Design and Analysis of Algorithms – UE17CS251

CLASS 1

What is an algorithm?

An algorithm is a **sequence of instructions to accomplish a task**

COURSE_INFORMATION

Why study algorithms?

#1

A student of Computer Science should know a standard set of algorithms from different areas of computing.

#2

Algorithmics is the core and cornerstone of Computer Science.

Why study algorithms?

#3

A student should know how to design new algorithms and analyse their efficiency.

#4

Provides a novel lens on domains outside Computer Science as well.

#5

Algorithmics will challenge you. It is fun ☺

The most valuable acquisitions in a scientific or technical education are the general purpose mental tools which remain serviceable for a lifetime.

~ George Forsythe

An algorithm that changed the world! *Page Rank*

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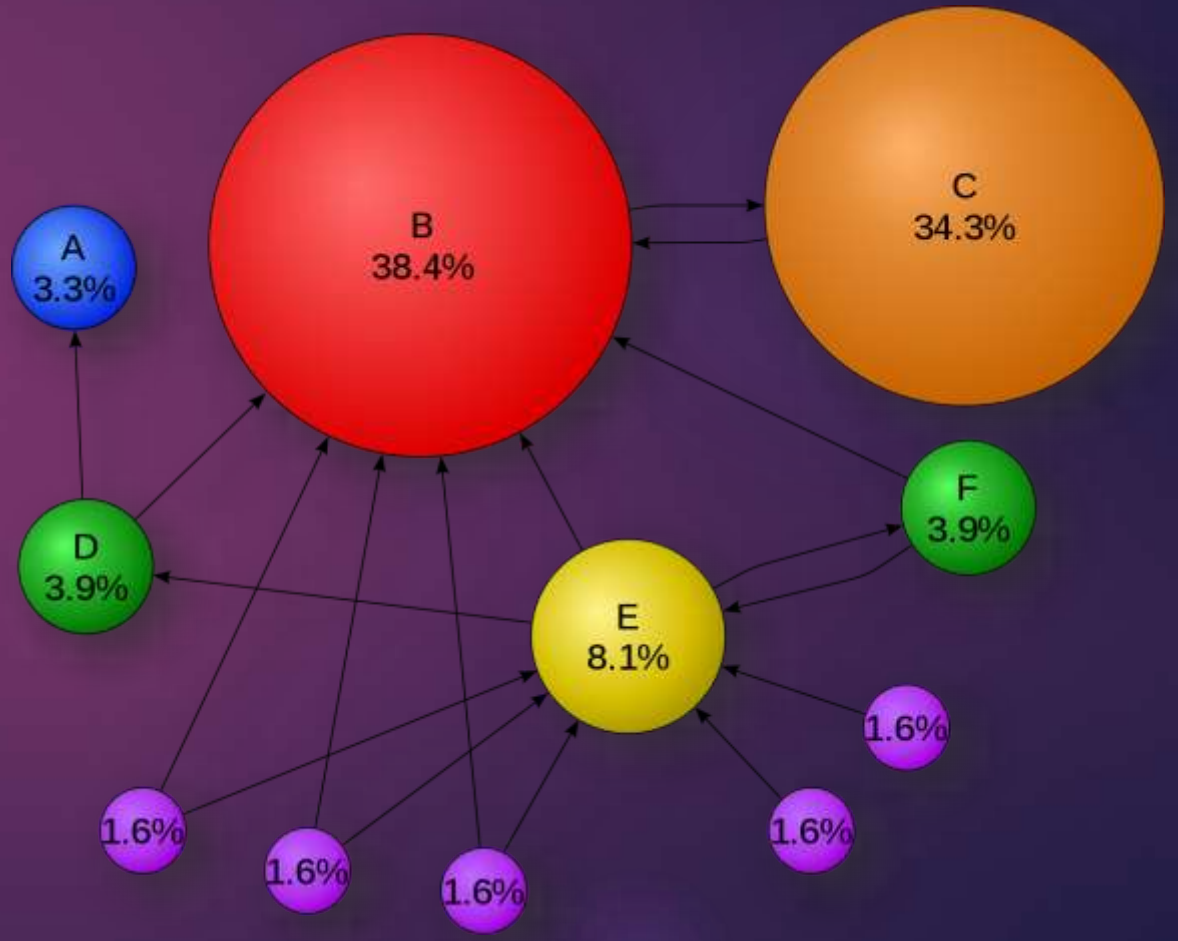

