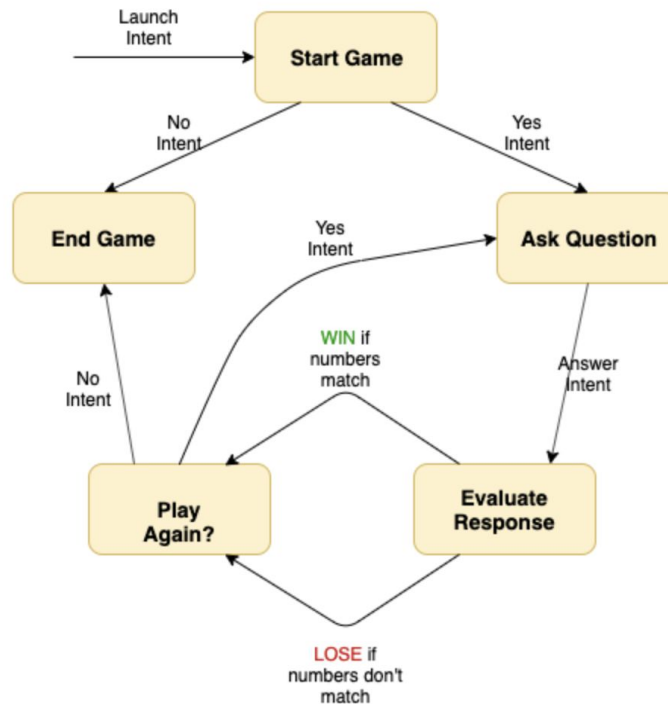# HW1 Part1: Alexa Skill for Memory Game
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1. State Diagram of the skill:

2. Why is a session used and what is the advantage of using session attributes?

A session marks the lifecycle of the invocated skill. It is used to have interaction with user without asking them to use the skill's invocation name every time they convey something. There are multiple advantages of using a session-

- It can store some information in its attributes which can be used later to build a response or ask a question later during any time within the session. They even allow complex structures to be stored as attributes as long as they fit into a key-value map.

- It can also be used to keep track of the state of the conversation. For instance, there might be similar responses from a user for a question even though it is being asked at different points. In this case, if we store the state as attribute in the session, we can differentiate between the responses based on the state.

3. **Sample Utterances used:**
   - **LaunchIntent:** "start memory number game"
   - **YesIntent:** {okay, why not , sure, yo, yep, yeah, yeah sure, ya, yes, yes i am ready, lets play, lets play again, i am ready to play again, cool}
   - **AnswerIntent:** Following utterances are accepted where {first}, {second} and {third} are slots of type AMAZON.NUMBER-
     - is it {first} {second} {third}
     - is it {first} {second} and {third}
     - that should be{first} {second} {third}
     - that should be be{first} {second} and {third}
     - that will be {first} {second} {third}
     - that will be {first} {second} and {third}
     - {first} {second} {third}
     - {first} {second} and {third}
     - yes it will be {first} {second} {third}
     - yes it will be {first} {second} and {third}
     - that would be {first} {second} {third}
     - that would be {first} {second} and {third}

   - **NoIntent**: {no, nope, neh, na, nah, no way, I don't, I don't want to, I don't want to play, I don't want to play again, another time, sorry not now}
4. **Intents:**
   - **LaunchIntent:** It is used to invoke the number memory game skill.
   - **YesIntent:** It is used twice, once to ask user if they are ready to play the game, and another time to ask if they want to play the game again.
   - **AnswerIntent:** It is used to fetch the numbers from user.
   - **NoIntent**: It is used to end the game if the user is not interested to play, or if they don't want to play the game again.

5. **References**:
   - http://tts.speech.cs.cmu.edu/courses/11492/slides/alexa_skills.pdf
   - https://developer.amazon.com/blogs/post/Tx14R0IYYGH3SKT/flask-ask-a-new-python-framework-for-rapid-alexa-skills-kit-development