UCS2504 - Artificial Intelligence Lab

Department of CSE, SSN College of Engineering

3. Adversarial Search - Minimax Algorithm

1. Consider a state space where the start state is *n* and its successor function returns *2n+1* and *2n+2*. Construct a state space tree (full binary tree) for the level specified by the user.
   Hint: Read the start state, *n* and the level, *l.* Assume the first level as 0. Also, the nodes at the last level are assumed as terminal nodes.

2. Implement the Minimax algorithm as a Recursive Depth First Search using a function called **minimax**. Assume that the first move is carried out by max player and the last level contains terminal states. Let the utility values of the terminal states be the value of the node itself. Find the value of the root node and print the path travelled to compute the value of the root node.

Note: In the observation note, draw the state space tree, and write the minimax algorithm to solve question 2.