LAB-2

**PRELAB:**

1. Write an algorithm to solve the water jug problem?

2. You have two jugs with capacities x and y liters. There is an infinite amount of water supply available to you. Now you need to determine whether it is possible to measure z liters using these two jugs. If z liters of water are measurable, you must have z liters contained within one or both jugs by the end.

We can do these few operations −

• Fill any of the jugs fully with water.

• Empty any of the jugs.

• Pour water from one jug into another till the other jug is completely full or the first jug itself is empty.

**INLAB:**

1. A Water Jug Problem with 2 gallons: You are given two jugs, a 5-gallon one and a 4-gallon one, a pump which can supply unlimited water that can be used to fill the jugs, and a ground on which water can be disposed. Neither jug has any measuring markings on it. Implement a python code to get exactly 2 gallons of water in the 5-gallon jug.

**POSTLAB:**

1. A Water jug problem with 3 gallon: You are given three jugs, a 12-gallon one and an 8-gallon one and a 5-gallon one, a pump which can supply unlimited water that can be used to fill the jugs, and a ground on which water can be disposed. Neither jug has any measuring markings on it. Implement a python code to get exactly 6 gallons of water in any of the jug.