Relational Algebra

- **Select boards where UserID is 1:**
  σ_{UserID=1}(Boards) [Replace "1" with the desired UserID]

- **Join Users with Boards on UserID:**
  Users ⋈_{UserID=UserID}(Boards)

- **Select lists where BoardID is 1:**
  σ_{BoardID=1}(Lists) [Replace "1" with the desired BoardID]

- **Join Lists with Boards on BoardID, then join the result with Users on UserID:**
  (Lists ⋈_{BoardID=BoardID}(Boards)) ⋈_{UserID=UserID}(Users)

- **Select cards where ListID is 1:**
  σ_{ListID=1}(Cards) [Replace "1" with the desired ListID]

- **Join Cards with Lists on ListID, then join the result with Boards on BoardID, and finally join with Users on UserID:**
  ((Cards ⋈_{ListID=ListID}(Lists)) ⋈_{BoardID=BoardID}(Boards))
  ⋈_{UserID=UserID}(Users)

- **Select comments where CardID is 1:**
  σ_{CardID=1}(Comments) [Replace "1" with the desired CardID]

- **Join Comments with Cards on CardID, then join the result with Lists on ListID, then join with Boards on BoardID, and finally join with Users on UserID:**
  (((Comments ⋈_{CardID=CardID}(Cards)) ⋈_{ListID=ListID}(Lists))
  ⋈_{BoardID=BoardID}(Boards)) ⋈_{UserID=UserID}(Users)

- **Select labels where UserID is 1:**
  σ_{UserID=1}(Labels) [Replace "1" with the desired UserID]

- **Join Labels with Users on UserID:**
  Labels ⋈_{UserID=UserID}(Users)

- **Select labels where CardID is 1:**
  σ_{CardID=1}(Labels) [Replace "1" with the desired CardID]

- **Join Labels with Cards on CardID, then join the result with Lists on ListID, then join with Boards on BoardID, and finally join with Users on UserID:**
  (((Labels ⋈_{CardID=CardID}(Cards)) ⋈_{ListID=ListID}(Lists))
  ⋈_{BoardID=BoardID}(Boards)) ⋈_{UserID=UserID}(Users)