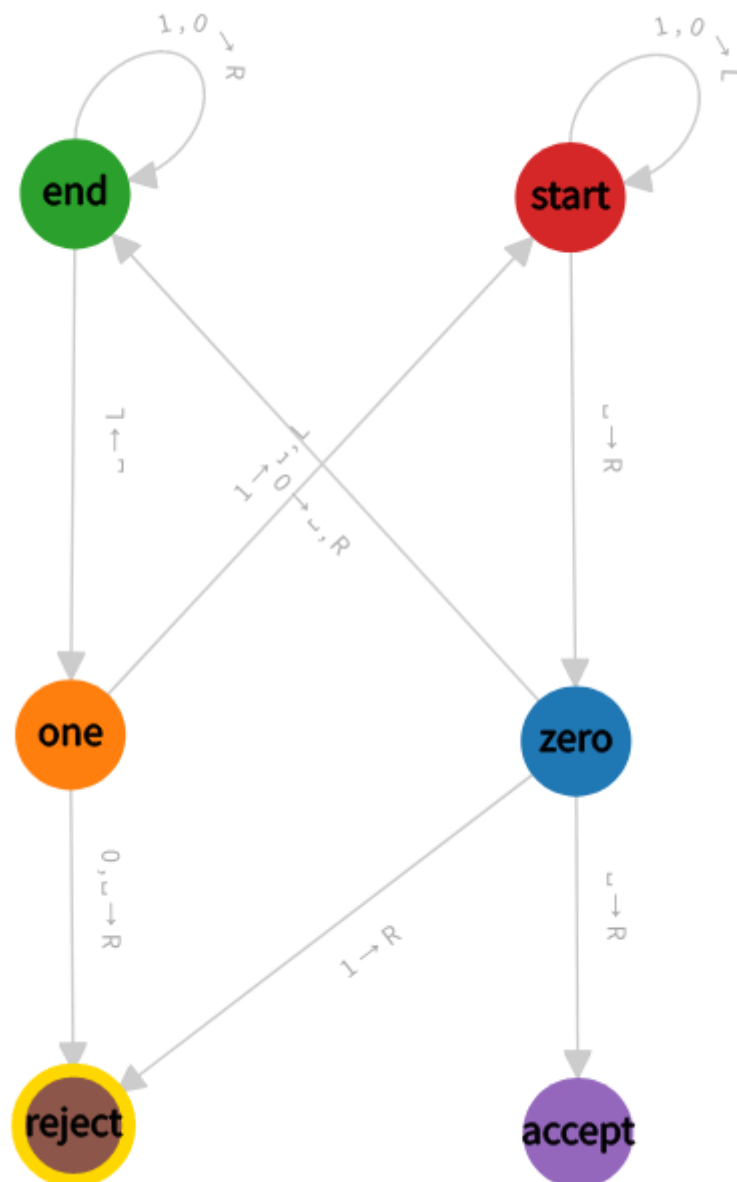


Student Information

Name: Ahmet Eren Çolak

ID: 2587921

Q1.

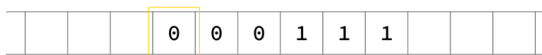
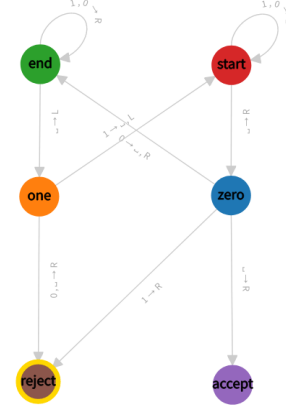
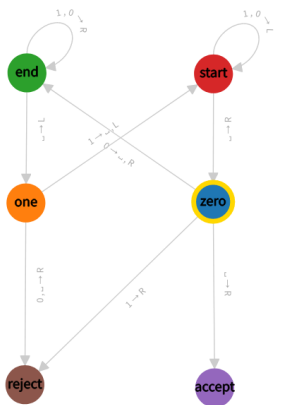
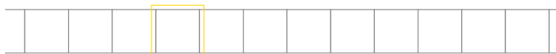
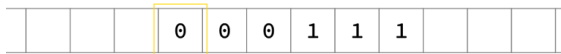
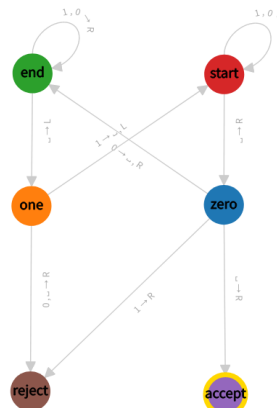
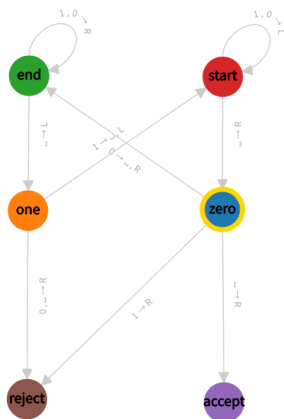


