Collaboration diagram:

A collaboration diagram, also known as a communication diagram, is an illustration of the relationships and interactions among software <u>objects</u> in the Unified Modelling Language (<u>UML</u>). These diagrams can be used to portray the dynamic behaviour of a particular <u>use case</u> and define the role of each object. Several vendors offer software for creating and editing collaboration diagrams.

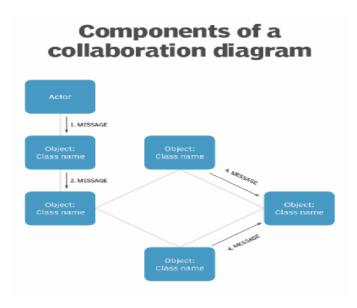
Notations of a collaboration diagram

The four major components of a collaboration diagram are:

1. Objects-Objects are shown as rectangles with naming labels inside. The

naming label follows the convention of object name: class name

- 2. Actors- Actors are instances that invoke the interaction in the diagram. Each actor has a name and a role, with one actor initiating the entire use case.
- 3. Links- Links connect objects with actors and are depicted using a solid line between two elements. Each link is an instance where messages can be sent.



4. <u>Messages</u>- Messages between objects are shown as a labelled arrow placed near a link.

The most important objects are placed in the centre of the diagram, with all other participating objects branching off.

When to use a collaboration diagram

A few examples of instances where collaboration diagrams might be helpful include:

- Modelling collaborations, mechanisms or the structural organization within a system design.
- Providing an overview of collaborating objects within an object-oriented system.
- Exhibiting many alternative scenarios for the same use case.
- Capturing the passage of information between objects.
- Visualizing the complex logic behind an operation.