



BAHRDAR UNIVERSITY

Draw.io

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Introduction

what is Draw.io?

- is a free, online diagramming tool that allows you to create flowcharts, diagrams, mind maps, organization charts, and much more.
- A web-based application, Draw.io is fully integrated with Google Drive. This means that you can automatically save the results of your work in your Google Workspace or Gmail account.
- The software lets you choose from an automatic layout function, or create a custom layout. They have a large selection of shapes and hundreds of visual elements to make your diagram or chart one-of-a-kind. The [drag-and-drop](#) feature makes it simple to create a great looking diagram or chart.

why use draw.io

- A picture is worth a thousand words, so Draw.io can help you convey all those words with diagrams and flowcharts. Some specific examples of what businesses might use Draw.io for include:
- Creating a flowchart to illustrate a process or the workflow of a project
- Designing an organizational chart to show the structure or hierarchy of the company
- Mapping out ideas or concepts via a mind map
- Visualizing a network using a network diagram Sketching out the design of a website or user interface
- Creating a floor plan or layout diagram as proof of concept
- Illustrating a scientific or technical concept
- Generally, Draw.io is a powerful tool for creating diagrams that convey information visually.

over view of draw.io

Features of draw.io

- Full version control is embedded in Confluence's version history.
- It supports ISO 9001 processes through extensive indexing and a diagram change log.
- It offers excellent revision processing and a powerful built-in search.
- Use pre-designed shapes, snapshots, and SVG images.
- Easily drag and drop images and elements directly into the application.
- Import your own image libraries.
- Easily import / export diagrams to exactly where you need them.
- Quickly switch from another charting plugin to draw .io.
- Use a mass import feature to replace all your diagrams with draw .io diagram in just one step.

key feature and functionality

- Start using the Draw.io interface for your diagrams
- If you are a Google app user, you will find the Draw.io editor very similar to all Google file editors. The men bar lists all features in five categories, beyond the help tab:
- File – here you will find options related to the file, i.e. import, publishing, synchronize .etc.
- Edit – here you will find options related to editing settings like selection of data, editing style, geometry or more
- View – here you can choose tools and interface elements that are to be permanently visible in the application window.
- Arrange – in this tab, you can set the order of chart objects, you can choose to transform them or group them, and more.
- Extras – here you will find all the advanced options and the ability to install specialized add-ons.



Untitled Diagram.drawio

File Edit View Arrange Extras Help

[Last change 10 minutes ago](#)



Save

Ctrl+S

Share...

Synchronize ?

Alt+Shift+S

Open from

Open Recent

New...

Rename...

Make a Copy...

Move to Folder...

