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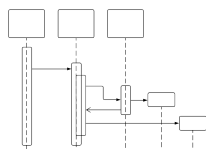
# UML Sequence Diagram Tutorial

What are your UML diagram needs?

I'm new to UML diagrams and want to learn more.

I want to make my own UML diagram in Lucidchart.

I want to make a UML diagram from a Lucidchart template.



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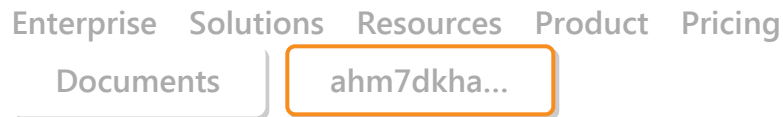
Use cases for sequence diagrams

Basic symbols and components

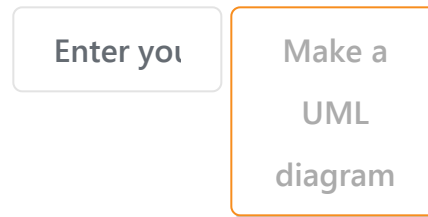
Sequence diagram examples

How to make a sequence diagram

Sequence diagrams are a popular dynamic modeling solution in UML because they specifically focus on *lifelines*, or the processes and objects that live simultaneously, and the messages exchanged between them to perform a function before the lifeline ends. Along with our UML diagramming tool, use this guide to learn everything there is to know about sequence



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## What is a sequence diagram in UML?

To understand what a sequence diagram is, it's important to know the role of the Unified Modeling Language, better known as UML.

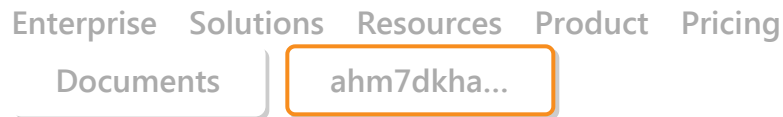


many types of diagrams, including behavior diagrams, interaction diagrams, and structure diagrams.

A sequence diagram is a type of interaction diagram because it describes how—and in what order—a group of objects works together. These diagrams are used by software developers and business

professionals to understand requirements for a new system or to document an existing process. Sequence diagrams are sometimes known as event diagrams or event scenarios.

Note that there are two types of sequence diagrams: UML diagrams and code-based diagrams. The latter is sourced from programming code and will not be covered in

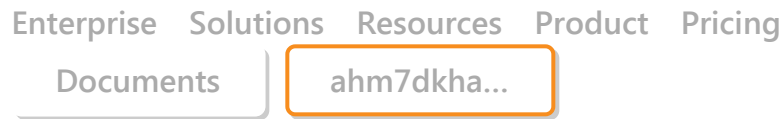


with all the shapes and features you will need to model both.

## Benefits of sequence diagrams

Sequence diagrams can be useful references for businesses and other organizations. Try drawing a sequence diagram to:

- Represent the details of a UML use case.
- Model the logic of a sophisticated procedure, function, or operation.
- See how objects and components interact with each other to complete a process.



scenario.

## Use cases for sequence diagrams

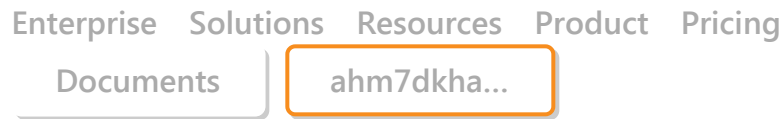
The following scenarios are ideal for using a sequence diagram:

- **Usage scenario:** A usage scenario is a diagram of how your system could potentially be used. It's a great way to make sure that you have worked through the logic of every usage scenario for the system.
- **Method logic:** Just as you might use a UML sequence diagram to explore the logic of a



process.

- **Service logic:** If you consider a service to be a high-level method used by different clients, a sequence diagram is an ideal way to map that out.
- **Sequence diagram Visio** - Any sequence diagram that you create with Visio can also be uploaded into Lucidchart. Lucidchart supports .vsd and .vdx file import and is a great Microsoft Visio alternative. Almost all of the images you see in the UML section of this site were generated using Lucidchart.



Enter you

Make a  
UML  
diagram

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## Basic symbols and components



To understand what a sequence diagram is, you should be familiar with its symbols and components. Sequence diagrams are made up of the following icons and



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SymbolName	Description
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	Object symbol	Represents a class or object in UML. The object symbol demonstrates how an object will behave in the context of the system. Class attributes should not be listed in this shape.
	Activation box	Represents the time needed for

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task will take, the longer the activation box becomes.



Actor symbol

Shows entities that interact with or are external to the system.



Package symbol

Used in UML 2.0 notation to contain interactive elements of the diagram. Also known as a frame, this rectangular shape has a small inner rectangle for labeling the diagram.

