

Chapter 2

Topics

All games require a game world and a gamified course is no exception. However, since a player is navigating through knowledge and facts, creating a simple 2d board is not quite enough. Instead, we must navigate through a more conceptual space. Traditionally, a course has a collection of knowledge resources in the form of notes, exercises, assignments, and readings. A student would simply navigate through these materials by picking one up, reading or working a bit, and putting it down. For a game world to be built out of these resources, something must be defined to represent a location as well as a way to move between locations.

Conditional Topics

- booleans
- “and” statements
- “or” statements
- using both “and” and “or”
- conditionals (if-then)
- branching (else)
- multiple branches (elseif)

Figure 2.1: Example Topics

Like a room in an interactive text adventure or a square on a chessboard, a topic will be a single atomic location in our game world. However, unlike rooms and squares a topic has no real location in space. However, it is an atomic unit of “knowledge”. A topic can be thought of as the smallest unit of fact or knowledge attempting to be taught. Think of it as the smallest subsection within a book; a topic conveys one and only one piece of information.

The topics contain everything necessary to teach this one concept. This includes tasks, questions, and information. These will be explained more thoroughly in 2.2.

However, it is necessary to be able to group topics. Figure 2.1 shows a few possible topics for conditionals. Although each topic stands by itself, they are clearly related in subject. Subjects will be defined as any term which a given

Note:

- The value of a hint can be weighted by how many points it subtracts
- the total points of a task must be at least the total cost of the hints plus the value of the explanation.
- the game state remembers
 - which tasks have been completed
 - which hints have been unlocked and they will always be unlocked
- you get no points for completing the same task twice