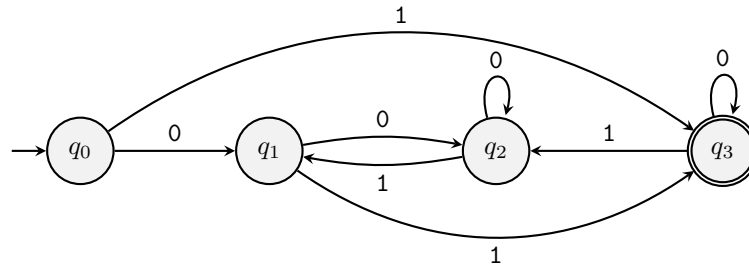


You have to use the designated spaces for your answers. No extra pages will be provided.

**Problem 1: Converting DFAs to Regular Expressions (7 points)**

Convert the following DFA into an equivalent regular expression using the state elimination method. First eliminate  $q_2$ , then  $q_3$  and finally  $q_1$ . You must show work.



**Problem 2: Regular Expressions (3 points)**

Give a regular expression for the following language over  $\Sigma = \{0, 1\}$ .

$$L = \{w : 11 \text{ appears at the beginning of } w \text{ but nowhere else}\}$$