

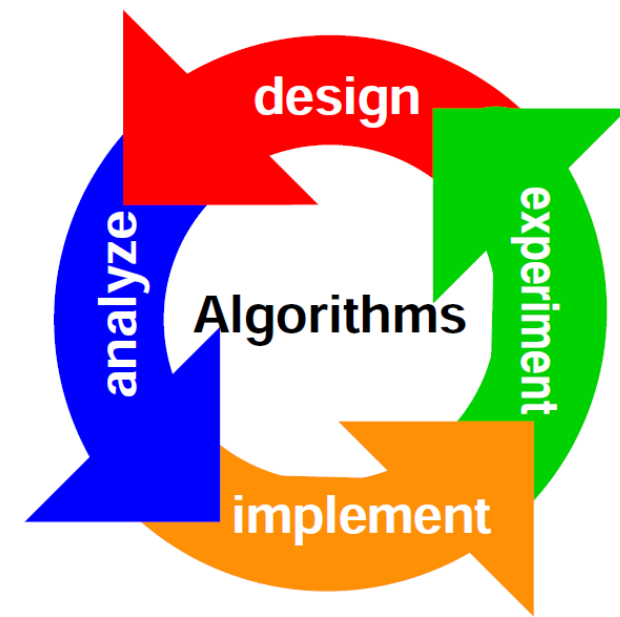
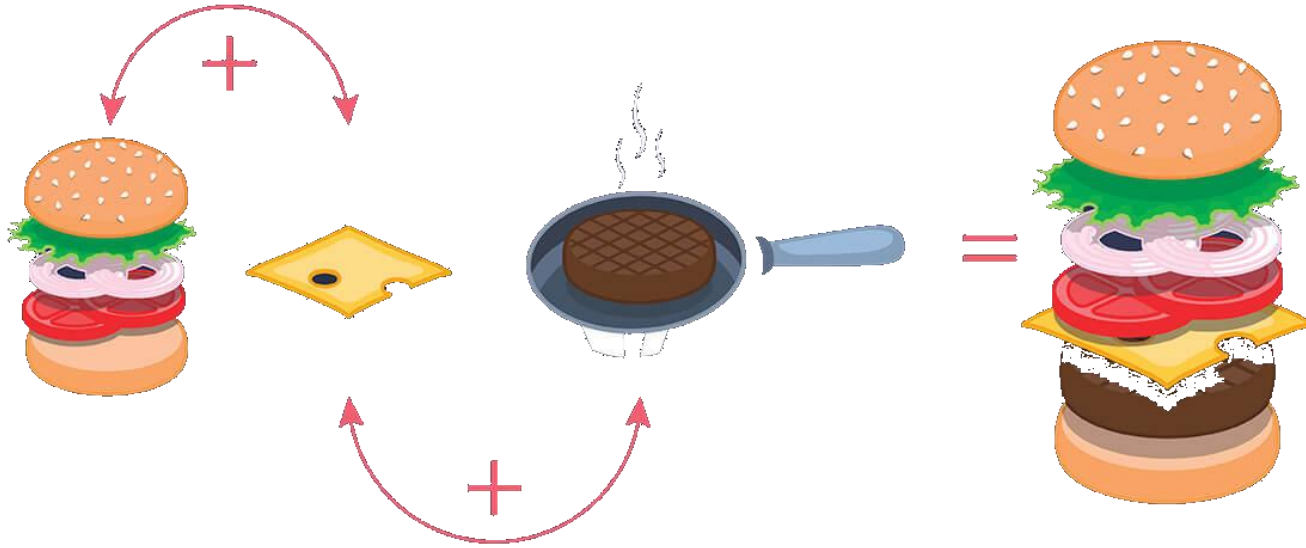
# Designing and Analysis of Algorithms

## Course Code: ECS 5101/CS514

- Dr Rahul Mishra
- IIT Patna

- **Lecture 0**

Let us think...



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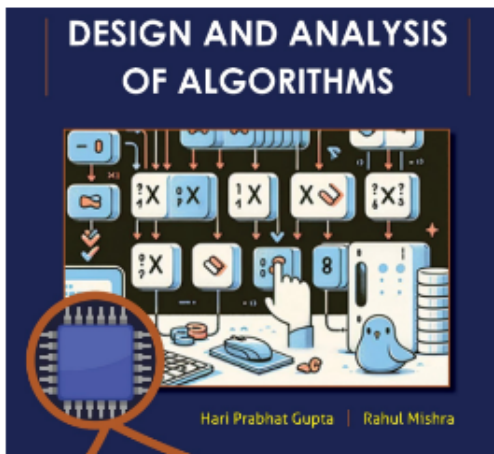
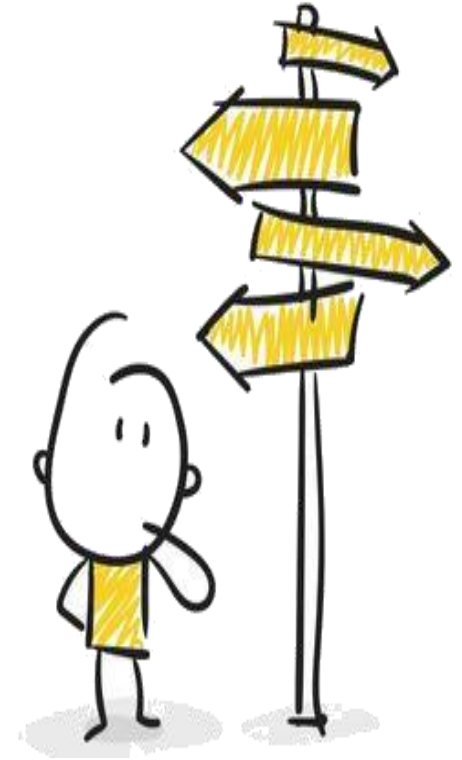
# Know your mentor

Your mentor: Dr. Rahul Mishra, PhD., IIT (BHU) Varanasi

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## Book

Title of Book: Design and Analysis of Algorithms

Author: Hari Prabhat Gupta and **Rahul Mishra**

Publisher and Year: AICTE as per National Education Policy (NEP), 2024.

# Notes and study materials

## Textbooks

- T. H. Cormen, C. E. Leiserson, R. L. Rivest and C. Stein, Introduction to Algorithms, MIT Press, 2001.
- A. Aho, J. E. Hopcroft and J. D. Ullman, The Design and Analysis of Computer Algorithms, Addison-Wesley, 1974.
- M. T. Goodrich and R. Tamassia, Algorithm Design: Foundations, Analysis and Internet Examples, John Wiley & Sons, 2001
- *All the slides presented in the class will be provided to the students.*
- *Some of the published papers will also be given to enhance your in-depth understanding.*



# Grading Policy

## **Assessment method:**

The assessment weightage is divided as follows:

- 1.Mid Semester Examination: 30%**
- 2.Final Semester Examination: 40%**
- 3.Laboratory: 10%**
- 4.Quiz: 20% (Mostly MCQs)**



# Course Outcome

The course aims to introduce the concept of data structures and their indispensability in implementing algorithms and also how they aid in improving performance.

After completion of this course, students will be able to understand:

1. Describe how efficiency affects the practical usage of algorithms and data structures.
2. Identify different algorithmic techniques for running programs at scale.
3. Construct programs that apply computational concepts as a tool in other domains.
4. Discuss how computer science interacts with and affects the world.



# Course Prerequisites

Programing in C.

**Your curiosity to learn new things (Important)**

