





# Design and Analysis of Algorithms

Introduction



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# Topics



## Topics

- ☐ What is an Algorithm?
- ☐ Syllabus



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- ☐ What is an Algorithm?
- ☐ Syllabus
- ☐ Target Audience



# What is an Algorithm?



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- Step-by-step **procedure** to solve a specific problem.

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## Problem Statement

Write an algorithm to scan the phone's contact list.

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Steps



# What is an Algorithm?

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## Steps

1. Unlock your phone.
2. Open the Contacts app.
3. Start scanning the list.

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- Step-by-step procedure to solve a specific problem.



## Steps

1. Unlock your phone.
2. Open the Contacts app.
3. Start scanning the list.
4. Compare the contact name with the desired contact name.

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- Step-by-step procedure to solve a specific problem.



## Steps

1. Unlock your phone.
2. Open the Contacts app.
3. Start scanning the list.
4. Compare the contact name with the desired contact name.
5. If the names match, then match is found.

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5. If the names match, then match is found.
6. If the names do not match, then move to the next contact in the list.
7. Repeat until the desired contact is found.



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# Syllabus



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Introduction

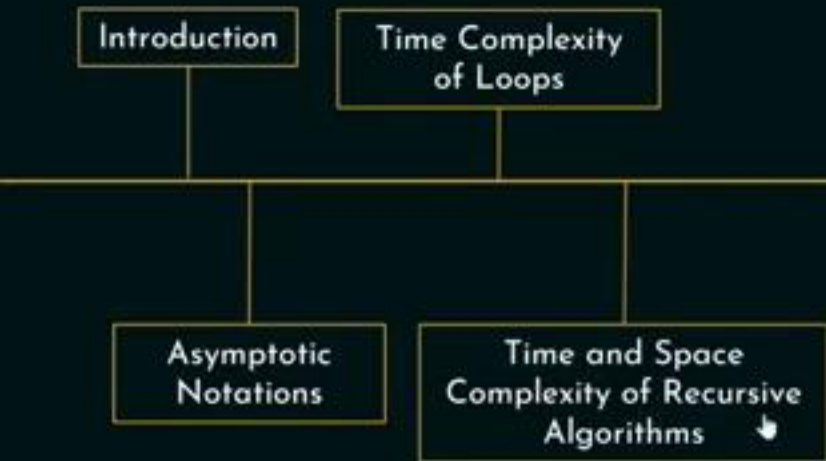


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graph TD; A[Introduction] --- B[Asymptotic Notations]
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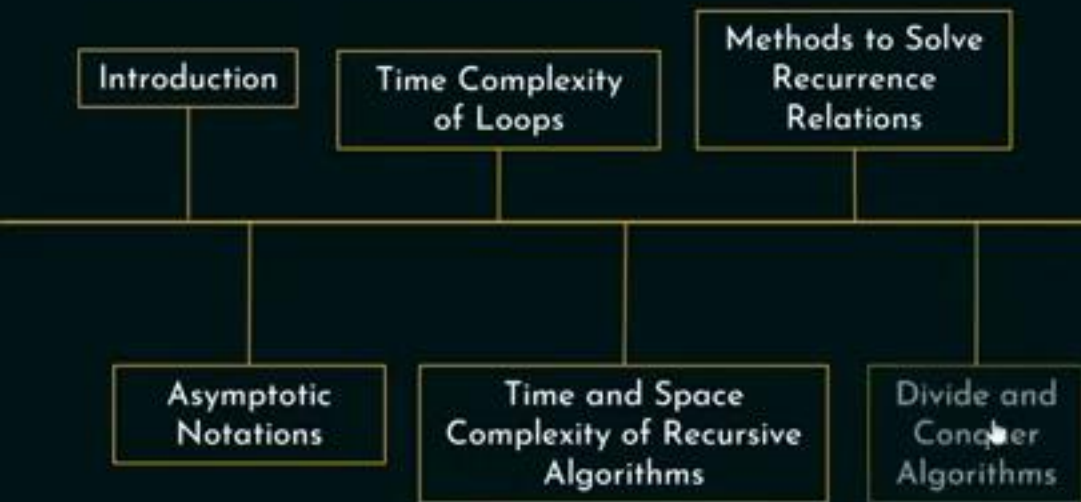
Asymptotic  
Notations



