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Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Theory of Computation & Compiler Design (CSE2002)

Introduction to Compilers, Analysis of Source Program & Phases of Compiler

-Nitin Singh Rajput



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Outline of this Lecture

- ▶ *Some Problem Solving on Language Operations*
- ▶ *Introduction to Compilers*
- ▶ *Analysis of Source Program*
- ▶ *Phases of Compiler*



Some Problem Solving - 1

- ▶ Let $L = \{ab\}$ than find L^* and L^+

Some Problem Solving - 1

► Let $L = \{ab\}$ than

$$L^* = L^0 \cup L^1 \cup L^2 \cup L^3 \dots \dots$$

$$L^* = \{\epsilon\} \cup \{ab\} \cup \{abab\} \cup \{ababab\} \dots \dots$$

$$L^* = \{\epsilon, ab, abab, ababab\dots \dots\}$$

$$L^+ = L^* - \{\epsilon\}$$

$$= \{ab, abab, ababab\dots \dots\}$$



Some Problem Solving -2

- ▶ Let $L = \{a, ab\}$ than find L^* and L^+