Embedded System – Automatic Water Tap

**Actors**

1. User (U)
2. Water Tap (T)

**Signals**

* U to T – User intends to use the tap
* U to T – User stops using the tap
* T to U – Water starts running
* T to U – Water stops running

**Interactions**

* Initially, the water is not running and the user is not using the tap;
* When the user signals that they want to use the tap, the tap will start dispensing water; also, a countdown timer starts;
* After the water starts, the user uses the tap. They can either wait for the water to stop, or leave before it does so. When they leave, they signal the tap their intention;
* Whenever the tap timer runs out, or if the user left, the water stops running.

**Smart Recycling Bin**

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