Import from

Export as

Embed

Publish



Search

Scratch

Open

General

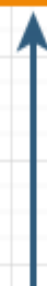


Segmentation

Instruments

Marketing

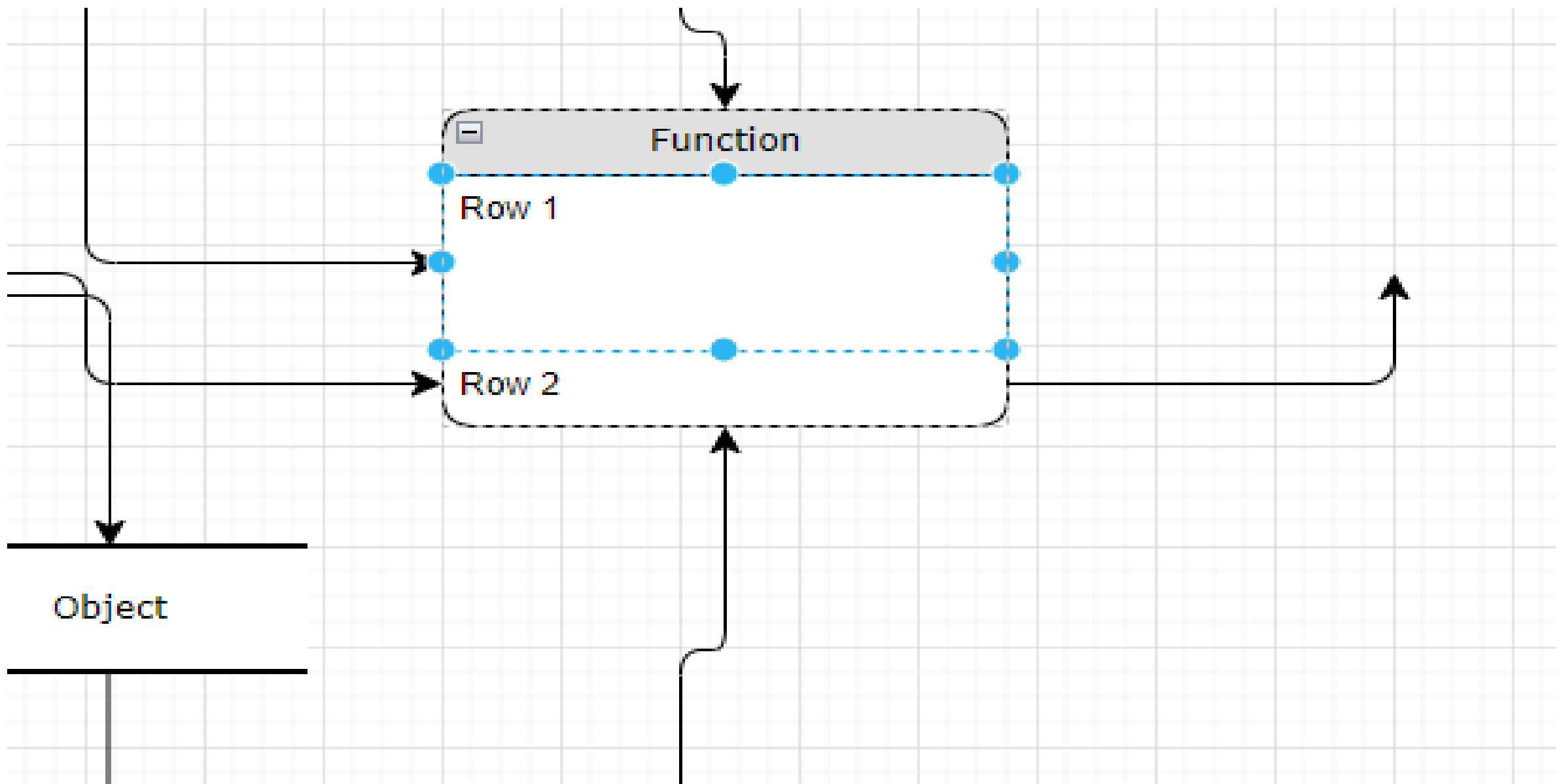
Layout

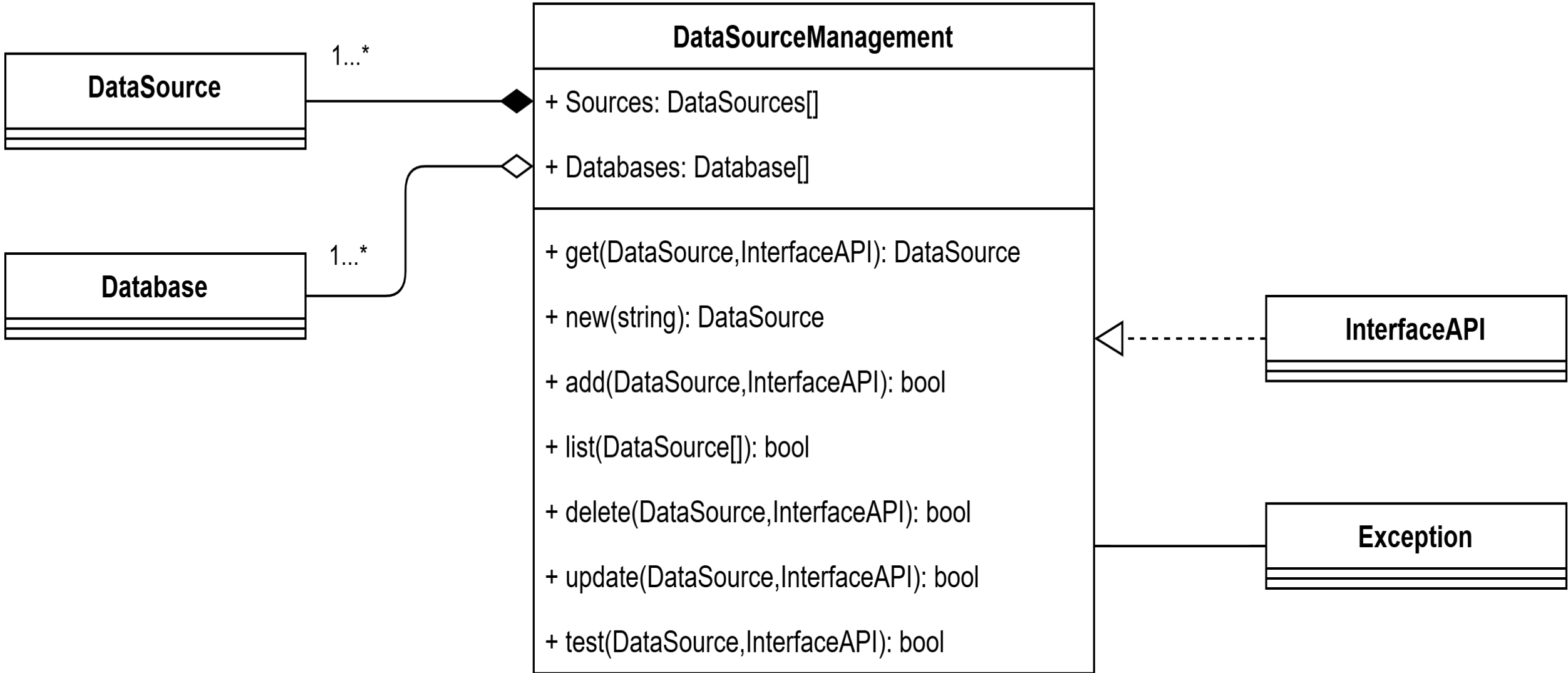


Key future of draw.io cont.....

Function of draw.io

- You now have a better understanding of how to use the diagramming software on your device. Let's see what are some of the functions it can perform.
- Shapes: Starting with rectangles, ellipses and diamonds, you can use a variety of predefined shapes. At the same time, you can create custom shapes to personalize your experience.
- Text: You can add text to your diagrams to provide labels, annotations, and explanations for all languages. You can format the text using a variety of options, such as font, size, and color.
- Automation: You can use the built-in scripting technology to automate repetitive tasks or to create diagrams that automatically update based on external data.
- Connectors: You can connect shapes in your diagrams using lines, arrows, and other floating or fixed connectors.





Data Source Management
(UML Class)

