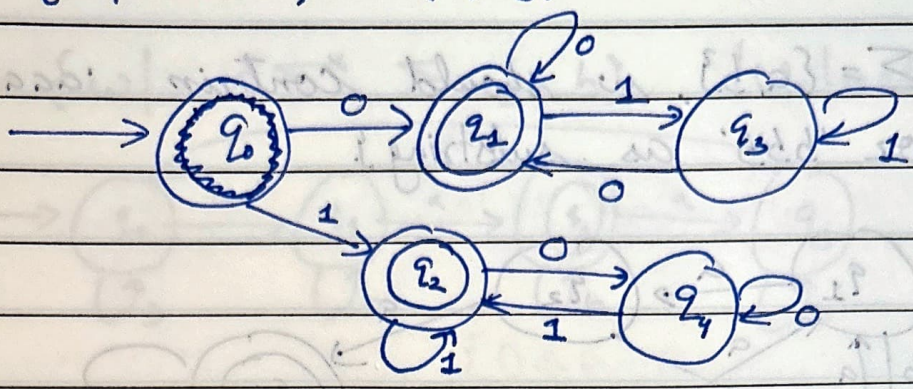
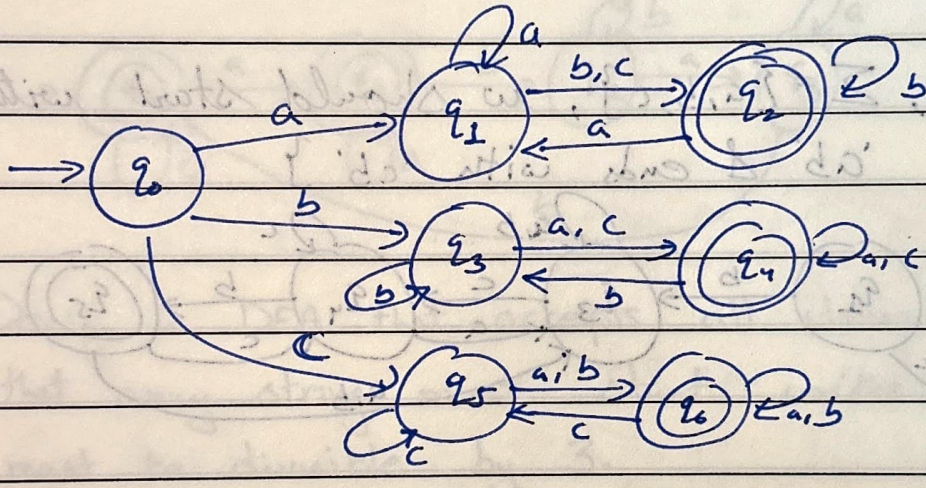
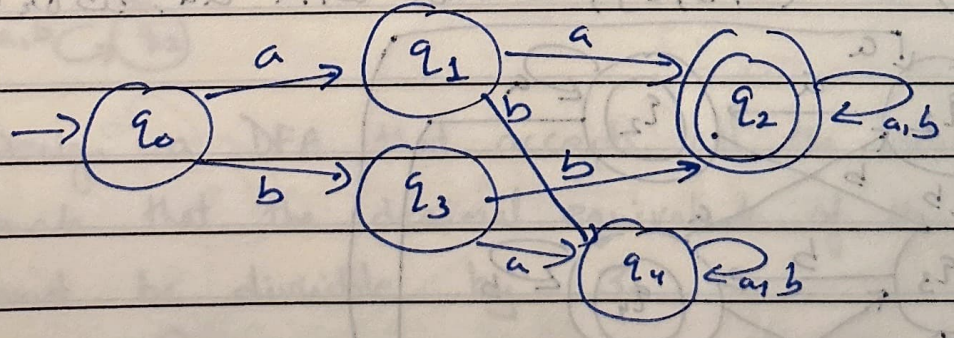
$L = \{w \mid w \in \Sigma^*, \Sigma = \{0,1\}, w \text{ starts \& ends with same character}\}$



