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Problem Statement:
       Write a program for Towers of Hanoi using appropriate knowledge representation and reasoning techniques.
        def Hanoi(n, A, B, C):
            count = 1
            if n==1 :
               print("Move disk ", n, " from " , A, " to ", C)
               return count
            else :
               count += Hanoi(n-1, A, C, B)
               print("Move disk ", n, " from " , A, " to ", C)
               count += Hanoi(n-1, B, A, C)
                return count
        Hanoi(3,'A','B','C')
       Move disk 1 from A to C
       Move disk 2 from A to B
       Move disk 1 from C to B
       Move disk 3 from A to C
       Move disk 1 from B to A
       Move disk 2 from B to {\tt C}
       Move disk 1 from A to C
Out[2]: 7
        Hanoi(4, "Tower 1", "Tower 2", "Tower 3")
       Move disk 1 from Tower 1 to Tower 2
       Move disk 2 from Tower 1 to Tower 3
       Move disk 1 from Tower 2 to Tower 3
       Move disk 3 from Tower 1 to Tower 2
       Move disk 1 from Tower 3 to Tower 1
       Move disk 2 from Tower 3 to Tower 2
       Move disk 1 from Tower 1 to Tower 2
       Move disk 4 from Tower 1 to Tower 3 Move disk 1 from Tower 2 to Tower 3 Move disk 2 from Tower 2 to Tower 1
       Move disk 1 from Tower 3 to Tower 1
       Move disk 3 from Tower 2 to Tower 3
       Move disk 1 from Tower 1 to Tower 2
       Move disk 2 from Tower 1 to Tower 3
       Move disk 1 from Tower 2 to Tower 3
Out[3]: 15
In [4]:
        n = int(input("Enter number of rings : "))
        Hanoi(n,'A','B','C')
        Enter number of rings : 5
        Move disk 1 from A to
       Move disk 2 from A to B
       Move disk 1 from C to B
       Move disk 3 from A to C
        Move disk
                 1 from
        Move disk 2 from B to
       Move disk 1 from A
                             to
                                 С
        Move disk
                 4 from
                          A
                    from
        Move disk
                 1
                          С
                  2 from C
       Move disk
                             to
                                 Α
       Move disk 1 from B
                             to
        Move disk 3 from C
       Move disk 1 from A
       Move disk 2 from A to
       Move disk 1 from C
                             to
                                 В
                  5 from A
       Move disk
                             to
                                 С
       Move disk
                  1
                    from
                          В
                  2 from B
       Move disk
                             to
       Move disk 1 from A to
                                 С
       Move disk 3 from B to
                                 Α
       Move disk 1 from C to
       Move disk 2 from C to A
       Move disk 1 from B to
                                 Α
        Move disk
                 4 from B
                             to
                                 C
        Move disk
                 1
                    from
                          Α
       Move disk 2 from A
                             to
                                 В
       Move disk 1 from C
                                 В
                             to
        Move disk 3 from A
                             to
        Move disk 1 from B to
       Move disk 2 from B to C
       Move disk 1 from A to
Out[4]: 31
        n = int(input("Enter number of rings : "))
        Hanoi(n,'A','B','C')
        Enter number of rings : 6
        Move disk 1 from A
       Move disk 2 from A
                             to
       Move disk 1 from B
                             to
        Move disk 3 from A
                             to
        Move disk 1 from C to
       Move disk 2 from C to
                                 В
       Move disk 1 from A
                                 В
                             to
       Move disk
                 4 from A
                                 С
                             to
       Move disk
                  1
                    from
                          В
                             to
                  2 from B
       Move disk
                             to
                                 Α
       Move disk 1 from C
                             to
       Move disk 3 from B to
       Move disk 1 from A to
       Move disk 2 from A to C
       Move disk 1 from B to
                                 C
        Move disk
                  5 from A
                                 В
                             to
        Move disk
                  1
                    from
                          C
                                 Α
                  2 from C
       Move disk
                             to
                                 В
       Move disk 1 from A
                             to
                                 В
       Move disk 3 from C
                             to
       Move disk 1 from B
       Move disk 2 from B to A
       Move disk 1 from C to A
       Move disk 4 from {\tt C}
                                 В
                             to
       Move disk 1 from A
Move disk 2 from A
                             to
                             to
       Move disk 1 from B to
                                 С
       Move disk 3 from A to
                                 В
       Move disk 1 from C to
       Move disk 2 from C to
       Move disk 1 from A to
                                 В
       Move disk 6 from A
                                 С
                             to
        Move disk
                 1
                    from
                          В
                             to
                                 C
       Move disk 2 from
                          В
                             to
       Move disk 1 from C
                             to
       Move disk 3 from B
                             to
                                 С
        Move disk 1 from A
       Move disk 2 from A to
       Move disk 1 from B to C
       Move disk 4 from B
                             to
                                 Α
                 1 from C
2 from C
        Move disk
                             to
       Move disk
       Move disk 1 from A to
       Move disk 3 from C to
        Move disk 2 from
                         B to
       Move disk 1 from C to A
       Move disk 5 from B to {\tt C}
       Move disk 1 from A to B Move disk 2 from A to C
       Move disk 1 from B to C
       Move disk 3 from A to B
       Move disk 1 from C to A
       Move disk 2 from C to B
       Move disk 1 from A to B
       Move disk 4 from A to C
Move disk 1 from B to C
Move disk 2 from B to A
       Move disk 1 from C to A
       Move disk 3 from B to C
       Move disk 1 from A to B
       Move disk 2 from A to C
       Move disk 1 from B to C
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In []:

Out[5]: 63