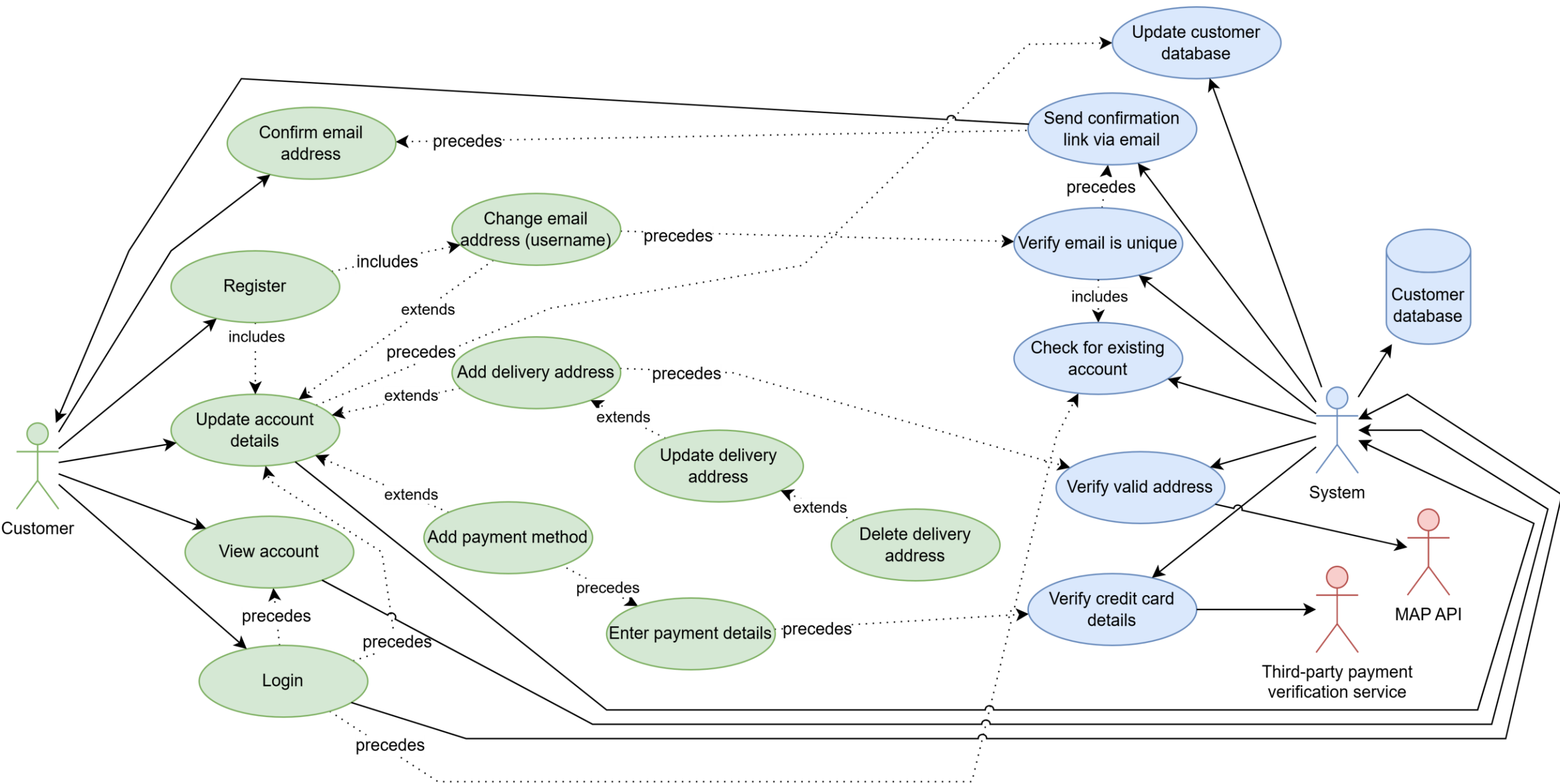
Diagrams of draw.io

- Diagrams supported by DRAWIO include flowcharts, organization charts, maps, engineering elements, process diagrams, charts and more.
- DRAWIO files can be exported to several different formats such as JPG, PNG, BMP, XML, PDF, HTML and VSDX. DRAWIO files are vector image files, stored in the standard XML file format. Developed by diagrams net, it provides the capability to store diagrams information similar to Microsoft Visio.
- Draw.IO is available as online app to create, open and export diagrams to various formats. The app is based on the mx Graph diagramming library that provides interactive graph and charting applications that run in any major browser such as Chrome, Firefox, Edge and Safari.

