Sequence Diagram Basics

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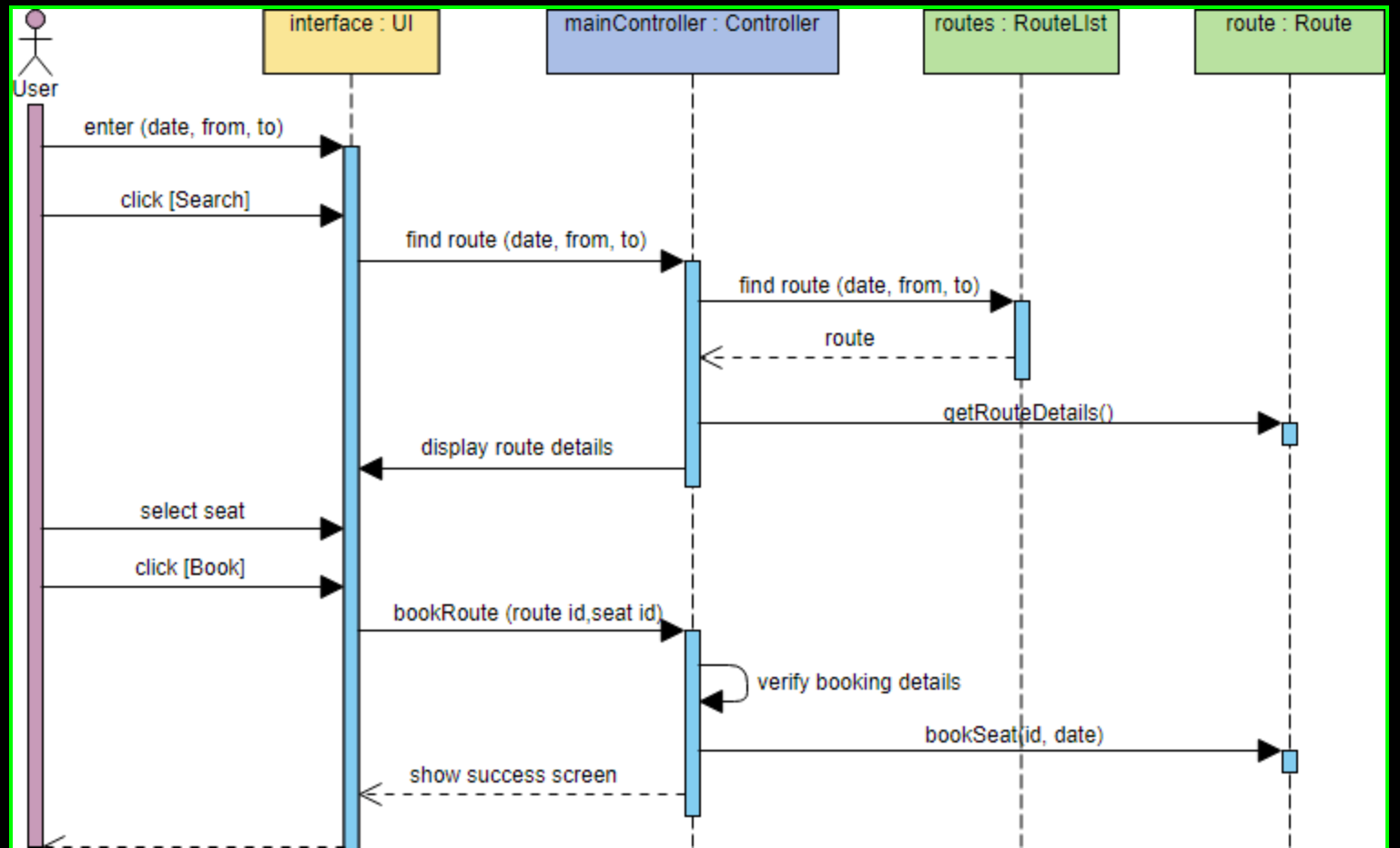
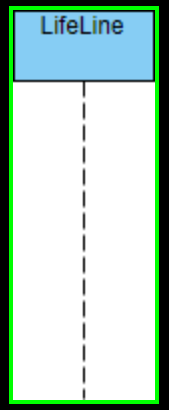
Introduction to UML Sequence Diagrams

- **Definition:** UML Sequence Diagrams depict how objects in a system interact over time.
- **Usage:** Useful for visualizing dynamic behavior and message flow.