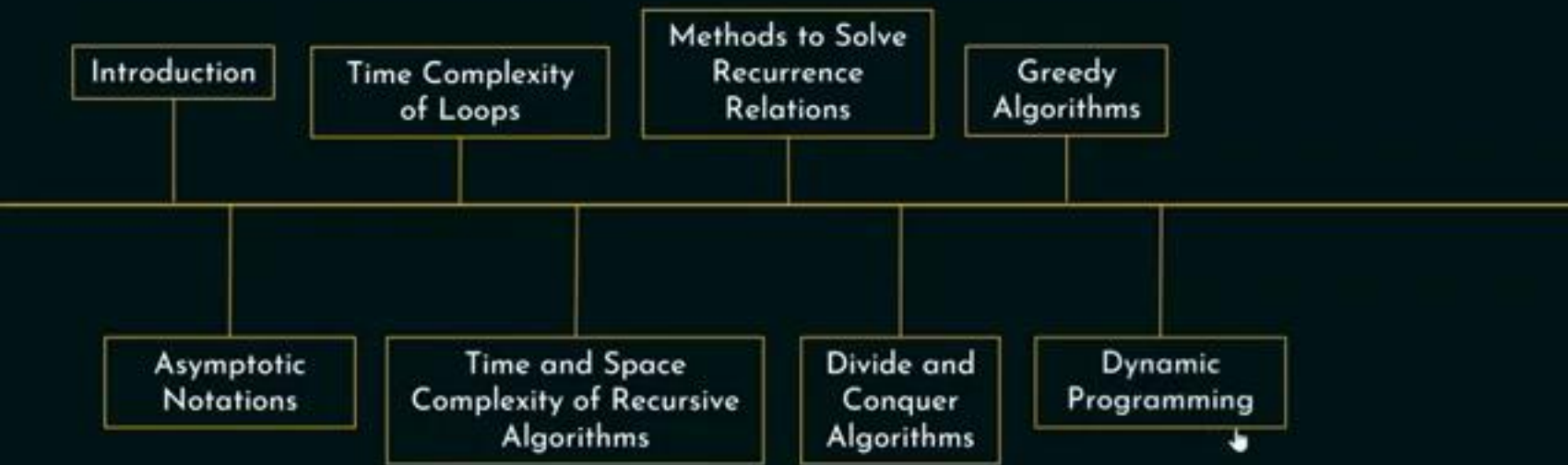
# Syllabus



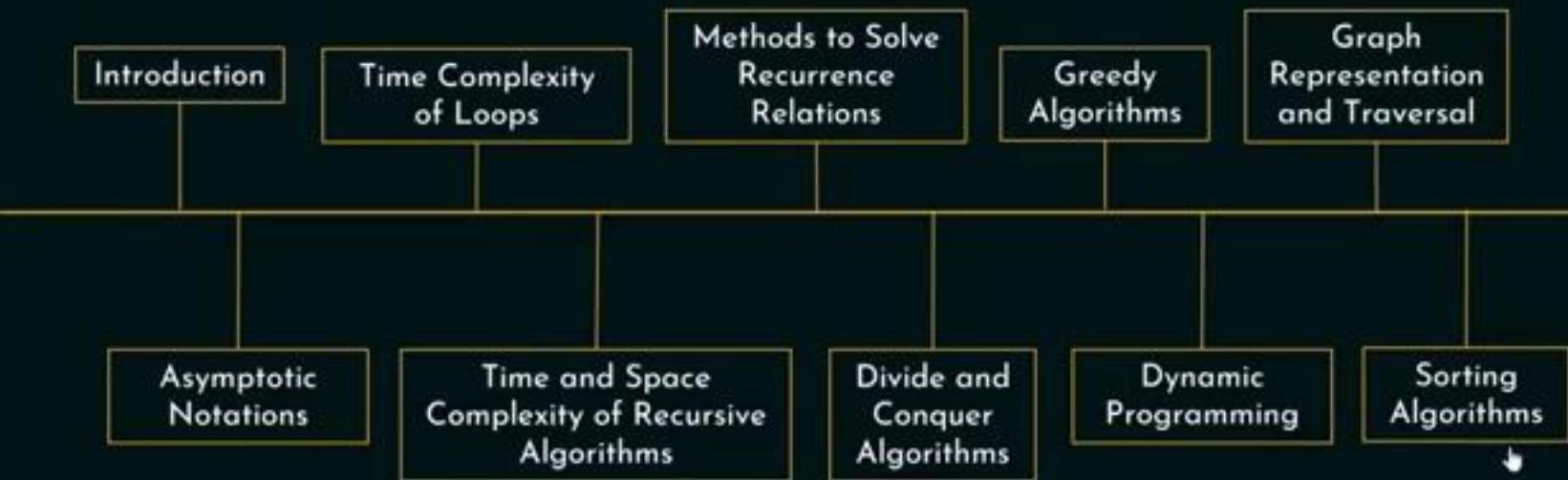
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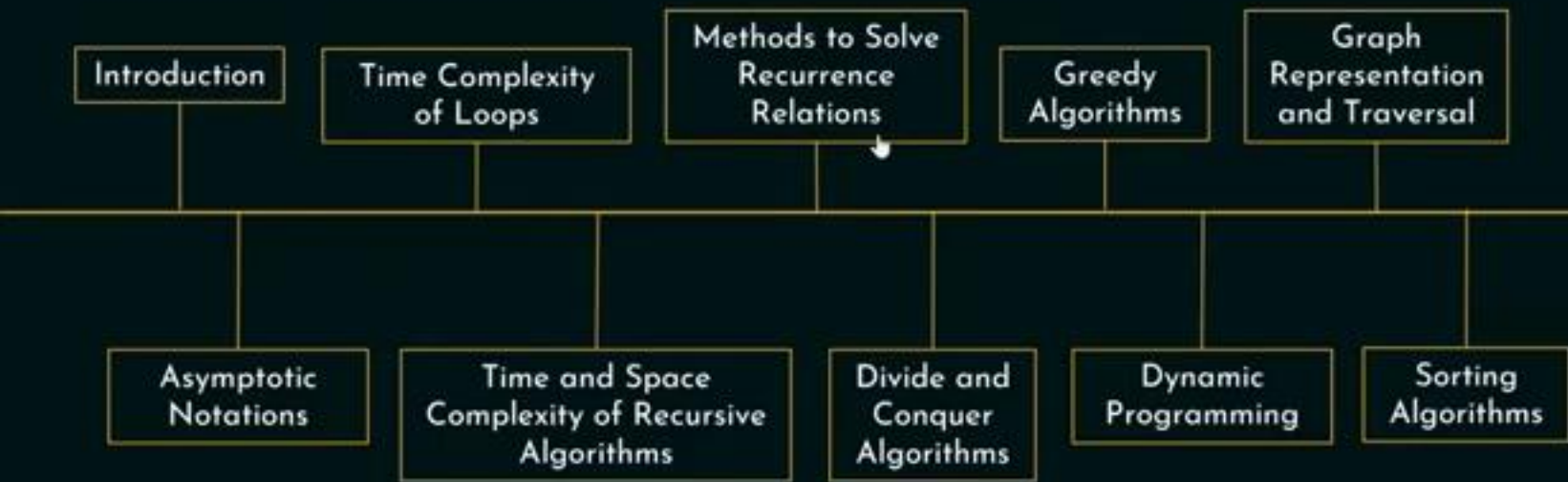
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