UML diagramming of darw.io

use case diagramming of draw.io

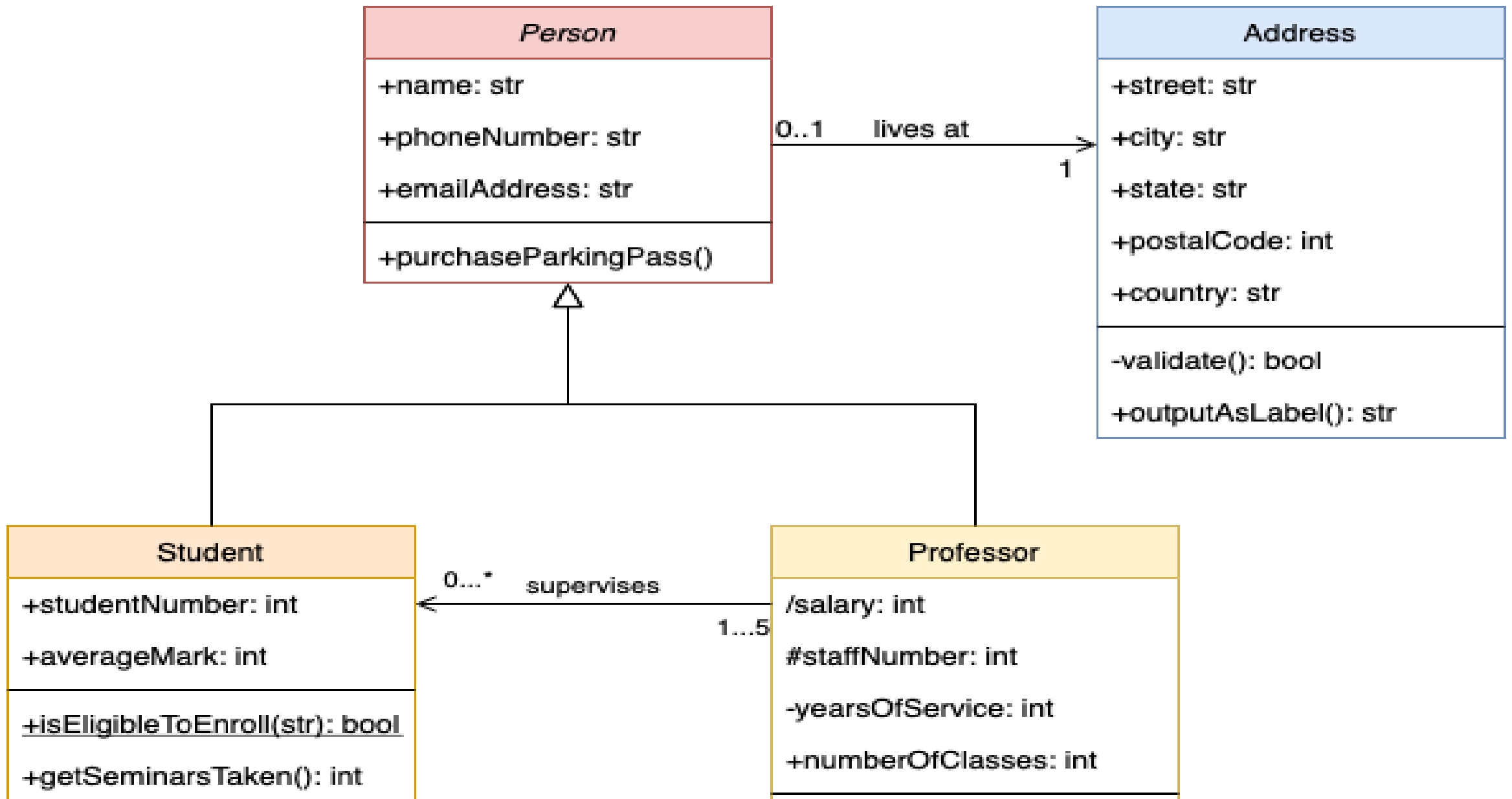
- A use case diagram shows all of the ways an end-user interacts with your systems, with all of its pre- and post-conditions, exceptions and alternate paths. These diagrams are used to establish your system requirements, whether that be a software system or an interaction with another person or team.
- UML use case diagrams are not used for scheduling or broad planning purposes as they are highly technical and specific, but instead function as the foundation for a system's technical documentation.



Use case example - Customer updates account

UML class diagram

- UML class diagrams are used to illustrate the structure of a computer program. They detail the types of data or attributes stored within each 'class', the methods (operations or functions) that each class provides, and the relationships between the classes.



Draw.io integration

- At draw.io, being open source means anyone can take the project, change it, deploy it and integrate it.
- In fact, draw.io and our [free online editor](#) tool has already been integrated into a wide variety of platforms, and is available to be deployed as a self-hosted Docker application, or used as a stand-alone private diagramming application.
- Although the integrations may be branded under our diagrams.net and draw.io names, it's the same editor underneath.

Integration of draw .io with other tool

- At draw.io, being open source means anyone can take the project, change it, deploy it and integrate it.
- Microsoft SharePoint, OneDrive, Office 365 and Teams integrations
- draw.io works with [OneDrive and SharePoint](#). An [Office 365 app](#) is available for Word, PowerPoint and Excel, and a [Microsoft Teams app](#).
- GitHub app
- The [draw.io app for GitHub](#) lets you authorize access to individual repositories, and will replace the older OAuth authorization method.

Integration with other tool cont....

- Notion and Next cloud integrations
- With the [draw.io for Notion extension in the chrome web store](#), you can [embed and edit diagrams directly within your Notion pages](#). This browser extension works in Google Chrome, Opera and Microsoft Edge.
- The [draw.io app for Nextcloud](#) lets you create and edit diagrams in Next cloud, including with shared cursors for real-time collaboration.
- Atlas Sian Confluence and Jira
- The draw.io apps for Confluence and Jira are available via the Atlas Sian Marketplace for Cloud, Data Centre and Server. [draw.io for Confluence](#) is the highest-rated app on the Atlas Sian Marketplace.

integration with other tool cont....