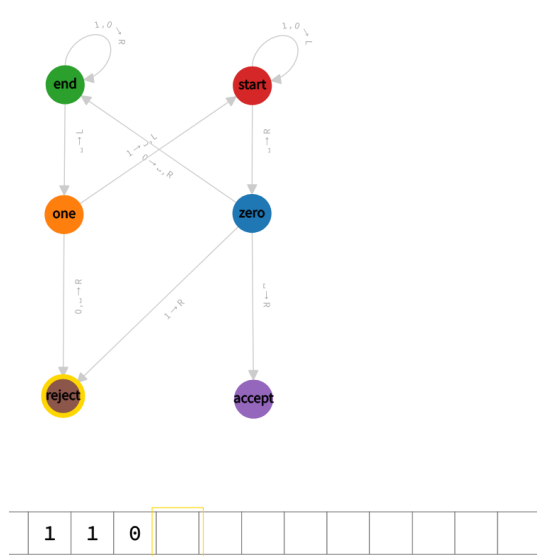
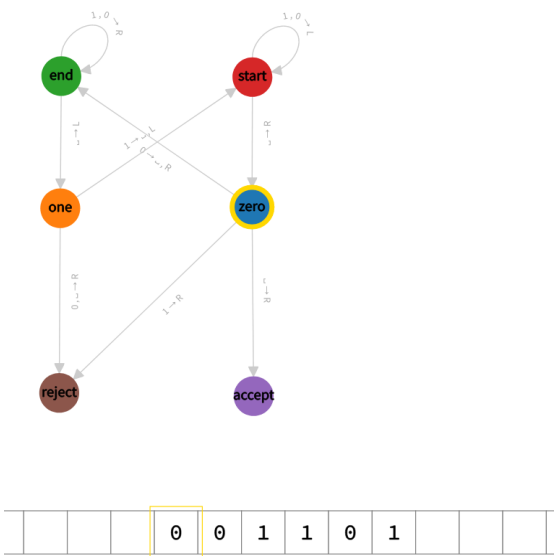
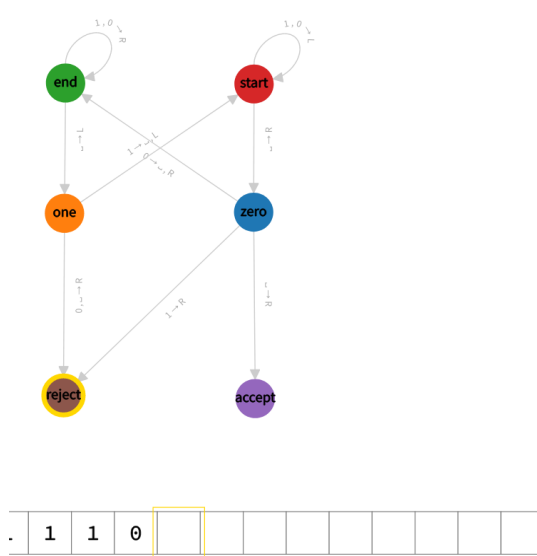
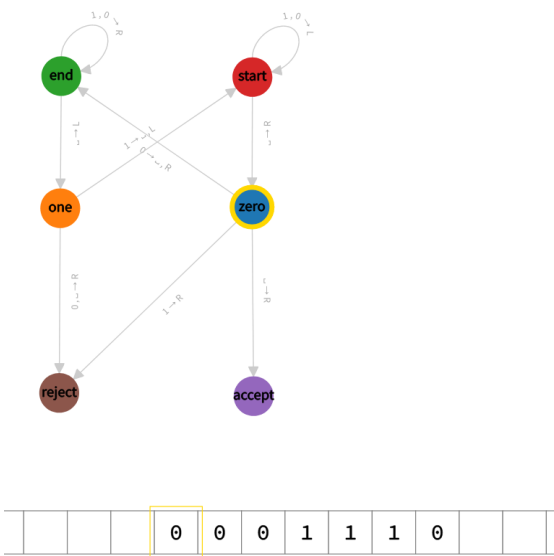
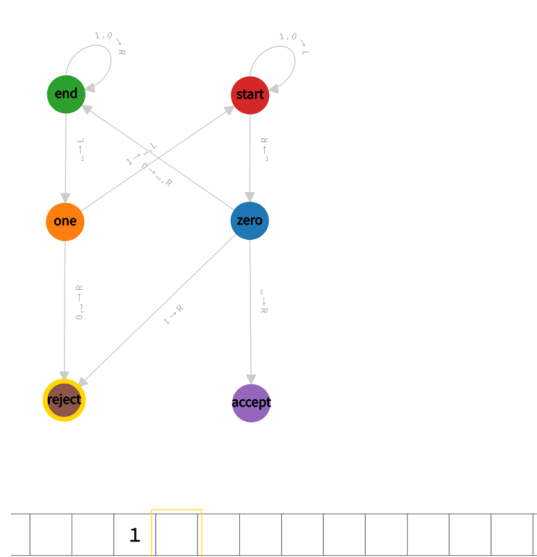
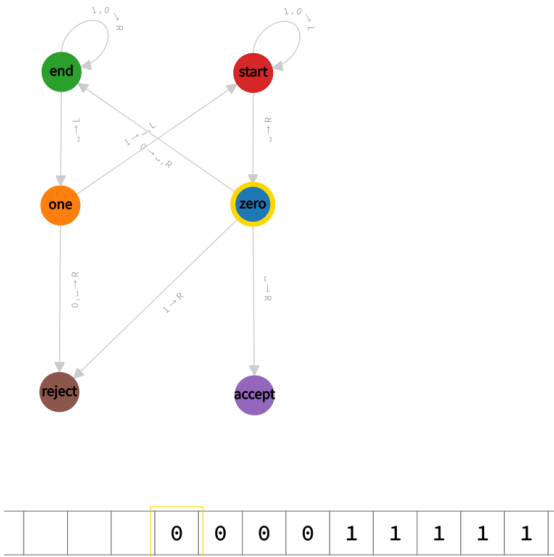
Zero state is the starting state of the machine. If it reads 0, it makes the machine switch to end state or if it reads a 1 it rejects the string. If it reads an empty string it accepts the string because all zeroes are consumed.

