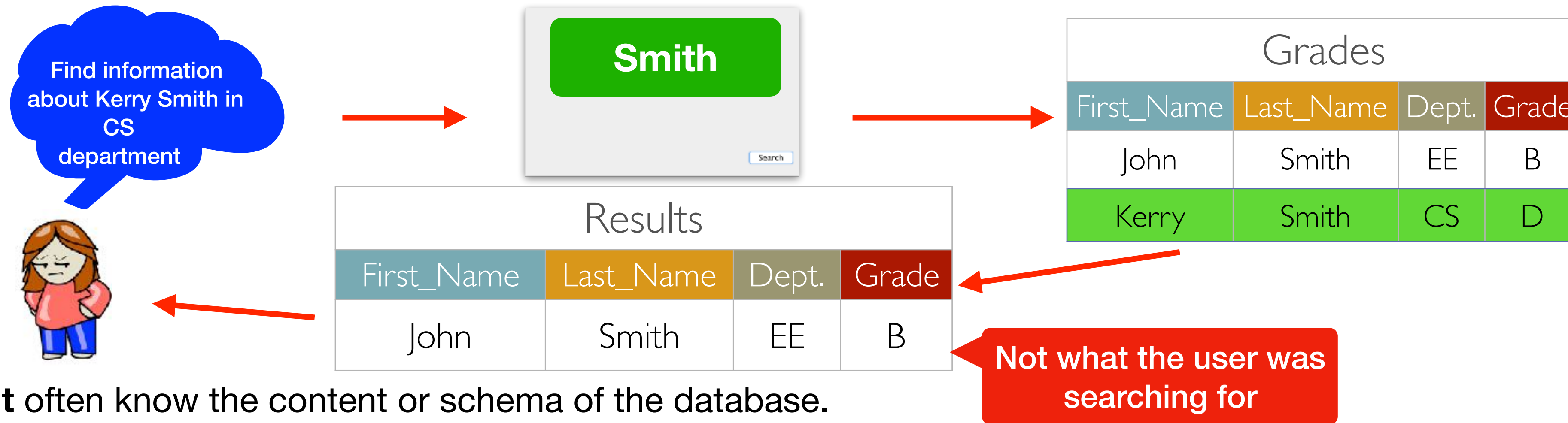# The Data Interaction Game

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- Users **do not** often know the content or schema of the database.

  ‣ They **cannot** express their intents as queries that the DBMS understands.

- **Solution:** users and DBMS can establish a mutual understanding via interaction.

  ‣ Users learn to express their intents more precisely by observing results of queries.

  ‣ DBMS learns the intents behind users' queries more accurately by observing users' feedback.

- Naturally, data interaction is a game between two rational agents who create a common language.

  ‣ We show that users learn to express their intents using a reinforcement learning method.

  ‣ We propose an effective and efficient reinforcement query learning algorithm for the DBMS that adapts to the user's learning.