**Embedded System – Smart Watering**

**Actors**

1. Soil Moisture Sensor (MS)
2. Sprinkler (S)
3. Controller (C)

**Signals**

MS to C and C to S

**Interactions**

* Initially, S is in *stopped* state;
* MS keeps checking the level of water from the soil, normalizing the data to be between 0 and 100%; MS **signals** C every time the value of the moisture changes; the signals contain the new value of soil moisture
* if the moisture is less than or equal to 40% and S is in the *stopped* state, C **signals** S to start watering; S will go to the *watering* state;
* if the moisture reaches at least 80% and S is still in *watering* state, C **signals** S to stop watering; S will go to the *stopped* state

**UBB-Goes-Green – 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. If the user is still present, it also **signals** them that the water has stopped.