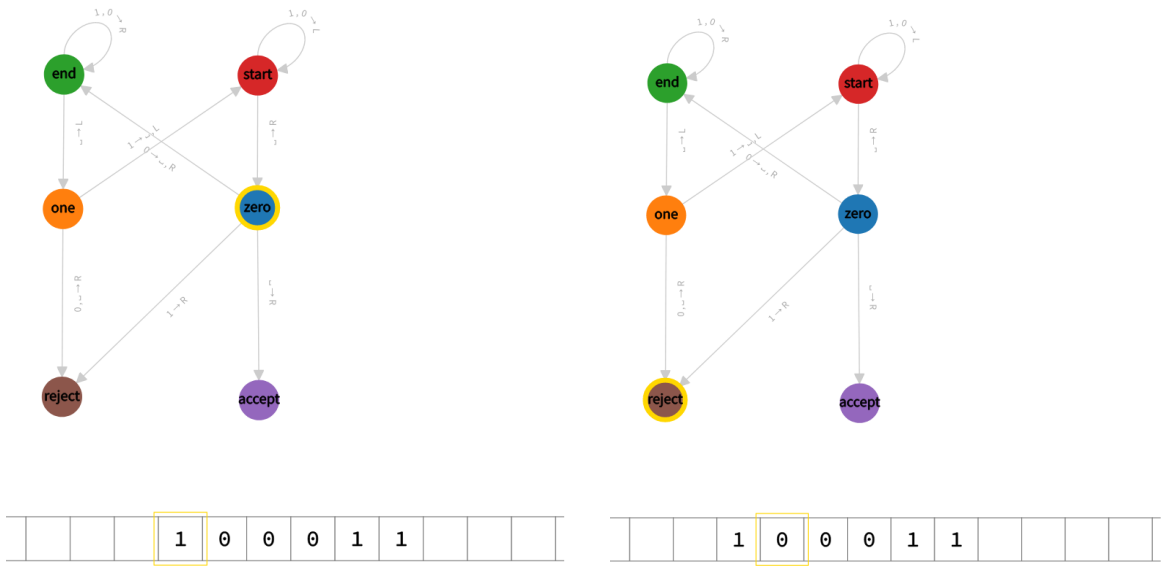
End state makes the machine go to the end of the string and if it reads an empty string it makes the machine switch to one state.

