Rationale
Why is this lesson important? Why does the student need this lesson? How does this lesson fit in the larger module?

Gen2 provides different sessions to manage tag populations more efficiently. The student needs this lesson to understand sessions in Gen2.

Objective(s)
What will the student know, be able to do, and value at the end of this lesson? This is smaller amounts of information than the module objectives.

The student will be able to recall the number of sessions in Gen2, describe the purpose of sessions in Gen2, and choose the appropriate session for a given application.

Exploration
Explicit concepts related to the Module goal are explored. It is at this point that the student will be provided basic information about the topic and the chance to explore some basic concepts about the topic. This is where the instructor imparts information.

- Gen2 sessions
  - Tags have 4 session inventoried flags (S0, S1, S2, S3) with two states: A and B. At power-up the S0 flag shall be set to A. All other flags may be A or B.
  - Different persistent times for inventoried flag
    - S0: persists with reader power; when no reader power it loses state
    - S1: Limited persistence when tag powered or not power (500 ms < t < 5 s). If not refreshed in time t, resets to state A
    - S2: Persist when powered and at least 2 seconds after losing power
    - S3: Persist when powered and at least 2 seconds after losing power
  - Selected flag (SL)
    - Assert or deassert with a Select command
    - Query command inventories tags with either SL asserted or deasserted

- Reasons for sessions
  - Sessions help inventory performance
  - Reader frequency hops and may count some of the same tags again.

- S0 or S1
  - If need to count multiple times in short amount of time like a conveyor, use nonpersistent session like S0 or S1.

- S2 or S3
  - If use S2 or S3, tag remembers it was counted.
  - Count tags twice. Count tags with S2 in state A, switch them to B, and then count tags with S2 in state B
Reflection
Several questions are posed to the student to answer and then often discuss as a class. This is an attempt to determine whether the student "gets" the basic concepts delivered above. If they do get it, move on to engagement. If they do not get it, go back to exploration above. It could be as simple as asking a few probing questions or as complex as asking the student to write a paper.

- In what application is S0 used?
- In what application is S2 or S3 used?
- Why are there two states A and B?

Engagement
Concepts learned in the Exploration are further developed by conducting experiments, designing and building solutions, and solving problems. This is an attempt to cause the student to apply the new knowledge. By applying the new knowledge, the student is much more likely to retain this information. This engagement could be accomplished through a debate, an experiment, a problem solving activity, or anything else that would cause the student to demonstrate understanding and competence.

- Homework assignment

Expansion
Provide opportunities for students to expand the concepts to more general or global situations including connection to the Module goal. Expand back to the big ideas of the module and prepare for the next lesson.

- Without sessions on tags, how would readers increase the performance?

Lesson Assessment
Assess student understanding of the lesson content. This does not have to be a full-blown examination. It could be a graded homework assignment, a quiz, a performance examination, a graded problem solving activity, or something similar.

- Homework assignment

Equipment
- None

Software
- None

References
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