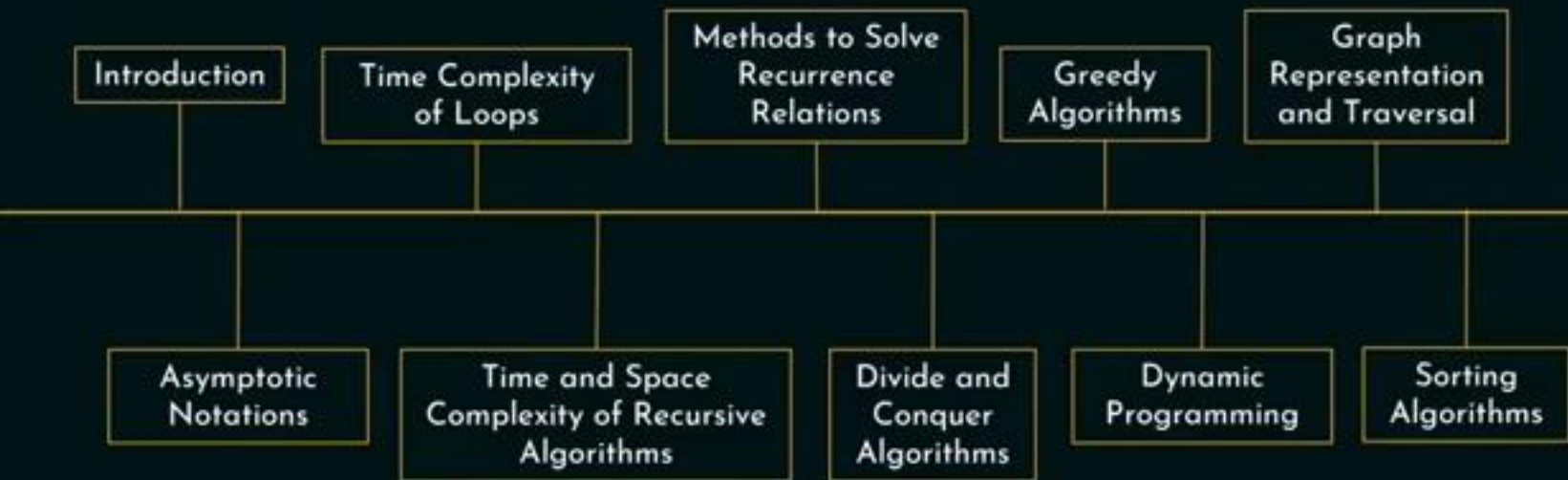
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- ✓ Students preparing for interviews and competitive exams (GATE, NET, etc.).



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