

# Module 1

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# **1 INTRODUCTION**

## **1.1 What is an Algorithm ?**

## **1.2 Fundamentals of Algorithmic Problem Solving**

# **2 FUNDAMENTALS OF THE ANALYSIS OF ALGORITHM EFFICIENCY**

## **2.1 Analysis Framework**

## **2.2 Asymptotic Notations and Basic Efficiency Classes**

## **2.3 Mathematical Analysis of Non recursive Algorithms**

## **2.4 Mathematical Analysis of Recursive Algorithms**

# **3 BRUTE FORCE APPROACHES**

## **3.1 Selection Sort and Bubble Sort**

## **3.2 Sequential Search**

## **3.3 Brute Force String Matching**