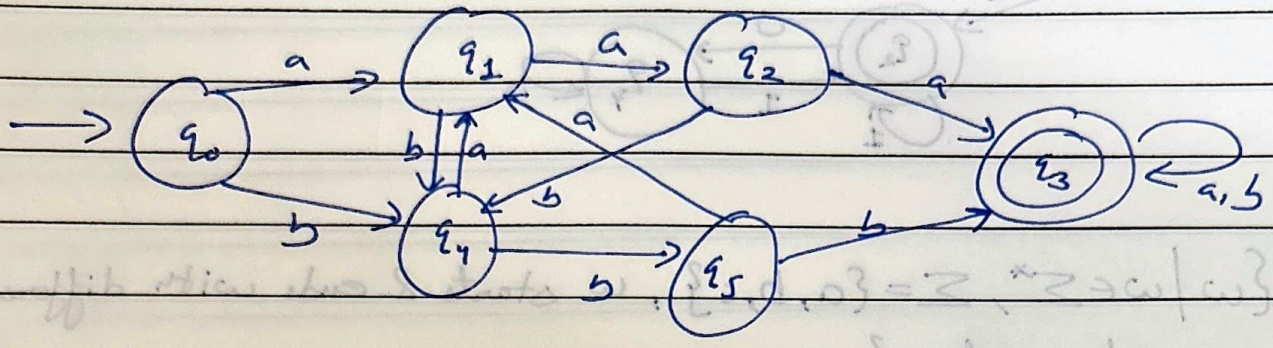
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b,c\}, w \text{ starts \& ends with different characters}\}$



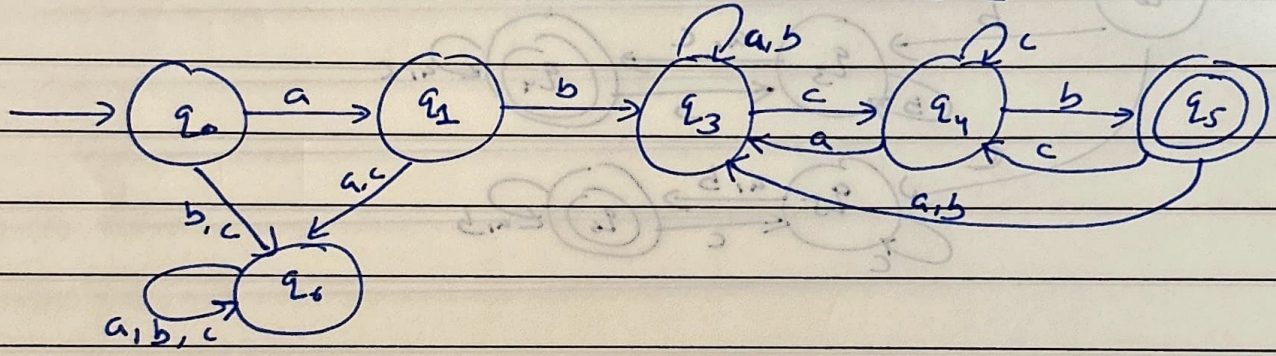
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b\}, w \text{ starts with aa or bb}\}$



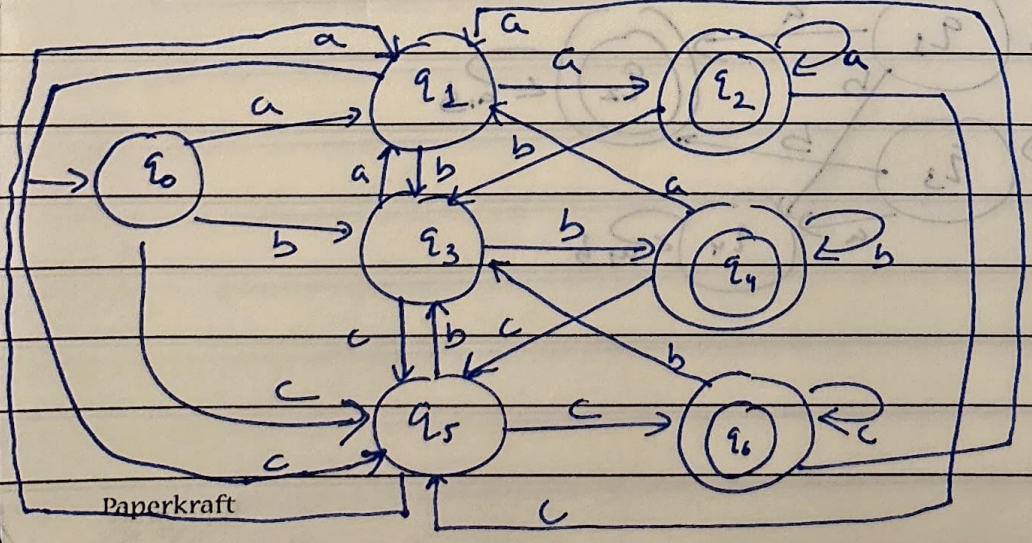
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b\}, w$ should contain 'aaa' or 'bbb' as substring$\}$.



