CS5104 Assignment 6  
Due Wednesday, May 12  

Problems:  

1. Build a TM that accepts the language \( \{a^n b^{n+1} | n \geq 0\} \)  

2. Build a TM to accept the language \( a^n b^n c^n \).  

3. On a 2 track TM, Track 1 contains a string of the form \((0 + 1)^*\), in which consecutive 0’s are separated by single 1’s. The string is interpreted as a unary representation of numbers. For example, 000010010000 represents three numbers: 4, 2, and 3. Design a 2 track TM to find the largest of the numbers on track 1 and copy it to track 2.