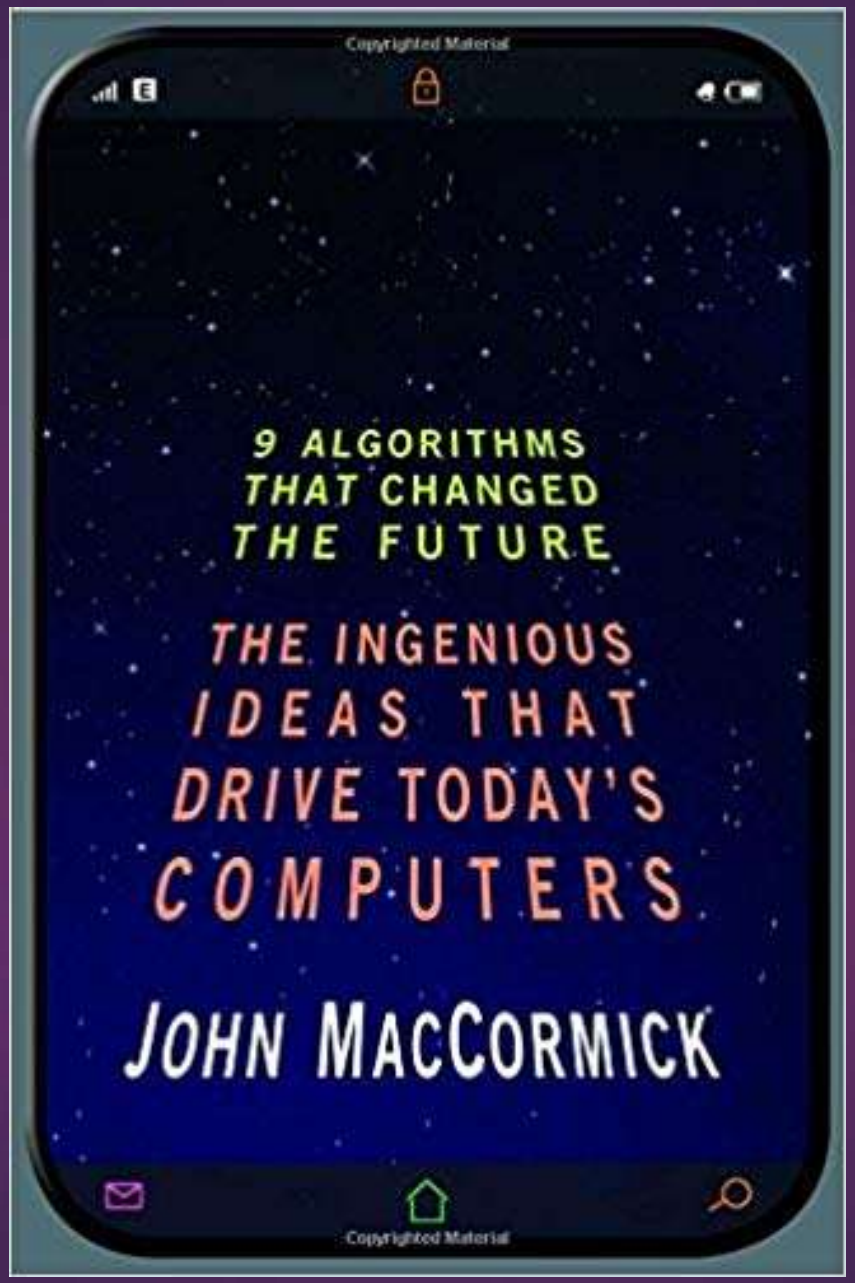
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9 ALGORITHMS
THAT CHANGED
THE FUTURE
THE INGENIOUS
IDEAS THAT
DRIVE TODAY'S
COMPUTERS
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History of Algorithms

Father of Algorithms

Abu Abdullah Muhammad ibn Musa Al-Khwarizmi (c. 850 AD).

Persian Astronomer and Mathematician

History of Algorithms

- Al – Khwarizmi introduced the decimal positioning within numeric systems to the western world.
- In its original form, algorithms known as algorism was regarded as rules for computing calculations and performing arithmetic with Hindu-Arabic numerals.

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