**Problem1:**

Diagram

Description automatically generated

**Problem2:**

A piece of paper with writing on it

Description automatically generated with medium confidence

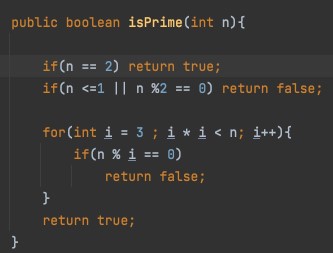
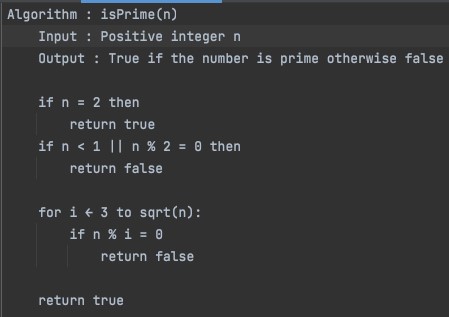
A piece of paper with writing on it

Description automatically generated with medium confidence

A piece of paper with writing

Description automatically generated with medium confidence

**Problem3:**



**a) Pseudo-code b) Implementation**

# Running Time: 𝑶(√𝒏)