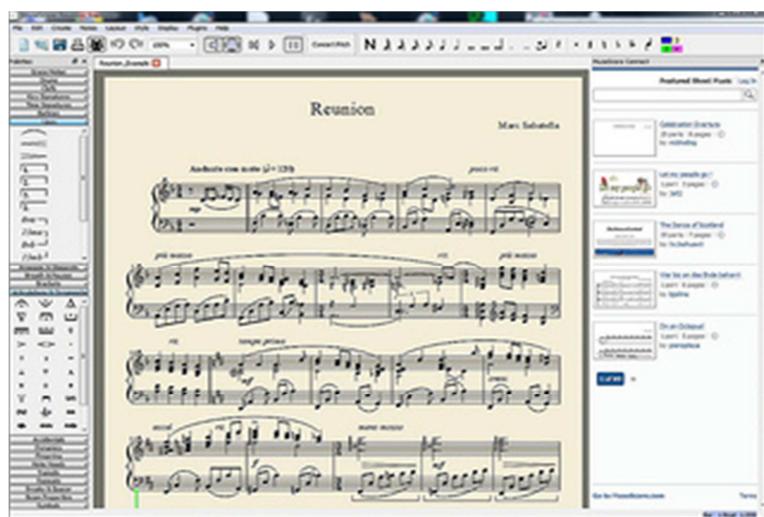
www.image-line.com/documents/fstudio.html



Musescore is a free music composition. It lets you create, edit and listen to partitions.

This software is very popular among users with good graphics rendering which makes it very intuitive. Obviously, it requires a little practice and a good knowledge of music if you want to achieve a conclusive result.

musescore.org/fr



The user has the option to register on the site MuseScore. He can then have access to the partitions created by other users, listen and follow them to keep abreast of their musical activity. It can also upload its own partitions on the site.

Strengths:

- Instruments have excellent sound quality
- Comprehensive
- Communal

Weaknesses:

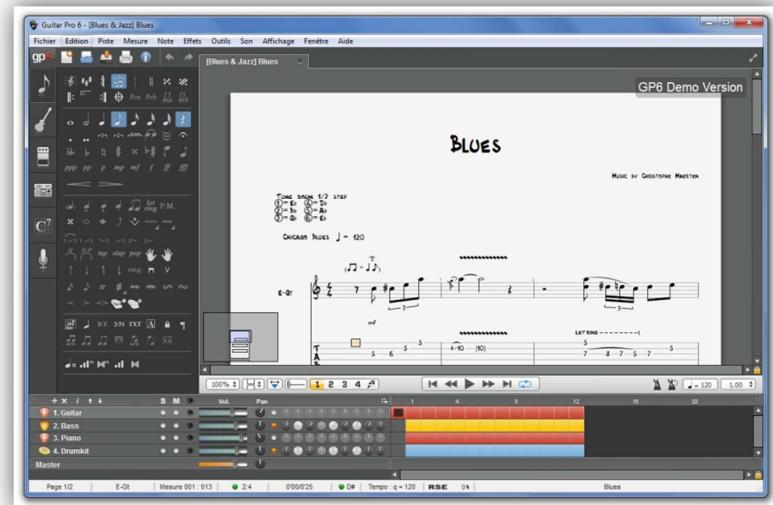
- Can not manage tablatures
- Users can not add updates their creations



Guitar Pro 6 is software that allows you to compose and edit partitions and tablatures. It contains a large bank of sounds and effects possible.

There is a version for Windows, Mac and Linux and it takes about 60 euros for those who do not have previous versions, an update costing less expensive.

www.guitar-pro.com/fr



Strengths:

- Easy to use
- Manages multiple instruments
- Manages tablatures and scores

Weaknesses:

- Paying
- The community is not very developed



Virtual DJ is a music mixing software. There are several versions, including a free one. For paying versions, the price is \$ 49 (40 euros) to \$ 329 (270 euros) for the most complete version.

This program allows you to import music or videos from computer or directly from the web (with a search bar), and make musical assemblies. The interface is easy to use. It consists of a simple virtual mixer with two decks.

It also contains a set of audio tools that allows the user, for example, to add predefined sounds. It is designed for DJs.

fr.virtualdj.com



Strengths:

- Easy to use
- Supports most audio and video files

Weaknesses:

- Paying
- Only available on Windows and Mac
- Is intended only for DJs



Logic Pro Logic Pro is a software made for all those who want to create and / or record their music. It costs 179.99 euros for this application. This program provides an interface for multitrack recording. You can also easily make musical assemblies with a mixer that is available to users.