- **Enterprise file management support:** Even if your company doesn't want to store diagrams inside the Confluence or Jira instance, you can take advantage of the app's [integrations with Google Drive and Microsoft OneDrive](#).
- **Flexible customization:** By using draw.io within your Confluence and Jira environment, you can [customise many aspects to make it easier for your employees to diagram](#): templates, shapes, shape libraries, color palettes and style to match your corporate image, plugins, and even the user interface can be customized.
- **Easy migration:** If you have many Griffey and/or Lucid Chart On Perm diagrams in your Confluence instances, you can convert all of these to draw.io diagrams with one click in the app administration section.

3rd party integrations with draw .io

- [Bioicons](#): Open-source icon libraries that work with the draw.io web app for life science illustrations and diagrams.
- [BookStack](#): An open source information management system.
- [Docstell](#): Docs tell provide software documentation for developers.
- [FOSWiki](#): Combine text and structured content, macros and data from web APIs with FOS Wiki.
- [Grafana](#): Add diagrams to this analytics and modelling platform with Arnaud Gentry's open-source plugin.
- [Growi](#): Growl is team collaboration software that uses markdown. It can integrate draw.io into the platform.
- [JupyterLab](#): Project Jupiter by Quants tack lets you combine various content types like runnable code snippets, La TeX, images, embedded interactive diagrams.

3 rd. party integration of draw.io cont.....

- [Lark](#): Lark has integrated our diagram editor into their page editor as part of their content and collaboration suite.
- [LumApps](#): Insert diagrams into your LUM Apps content.
- [MediaWiki](#): Draw.io Editor is a Media Wiki extension that integrates draw.io and allows inline editing of diagrams.
- [Nuclino](#): Embed your diagrams easily into this content development platform.
- [ONLYOFFICE](#): Integrates the diagram editor in documents via a plugin to their Docs application.
- [ownCloud](#): Create and modify diagrams in the own Cloud open-source collaboration platform's file editor app.

Cont.....

- **Redmine:** Create diagrams in your project documentation in Redmine, a project management web application, based on Ruby on Rails.
- **Tiki Wiki CMS Groupware:** Manage diagrams in Tiki Wiki CMS Groupware, a collaborative, free and open source wiki-based content management system.
- **VS Code:** Edit and manage diagrams directly inside VS Code. [See how to use the VS Code extension with github.dev](#)
- **XWiki:** Create diagrams in XWiki by using the Diagram Application extension.
- **Wiki.js:** Store and display diagrams in your documentation in Wiki.js, an open source Wiki program.

Draw.io applied area in different phase of software development

- **Planning Phase:** Create flowcharts to outline the software development lifecycle, including tasks, milestones, and dependencies.
- **Requirements Gathering:** Use UML diagrams to capture and organize requirements, such as use case diagrams to represent system functionalities.
- **Design Phase:** Develop wireframes and mockups to visualize the user interface and user experience.
- **Implementation Phase:** Create activity diagrams to map out the workflow and sequence diagrams to illustrate interactions between system components.
- **Testing Phase:** Generate test case diagrams to ensure all functionalities are covered and traceability matrices to track requirements.
- **Deployment Phase:** Use deployment diagrams to plan the infrastructure setup and deployment process.
- **Maintenance Phase:** Document any changes or updates using version control diagrams and update flowcharts.

Supported plat form

- To help with getting started, a “Quick Start” video can be viewed via the draw.io Help menu. This provides some useful pointers, but if you’ve used this type of software before, it should be straightforward.
- Because draw.io is freeware, technical support is fairly limited. When starting out with the program, you can learn about its features by checking out a directory of support articles. However, should you need a more specific question answered, the only place to turn is draw.io’s user forum, hosted on Google Groups.
- Note that for integrations with Alessiani products, dedicated support is available.

System requirement

- Operating System:** Windows 7 or later, macOS 10.12 or later, Linux (64-bit)
 - Processor:** 1 GHz or faster
 - RAM:** Minimum 2 GB (4 GB recommended)
 - Storage:** 200 MB of free space
 - Internet Connection:** Required for updates and online features
- can be used offline as a standalone desktop application, a progressive web app (PWA), or as a Chrome web app

Installation of draw.io

- Download:**

- Visit the and navigate to the download page.
- Choose the appropriate version for your operating system (Windows, macOS, Linux).

- Install:**

- For **Windows:**

- Run the downloaded .exe file.
- Follow the installation wizard to complete the setup.

- For **macOS:**

- Open the downloaded .dmg file.
- Drag the app to your Applications folder.

- For **Linux:**

- Download the .deb or .rpm package depending on your distribution.
- Use the package manager to install it (e.g., `sudo dpkg -i draw.io-amd64-<version>.deb`).

