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| A picture containing drawing, stop, room  Description automatically generated | Artificial Intelligence  Practical #5 | | |
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| **Subject/Course:** | **Artificial Intelligence** | | |
| **Topic** |  | | |
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| **1. Write a program to solve water jug problem.** | | | |
| **Code: in Prolog**  jug(0,0):-write("\nFill 3g jug."),jug(0,3).  jug(0,3):-write("\nPour water from 3g jug to 4g jug ."),jug(3,0).  jug(3,0):-write("\nFill 3g jug."),jug(3,3).  jug(3,3):-write("\nPour water from 3g jug to 4g jug until 4g is full."),jug(4,2).  jug(4,2):-write("\nEmpty 4g jug."),jug(0,2).  jug(0,2):-write("\nPour water from 3g jug to 4g jug."),jug(2,0).  jug(2,0):-write("\nGoal State.").    jug(X,Y):-X>4,not(Y>3),write("\n4g jug overflowed."),not(jug(2,0)).  jug(X,Y):-notX>4,(Y>3),write("\n3g jug overflowed."),not(jug(2,0)).  jug(X,Y):-X>4,(Y>3),write("\nBoth jug overflowed."),not(jug(2,0)).      jug(0,0):-write("\nFill 4g jug."),jug(4,0).  jug(4,0):-write("\nPour water from 4g jug to 3g jug ."),jug(1,3).  jug(1,3):-write("\nEmpty 4g jug."),jug(0,3).  jug(0,3):-write("\nPour water from 3g jug to 4g jug until 3g is full."),jug(3,0).  jug(3,0):-write("\nFill 3g jug."),jug(3,3).  jug(3,3):-write("\nPour water from 3g jug to 4g jug until 4g is full."),jug(4,2).  jug(4,2):-write("\nEmpty 4g jug."),jug(0,2).  jug(0,2):-write("\nPour water from 3g jug to 4g until 3g id Empty jug."),jug(2,0).  jug(2,0):-write("\nGoal State.").  **Output:**  image | | | |
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