**Comparison of YouTrack and GitHub projects**

Before we start the comparison, there are several criterias that we are going to compare PM tools:

1. *Time-tracking or timesheets*: it is desirable to find a halt in one or several of the tasks as soon as possible
2. *Workflows and boards*: these should provide a user-friendly visualization of the project, give a clear view on how each task proceeds, as well as on the project’s state in general
3. *Issue tracking*: as an extension to the previous point, it would be great to have custom tags, kanban boards and other similar features, which make the project’s state more transparent to users
4. *Report generation*: a built-in report system should allow to address any issue “on spot” - you can notify other members or provide problem description which other members can easily view. Moreover it could decrease time spent on routine tasks
5. *Resource management*: workload view or workload per user
6. *Integration with third-party services*: ease of integration with other tools
7. *Price*: one software can cost several times more than its analog, while providing only one or two additional features

YouTrack

*Pros*:

1. Issues management: you can quickly create issues for your software and search for other issues connected to yours.
2. Designed with Agile companies in mind and helps enhance Scrum and Kanban methodologies
3. For small teams, it is much easier to use than other complex and more known software
4. Provides tools to make migration from other similar software to YouTrack as smooth as possible

*Cons*:

1. Has less integration possibilities than other more known products
2. With its many features and, thus, complexities, the user interface is confusing at first, but YouTrack lacks a learning facility or guide walkthroughs, which may hinder the process before you get used to the UI
3. Not that easy to start, you need at least a server or to use a cloud (this is not a big deal for enterprise companies, and small companies may not need such a powerful tool)

**Github projects**

*Pros*:

1. Easy to create an issue, assign it to a team and even link issue to pull request to close it when merged.
2. Visualize all of your work and prioritize it right alongside your code with projects boards. See what tasks are planned or in-progress, either in a repository or across your organization.
3. Easy to integrate with more than 180 tools for project management.
4. Very easy and lightweight, and no need for additional service - all boards and features on the github website.

*Cons*:

1. Even though it provides lots of integrations with other services, itself it does not have much tools. Kanban board and issues are good, but there are a lot of other features that are not supported, and for services to integrate you have to pay additionally.

Summary: In general, youtrack is much more complex than github projects, with all consequences. If you are fine with trello as project management tool, this will be even better, as it is a built-in tool, so you can see all issues and progress on the progress main page. However, youtrack is much more powerful, has more features and if you really understand that just a kanban board with issues is not enough, youtrack is a good pick. It is designed for enterprise users, and lots of big companies uses it.

**Comparison of Coggle and XMind**

Before analyzing advantages and disadvantages of Coggle and XMind we should define criteria for assessment of poth pieces of software.

1. User-friendly design
2. Big amount of templates
3. Allowing multiple users to work on a diagram
4. Low price
5. Flexibility in the diagram design
6. Platforms the software is ported on

**Coggle:**

*Pros*

1. Collaborative. Coggle allows user to invite another user to work on the same project simultaneously.
2. Flexible design features and intuitive interface.
3. History of changes on one document. Allows to see the history of versions and make a copy from any instance of the project during its lifetime.
4. Support of Markdown, LaTex.
5. Sharing private diagrams. Allows to share a diagram with specific users.
6. Doesn’t require much effort for making beautiful diagrams.

*Cons*

1. Only tree relations. Coggle diagram don’t let the nodes to have relationships other than “parent-child”.
2. Monthly subscription.

**XMInd:**

*Pros*

1. Free and open-source basic version.
2. Flexible design features and intuitive interface.
3. Gantt chart view. Has a built-in Gantt chart view.
4. Tab-indented list into diagram. Can transform tab-indented list into the diagram and backwards, so the project can be saved as the Word document.
5. Local-network sharing.
6. Cross-platform. Can be used as a web app or a desktop app on Windows, OS X, Linux.

*Cons*

1. Can’t be used offline even as the desktop app.
2. No code for integration into website.

Summary: In conclusion, both projects have their own advantages and are intended for different audiences. Coggle is a great instrument for creating diagrams in a team. It offers great choices for sharing your document and allows multiple users to work on a project simultaneously, what is not supported in XMind. However, it has somewhat limited options for export and platforms it is ported on. XMind does not suffer from those drawbacks and, moreover, provides free open-source basic version and a Gantt chart view.

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