This software also provides the ability to compose music with a partition editor / player. Finally, a plugin system is set up to allow users to extend the range of program features.

www.apple.com/fr/logicpro

Strengths:

- Wide audience
- Simple and ergonomic
- System plugins making it more alive

Weaknesses:

- Paying
- Only available on Mac



III) Positioning of the project

a) What's new with Medley

The main strength of medley is its ability to be customized. Indeed, users can add to their musical software all the tools they want from those available. Medley aims to be an ergonomic tool with an ingenious drag'n'drop system. We plan to make a software clear and easy to use.

Thus, the user will be able to choose the plugins that he likes and that fit his musical skill level, which is not the case with most existing softwares.

As a tool rarely meets all the expectations of its users, Medley will make available an API so that they can develop their own plugins.

We chose to make a software and not a web tool, because we do not want Medley to be dependent on an internet connection.

Musicians can indeed use this software in places with no possibility to connect to the internet. The software is designed to be portable (Windows, Linux and Mac).

b) What Medley can't do

The goal of our program is precisely to be able to cover a maximum of functionalities. The ones which will not be provided to launch the project can be developed in the future.

The plugins will not be run from the website. It will only support the software, and will instead focus on the community side of Medley.

c) Obsolescence

Unlike many softwares mentioned above, with its plugins design, Medley does not depend on its original developers and will not become obsolete in terms of its functionality if the community is active. Nevertheless, it is a risk because Medley is very dependent of it.

However, we plan to use the Java Development Kit 1.6, not the latest version to ensure the portability of the software. In fact, due to a license problem, some Linux distributions no longer provide the Java Virtual Machine version 1.7.

This issue casts some doubts on the future portability of Medley on Linux systems.

IV) Conclusion

The comparison between our project and the existing is summarized by the matrix below.

Name	Target	Functionalities	Technologies	Price	Portability
Medley	Amateurs musicians, professional musicians	Customization: Adding plugins selected by the user. API available to develop their own tools.	Java	Free	Lin, Win, Mac
UJam	Musicians, lambda users	Intuitive : Can synthesize a melody from an audio recording or create music from A to Z. Choose from many different types of instruments.	Flash, Objective C	Free	Web, IPhone

Name	Target	Functionalities	Technologies	Price	Portability
AudioTool	Musicians	Musical creation, a lot of sounds and effects possible. You can add the tools you want with a system of drag n drop. Very ergonomic. Community site sharing creations.	Flash	Free	Web
JamStudio	Amateurs musicians, professionnals, musicians lambda users	Creating music from sound range. Lines are prerecorded and some instruments are available.	Flash	Between 3.95\$/month and 8.95\$/month depends on the duration	Web
FlStudio	Professional musicians comfortable with this kind of software	Music creation, mixing, audio recording	Delphi 2006	Between 37 and 680 euros Free demo available	Win, IPod, Ipad
Musescore	Apprentices or professional musicians	Create, edit partitions. Website where you can register, share scores and gain access to those of others.	C++/Qt	Free	Windows
Guitar Pro6	Professionnals musicians	Tablatures, sounds and effects edition	C++	60euros (Free demo available)	Win, Mac, Lin, IPhone, IPad, Android, BlackBerry
Virtual DJ	DJs and Host parties	Audios and videos assemblies, media stream import	C++	Between 40 and 270 euros + free version	Windows, Mac
Logic Pro	All musicians	Mixer, reader / editor of partitions, multitrack recording	Objective C	179 euros	Mac

Our project is analyzed in the **SWOT** below:

	Positive	Negative
Internal	Strengths	Weaknesses
	<ul style="list-style-type: none"> ✓ Customizable ✓ Extensible ✓ Accessible ✓ Intuitive 	<ul style="list-style-type: none"> ✗ Having many plugins that allow each user to use the software at its discretion takes time
External	Opportunities	Threats
	<ul style="list-style-type: none"> ✓ There is not really any software or web tool of this kind that is adaptable to the user ✓ Users seeking an easy software to pick up 	<ul style="list-style-type: none"> ✗ The market already provided a lot of Computer Aided Music ✗ Professionals softwares are already used by many musicians and are proven

Synthesis

In the market for Computer Aided Music already taken by multiple sites and softwares, it is not easy to get a place and out of the lot. However, users are often caught unawares when they must choose a software that corresponds to them in the jungle of tools at their disposal. Free? Paid? For professionals? Beginners? Intermediate?

Medley aims to be able to answer yes and no to each of these questions, since its particular strength lies in its ability to be customized. Whether professional or amateur, Medley is the tool that adapts to the user. The latter can indeed download music tools needed.

At its launch Medley will certainly not have the same software technology and won't be as recognized as pro Guitar Pro or Audiotool, but by involving users, developers via an API, it aims to get close.

Medley is an alternative to others softwares, an "all-in-one" that will allow the user to use the Computer Aided Music consistent with its music level, whether he is comfortable or not with this kind of software.