"Our problem is to construct a recognizer that looks for lexemes in the input buffer."

Three cases exist for this statement:

1. No pattern matches (report the error)

2. One pattern matches (chose the matching lexeme)

3. More than one pattern matches

   - Chose the longest lexeme matched
   - Chose the first listed matching pattern lexeme.

A finite automation is a natural model to build a lexical analyzer around.

References

[1] Jeffrey D. Ulman, Ravi Sethi, Alfred V. Aho *Compilers: Principles, Techniques and Tools* copywrite 1986 by Bell Telephone Laboratories, Incorporated