********** OUTPUT **********

Few scenarios:

Scenario as per the question

```
Welcome to Online IDE!! Happy Coding :)
[1, 1, 0, 1]

Index: 0 moved forward to index: 1
Index: 1 failed to move forward.
Index: 2. No movement forward - 0 value
Index: 3 incorrect last index value. Should be 0.
FALSE
```

```
[0, 0, 1, 0]

Index: 0. No movement forward - 0 value
Index: 1. No movement forward - 0 value
Index: 2. This will reach end. Value 0 detected at end
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
FALSE
```

```
[0, 0, 0, 0]

Index: 0. No movement forward - 0 value
Index: 1. No movement forward - 0 value
Index: 2. No movement forward - 0 value
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
FALSE
```

Scenario as per the question

```
Welcome to Online IDE!! Happy Coding :)
[2, 0, 1, 0]

Index: 0 moved forward to index: 2
Index: 1. No movement forward - 0 value
Index: 1. No movement forward - 0 value
Index: 2. This will reach end. Value 0 detected at end
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
TRUE
```

```
[1, 1, 1, 0]

Index: 0 moved forward to index: 1
Index: 1 moved forward to index: 2
Index: 2. This will reach end. Value 0 detected at end
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
TRUE
```

```
[3, 0, 0, 0]

Index: 0 moved forward to index: 3
Index: 1. No movement forward - 0 value
Index: 0 moved forward to index: 3
Index: 2. No movement forward - 0 value
Index: 0. This will reach end. Value 0 detected at end
Index: 1. No movement forward - 0 value
Index: 2. No movement forward - 0 value
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
TRUE
```

```
Welcome to Online IDE!! Happy Coding :)
[3, 0, 0, 1]

Index: 0 moved forward to index: 3
Index: 1. No movement forward - 0 value
Index: 0 moved forward to index: 3
Index: 2. No movement forward - 0 value
Index: 1. No movement forward - 0 value
Index: 2. No movement forward - 0 value
Index: 3 incorrect last index value. Should be 0.
FALSE
```

```
[5, 0, 0, 0]

Index: 0 value: 5   is greater than list size: 4
Index: 1. No movement forward - 0 value
Index: 2. No movement forward - 0 value
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
FALSE
```

```
[0, 0, 1, 0]

Index: 0. No movement forward - 0 value
Index: 1. No movement forward - 0 value
Index: 2. This will reach end. Value 0 detected at end
Index: 3. No movement forward - 0 value
Index: 3. This will reach end. Value 0 detected at end
FALSE
```

```
/*
Online Java - IDE, Code Editor, Compiler

Online Java is a quick and easy tool that helps you to build, compile, test your programs online.
*/
import java.util.ArrayList;


public class Main
{
   public static void main(String[] args) {
      System.out.println("Welcome to Online IDE!! Happy Coding :)");

      int[] nums = new int[]{0,0,1,0};
      boolean moveForward=true;
      String numbers = java.util.Arrays.toString(nums);
      System.out.println(numbers+"\n");
      boolean [] outcome = new boolean[nums.length];
      int falseCount=0;

      for (int i=0; i<nums.length; i++)
      {
         if (nums[i]>nums.length)
         {
            System.out.println("Index: " + i + " value: " + nums[i]+ "   is greater than list size: " +
nums.length);
            falseCount++;
            i++;
         }
         moveForward=true;

         if(i!=nums.length)
         {
            if (i==nums.length-1)
            {
               if (nums[i]==0)
               {
                  System.out.println("Index: " + (i) + ". No movement forward - 0 value");
                  //System.out.println("FALSE");
                  //System.exit(0);

               }
            }

            if (i!=nums.length-1)
            {
               if (nums[i]==0)
               {
                  System.out.println("Index: " + (i) + ". No movement forward - 0 value");

                  if (i==0)
                  {
                     falseCount++;
                  }
```

```
      //System.out.println("FALSE");
      //System.exit(0);

   }
}



if (i!=nums.length-1)
{
 if (nums[i]==1 && nums[i+1]>0)
 {
    System.out.println("Index: " + i + " moved forward to index: "+ (i+1));
    outcome[i]=true;
 }


 if (nums[i]==1 && nums[i+1]==0 && i+1!=nums.length-1)
 {
    System.out.println("Index: " + i + " failed to move forward.");
      moveForward=false;
      outcome[i]=false;
      //break;
 }
}
 /*
 if (nums[i]==0 && i!=nums.length-1)
 {
    System.out.println("Index2: " + i + " failed to move forward.");
      moveForward=false;
      outcome[i]=false;
      //break;
 }
 */

 if (nums[i]!=0 && i==nums.length-1)
 {
    System.out.println("Index: " + i + " incorrect last index value. Should be 0.");
    falseCount++;
      moveForward=false;
      outcome[i]=false;
      //break;
 }


for (int j=1;j<nums[i];j++)
{
   if (nums[i+j]>0)
   {
      System.out.println("Index3: " + i + " failed to move forward.");
      moveForward=false;
      outcome[i]=false;
      falseCount++;
      //break;
```

```
            }

            if (nums[i+j]==0)
            {
               System.out.println("Index: " + i + " moved forward to index: "+ (i+nums[i]));
               outcome[i]=true;

               System.out.println("Index: " + (i+j) + ". No movement forward - 0 value");


            }

          }

        if (nums[nums.length-1]==0)
        {
           if (nums[i+nums[i]]==0 && i+nums[i]==nums.length-1)  // This works fine. It reaches
end
        // on two scenarios. Where the last element has a 0 value. It also ensures
        {
           if(moveForward)
           {
           System.out.println("Index: " + i + ". This will reach end. Value 0 detected at end");
           outcome[i]=true;
           }
        }
        }

     }
  }

  for (boolean b: outcome)
  {


     if (falseCount==0)
     {
        System.out.println("TRUE");
        break;

     }

      if (!b)
     {
        System.out.println("FALSE");
        System.exit(0);
        falseCount++;

     }



  }
}
```

}