**Step 1: Interpret the Decision Trees**

The Random Forest uses **majority vote** from three decision trees (T1, T2, and T3).

* **T1:**
  + If x1=1, then check x2:
    - If x2 = 1 , then y = 0
    - If x2=0 , then y = 1
  + If x1=0, then y=0
* **T2:**
  + If x2 =1, then y=1
  + If x2 =0, then check x3:
    - If x3=1, then y=0
    - If x3=0, then y=1
* **T3:**
  + If x3=1, then y=1
  + If x3​=0, then y=0

**Step 2: Apply the Decision Trees to the Test Data**

Now we will apply each decision tree to the test data.

**First test sample: (x1=0,x2=1,x3=1,y=1)**

* **T1**:
  + x1​=0 → y==0
* **T2**:
  + x2=1 → y=1
* **T3**:
  + x3=1 → y=1
* **Majority vote**: y=1y = 1y=1 (correct prediction)

**Second test sample: (x1=1,x2=0,x3=0,y=1)**

* **T1**:
  + x1​=1, x2=0 → y=1
* **T2**:
  + x2=0, x3​=0 → y=1
* **T3**:
  + x3​=0 → y=0
* **Majority vote**: y=1y = 1y=1 (correct prediction)

**Third test sample: (x1=1,x2=0,x3=1,y=0)**

* **T1**:
  + x1​=1, x2​=0 → y=1
* **T2**:
  + x2​=0, x3=1 → y=0
* **T3**:
  + x3 = 1 → y =1
* **Majority vote**: y=1y = 1y=1 (incorrect prediction)

**Step 3: Calculate the Accuracy**

* We have **3 test samples**.
* Correct predictions:
  + First sample: Correct
  + Second sample: Correct
  + Third sample: Incorrect
* **Number of correct predictions** = 2

Now, calculate the accuracy:

Accuracy= 2 / 3 = 0.67