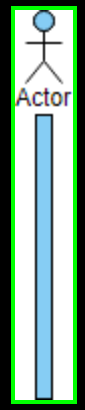
Lifeline

- **Definition**: Represents an individual participant in the interaction.
- **Usage**: Shows object existence over time.



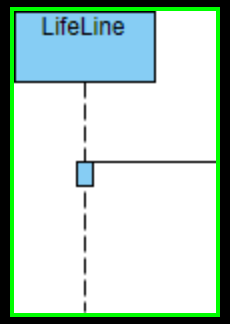
Actor

- **Definition**: Represents a user or system role outside the modeled system.
- **Usage**: Interacts with the system via messages.



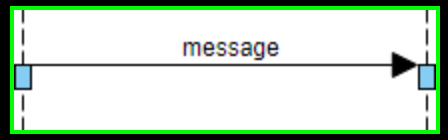
Activation

- **Definition**: Represents the time an object is performing an operation.
- **Usage**: Shown as a solid vertical bar.



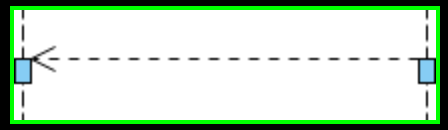
Call Message

- **Definition**: Represents a method invocation from one object to another.
- **Usage**: Indicated by an arrow with a solid line.



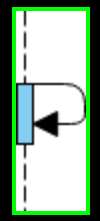
Return Message

- **Definition**: Indicates return of control from a called object to the caller.
- **Usage**: Shown as an arrow with a dashed line.



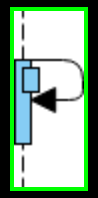
Self Message

- **Definition**: Message sent by an object to itself.
- **Usage**: Arrow looped back to the same lifeline.



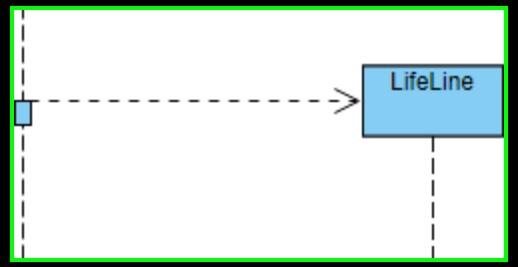
Recursive Message

- **Definition**: Message sent by an object to itself in a recursive context.
- **Usage**: Similar to self message but denotes recursion.



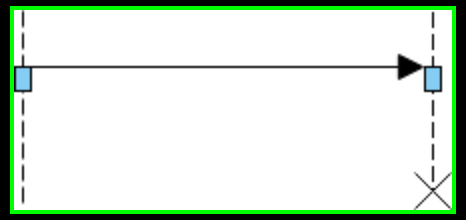
Create Message

- **Definition**: Indicates creation of a new object.
- **Usage**: Arrow with a filled circle at the receiving end.



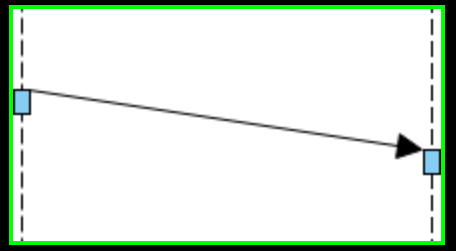
Destroy Message

- **Definition:** Represents destruction of an object.
- **Usage:** Arrow with an X at the receiving end.