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dashed vertical line shows the sequential events that occur to an object during the charted process. Lifelines may begin with a labeled rectangle shape or an actor symbol.



Option loop symbol

Used to model if/then scenarios, i.e., a circumstance that will only occur under certain conditions.



Alternative symbol

Symbolizes a choice (that is usually mutually exclusive) between two or more message


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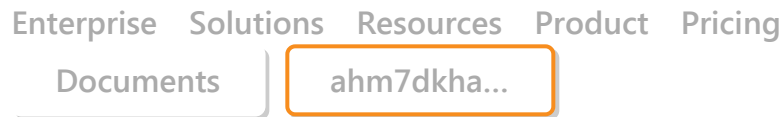
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rectangle shape  
with a dashed  
line inside.


### Common message symbols

Use the following arrows  
and message symbols to  
show how information is  
transmitted between  
objects. These symbols  
may reflect the start and  
execution of an  
operation or the sending  
and reception of a signal.

SymbolName	Description
 Synchronous message symbol	Represented by a solid line with a solid arrowhead. This symbol is used when a sender must wait for a response to a




The diagram should show both the call and the reply.


	Asynchronous message symbol	Represented by a solid line with a lined arrowhead. Asynchronous messages don't require a response before the sender continues. Only the call should be included in the diagram.
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symbol  
lined  
arrowhead.

 Asynchronous  
create  
message  
symbol  
Represented  
by a dashed  
line with a  
lined  
arrowhead.  
This message  
creates a new  
object.

 Reply  
message  
symbol  
Represented  
by a dashed  
line with a  
lined  
arrowhead,  
these  
messages are  
replies to  
calls.

 Delete  
message  
symbol  
Represented  
by a solid line  
with a solid  
arrowhead,  
followed by

# Sequence diagram examples

## Sequence diagram of a hospital management system

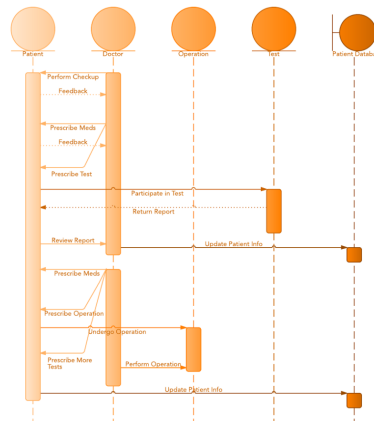
Technology has completely transformed the field of medicine, as it has with most industries. A hospital information system, also known as a hospital information system, helps doctors, administrators, and hospital staff managing all of the activities and information collected at a hospital, including checkups, prescriptions, appointments, and information on the

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view of how the primary processes operate with each other over time. You can use Lucidchart to reshape the diagram any way you choose and to share it with your colleagues or collaborators.



[Click here to use this template](#)

## Sequence diagram for ATM systems

An ATM allows patrons to access their bank accounts through a completely automated process. You can examine the steps of this

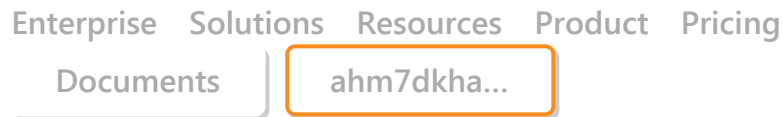




diagram. The example below outlines the sequential order of the interactions in the ATM system. Just click to edit the template, and customize the sequence diagram so it suits your own needs.

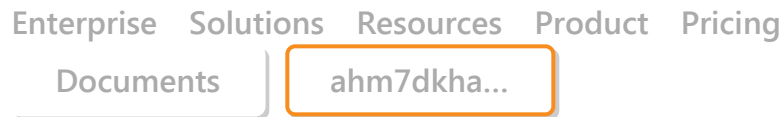
[Click here to use this template](#)

## How to make a



In Lucidchart, creating a sequence diagram from scratch is surprisingly simple. Just follow these steps:

1. Open a blank document or start with a template.
2. To the left of the editor, click "Shapes" to open the Shape Library Manager.
3. Check "UML" to enable all of the UML shape libraries or "UML" to enable shapes specific to UML sequence diagrams. Click "Save."
4. Drag the symbols you need from the toolbox to the canvas.
5. Then model the process flow by drawing lines between shapes while adding text.



insight. In Lucidchart, it's easy to resize and style any element. You can even generate a complete UML sequence diagram from text markup. If you'd like to learn more about UML, check out our "[What Is UML](#)" tutorial.

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## Additional Resources

UML Diagram Tool

What is UML?

Other Types of UML Diagrams

How to Draw a Sequence Diagram

Sequence diagrams don't have to be difficult with the help of Lucidchart. With a vast UML shape library and an assortment of sequence

diagram templates readily available, you can create any UML diagram fast and easy.

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