- Launch:**

- Once installed, open the application from your programs or applications menu.

Advantage of draw.io

- Secure and ISO 9001 compliant
- Versatile and easy-to-use, with both ready-made and customizable elements
- Works on desktop or mobile instances
- Top-rated Confluence diagramming solution since 2013
- draw .io offers a beginner-friendly vector graphics processing environment.

Advantage cont.....

- The big advantage of vector graphics over traditional image processing is that you won't lose any quality if you re-open and edit a vector file.
- If you've ever tried to re-size a heavily compressed JPG file, you'll know exactly how what a difference using vector graphics can make.
- Vector graphics are useful in all sorts of different professional settings, from creating building blueprints to designing project workflows to share with your team.
- The draw .io package comes with dozens of different pre-made layouts that you can pick from when working on a new design.
- Not having to start your projects from scratch will make your design process more efficient.

Dis advantage of draw.io

- Opening an existing diagram, the view is sometimes in a weird spot - zoomed in on blank space or something so it can be disconcerting
- Z order of shapes can be tricky to manage.
- Not so complete as Visio, it lacks a few advanced features.
- As you work in a browser, the app seems to lag if you work on it for a while.
- The app appears to glitch from time to time if you work for longer periods of time, making you lose some of your work if you're not careful.

Dis advantage cont.....

- Exporting your work in the form you would like can be challenging. You need to pay close attention to the previews and page layouts to make sure your work comes out the way you envision it.
- Sometimes it is a bit slow.
- Not enough tools to make super complex things.
- The basic design is not visually appealing.
- There's no dark mode to work in the dark and be softer on the eyes.

Limitation of draw.io

- Learning Curve:** For beginners, there might be a slight learning curve to understand and efficiently use all the features.
- Collaboration:** Real-time collaboration features are not as advanced as some other diagramming tools, which can make it a bit challenging for team projects.
- Cloud Storage:** While supports cloud storage options like Google Drive, OneDrive, and Dropbox, setting it up and managing permissions can sometimes be tricky.
- Customization:** Although offers a wide range of templates and shapes, some users may find the customization options somewhat limited compared to more advanced diagramming tools.
- Performance:** For very large and complex diagrams, performance might degrade slightly, especially on older hardware.
- Integration:** Integration with other tools and platforms can be limited, especially for more specialized applications.

Compare tool with dia MHO

- It's much better than previous free diagramming offerings like Dia IMHO
- – Saves to an interoperable format natively
 - Has an online site where you can share via a simple URL
 - Also has an installer for offline use (including all export formats like PDF, VHDX)
 - has a collection of “stencils” that has grown over time, nice starter templates
 - Free and open source, multiplatform (either within browser or based on electron)

Cost of draw.io

- **Free Plan:** Up to 10 users with basic features.
- **Cloud Plans:** Starting at **\$5 per month** for up to 10 users, with prices increasing based on the number of users.
- **Confluence and Jira Cloud:** Prices vary based on the number of users, starting at **\$0.50 per user per month** for Jira and **\$1.70 per user per month** for Confluence.
- **Confluence and Jira Data Center:** Higher prices for larger user bases, starting at **\$300 per month** for up to 50 users for Jira and **\$6250 per month** for up to 500 users for Confluence.

conclusion

- draw.io is a flowchart solution designed to help developers, network admins, IT analysts, and designers use drag-and-drop functionality to create and publish diagrams.
- The system enables professionals to add toggle layers with customizable URLs and align texts within the shapes. Businesses can utilize the inbuilt layout shapes to automatically organize flow charts, mind maps, and tree diagrams.
- The platform also lets teams automatically generate and export diagrams to PDF files .the good collaboration features and a beginner-friendly interface, draw .io is probably the best vector graphics editor for anyone who needs to produce professional diagrams for free.

Conclusion cont.....

- Despite some limitations like a learning curve for beginners, less advanced real-time collaboration features, and occasional performance issues with large diagrams, draw.io offers robust functionality for its cost. The ability to integrate with popular cloud storage solutions and the flexibility of both online and offline usage add to its appeal.
- Overall, draw.io is a powerful, cost-effective solution for individuals and teams looking to streamline their diagramming processes, making complex ideas easier to communicate and understand. Whether you're planning, designing, implementing, or maintaining software, draw.io can be an invaluable tool in your arsenal.

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