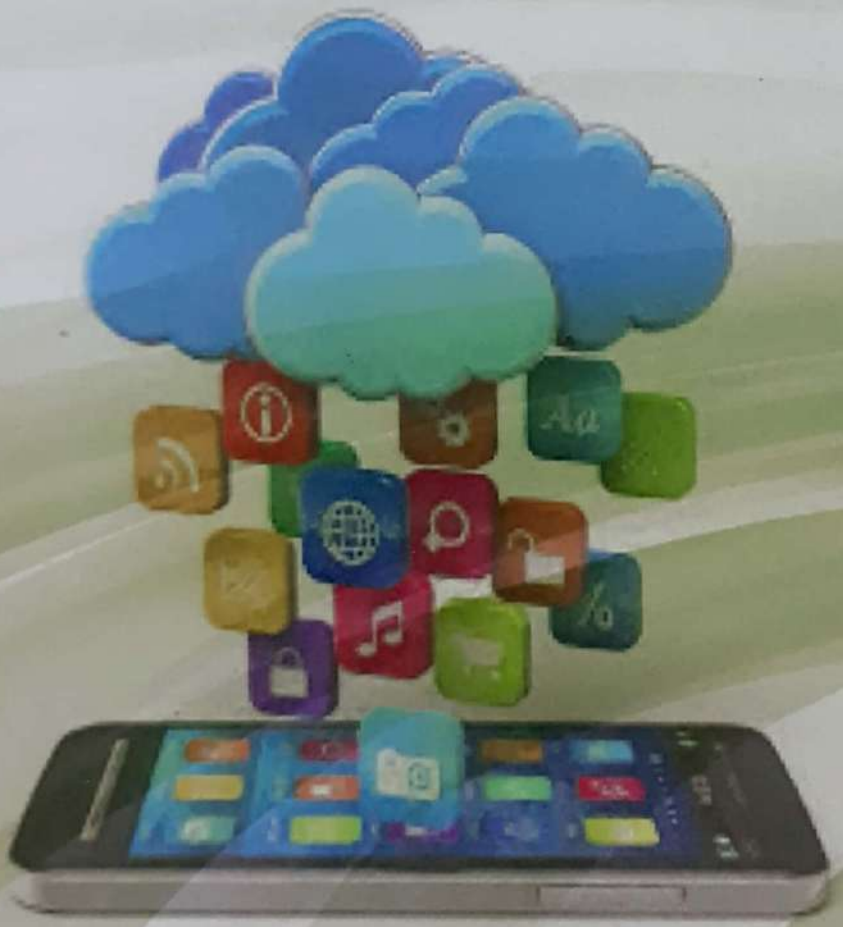
Vol. 1 Special Issue 2 December ISSN 2454-4558

An International Journal

MASTJ

Bi-Annual



APPLICATION FABRICS

Vol. 1 Special Issue. 2 December ISSN 2454-4558

An International Journal

MASIVJ

Bi-Annual

MASIVJ
Madurai Sivakasi Nadars Pioneers Meenakshi Women's College
Poovanthi, Tamil Nadu, India
Email: journmsnpioneer@gmail.com
Ph: 9843259191

Vol. 1 Special Issue 2 December ISSN: 2454-45

A COGNITIVE METHOD TO SOLVE WATER JUGS PROBLEMS

R.SMEETA MARY M.C.A.,M.Phil

Assistant Professor, Department of Computer Applications, Fatima College, TamilNadu, India.

Abstract - The Water Jug problem is a famous problem in Artificial Intelligence, Pro solving, Recreational, Computer Programming and Psychology. The solution of the pro mainly based on some search methods such as Breadth First Search (BFS) or Depth Search (DFS) or Diophantine approach. In BFS, DFS and Diophantine approach we find draw back while finding out the solution. In this paper, a new arithmetic appro Extended Euclidean approach which is used to solve the problem, it is simple and suit for manual calculation or programming language implementation. Analysis of the solu involves various steps and some illustrative examples are provided with different stages.

Key words - Water jugs problem, Artificial Intelligence, Problem solving, Diophantine approach, Extended Euclidean approach

I. INTRODUCTION

The Artificial Intelligence is the study of how to make computers to do things better than the human being. As the term says, here the water jug problem is well-known problem in Artificial Intelligence [1], Computer Programming [2], Problem solving [3], Geometry [4], Recreational and discrete Mathematics [5,6] and Psychology [7,8,9].

"You are at the side of a river. You have a 3 liter jug and a 5 liter jug. The jugs do not have markings to allow measuring smaller quantities. How can you use the jugs to measure 4 liters of water? "

There are various methods to solve this problem, including Breadth First search [10], Depth First Search [11] and the Diophantine approach [12]. However each and every method has its own disadvantages that is in BFS the ro not get trapped by exploring a b alley. In DFS, by chance we can as that we will be getting the goal e and the memory space is less. Diophantine approach the goal to depends on the assumption that are m over the value of X and Y.

In this paper a simple Arithm approach to solve the problem that introduced. A novel feature of approach is that one can deduce the t amount of water in jugs at each step getting the value of X and Y by using backward approach. When these va are just substituted in the Extend Euclidean equation our goal will reached. Due to its simplicity it is v suitable for manual calculation of proving steps.