One state writes an empty string if it reads a 1. If the machine reads zero or empty string it rejects the string because it means that the machine could not find a corresponding 1 for a 0.

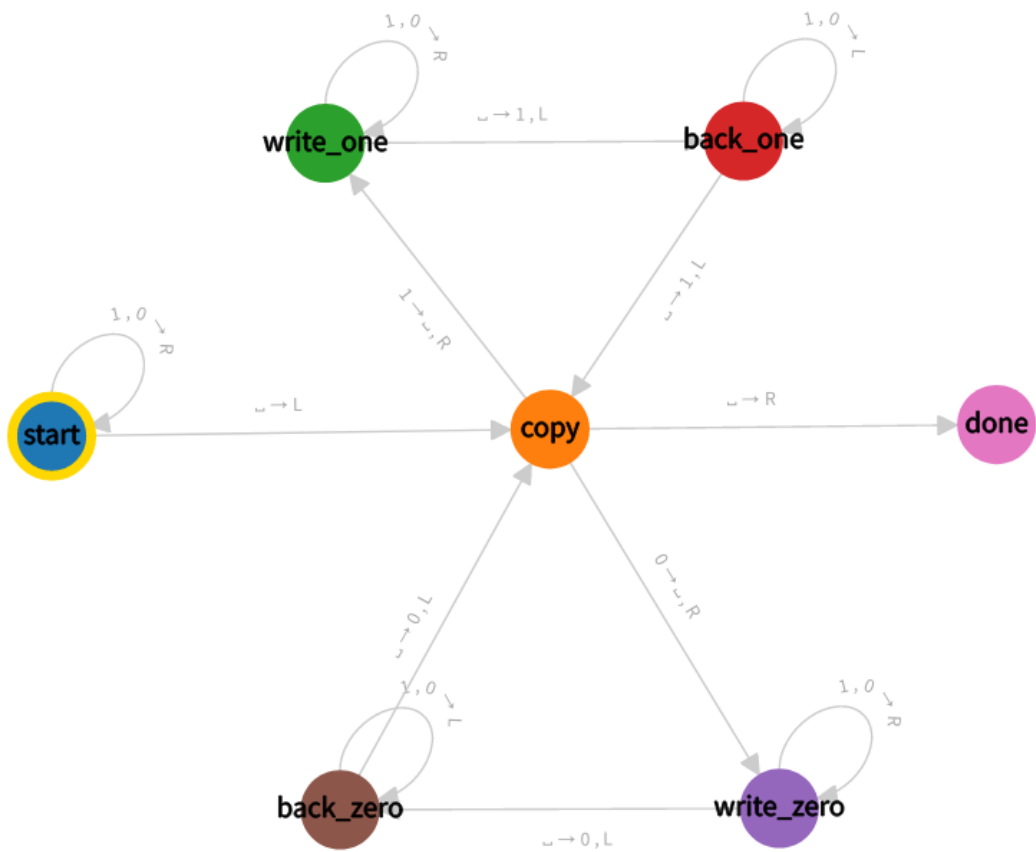
Start state makes the machine go to the beginning of the string and if it reads an empty string it makes the machine switch to zero state.







Q2.



Start state is the starting state of the machine. It makes the machine go to the end of the string. When the machine reads an empty string it switches to copy state.

Copy state makes the machine switch to the write_one state if the machine reads a 1 and or it makes the machine switch to the write_zero state if the machine reads a 0. It writes an empty string where the machine head is. When the machine reads an empty string in copy state, it means the process is completed thus it switches to done state.

write_one state makes the machine go to the end of the string and writes 1. Then it switches to back_one state.

Back_one state makes the machine head go left until it reads an empty string and writes a 1. Then it again switches to copy state.

write_zero state makes the machine go to the end of the string and writes 0. Then it switches to back_zero state.

back_zero state makes the machine head go left until it reads an empty string and writes a 0. Then it again switches to copy state.