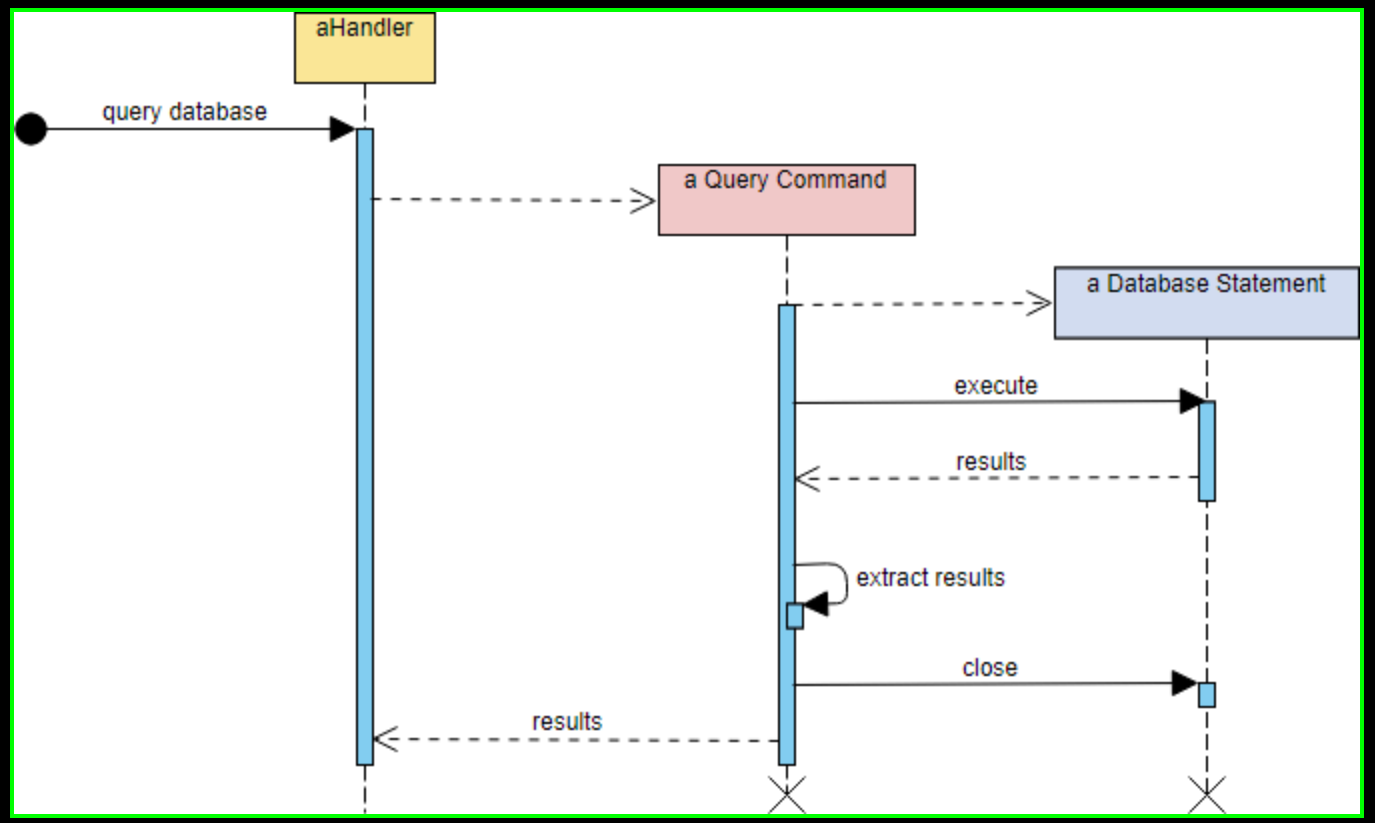


Duration Message

- **Definition**: Represents a long-running task or process.
- **Usage**: Shown as a dashed line with a notation for duration.



Example Sequence Diagram



Conclusion

- Sequence Diagrams are powerful tools for visualizing system behavior.
- They facilitate communication and design decisions.
- Mastering them enhances system understanding and collaboration.

Questions?

Any questions?