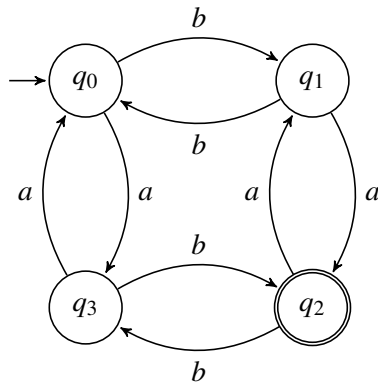




**Question 3**

Here is the state diagram of a dfa  $M$ :



(a) (20%) Describe in words the language  $L$  accepted by  $M$ .

(b) (20%) Given that  $L$  is the language of  $M$  above, let  $K$  be the language

$$\{w \in \{a, b\}^* \mid w \text{ is obtained by deleting one symbol from } v \text{ for some } v \in L\}$$

In other words,  $K$  is the set of strings obtained by deleting one symbol from the strings in  $L$ . Draw the state diagram for a dfa accepting  $K$ .