

## IAT-1

Q2)

a) Single pass assembler design databases

→ General design procedure of Assembler

1. Specify the problem
2. Specify data structures
3. Define format of data structures
4. Specify algorithm
5. Look for modularity
6. Repeat.

① Pass 1: Databases

- Input source program
  - "LC" location counter is used to keep a track of all locations address.
- Machine Operation table (MOT)  
symbolic mnemonic and length
- Pseudo Operation table [POT]  
pseudo mnemonic and action
- Symbol Table (ST) stores each table and its value
- Literal Table (LT) to store each literal (variable) and its location
- copy of input to use later by PASS-2