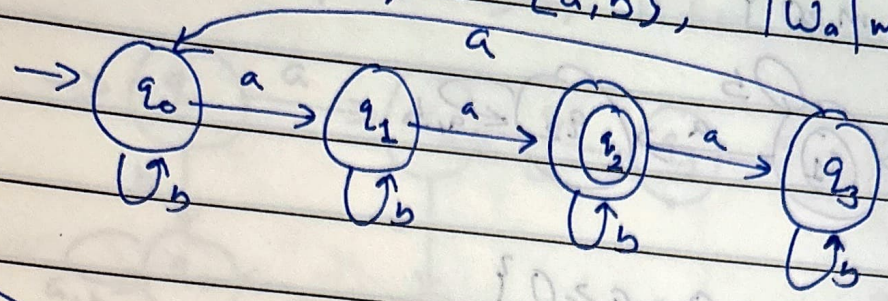
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b,c\}, w$ should start with 'ab' & ends with 'cb'$\}$



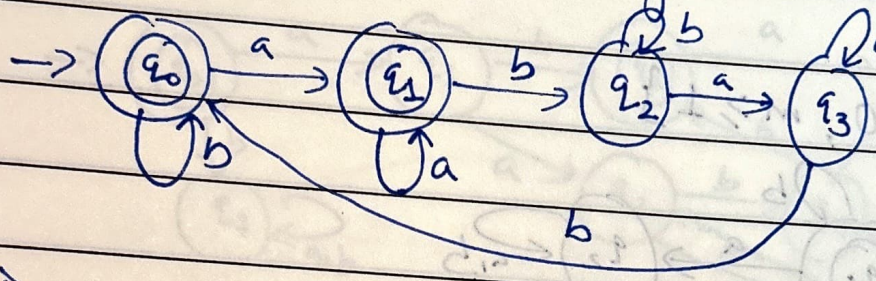
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b,c\}, w$ ends with 'aa', 'bb' or 'cc'$\}$



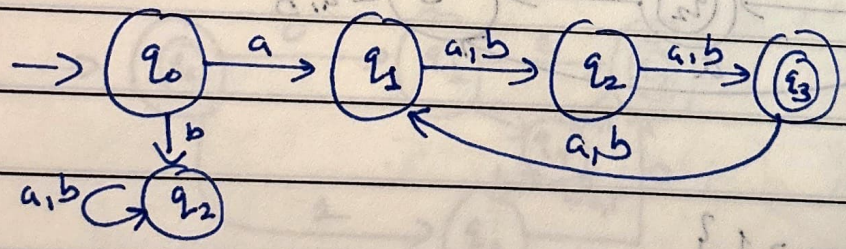
$L = \{w \mid w \in \Sigma^*, \Sigma = \{a,b\}, |w_a| \bmod 4 = 2\}$



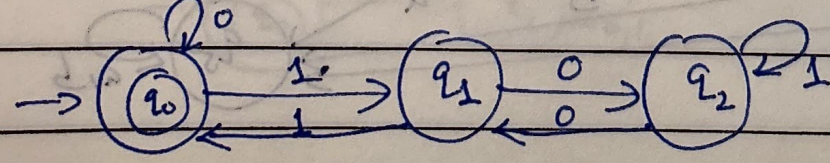
Design a DFA, that accepts all strings over $\{a,b\}$ such the string must be accepted only if the substring 'ab' occurred even number of times.



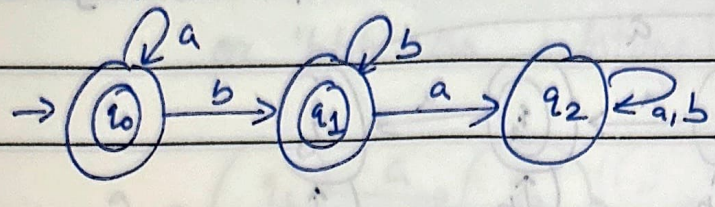
Design a DFA that accepts all strings over $\{a,b\}$ such that every string must start with 'a' & total length must be divisible by 3.



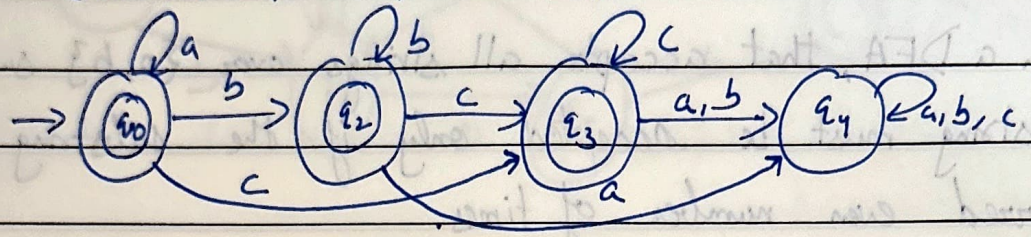
Design a DFA that accepts all the strings over $\{0,1\}$ such that the decimal equivalent of the binary string must be divisible by 3.



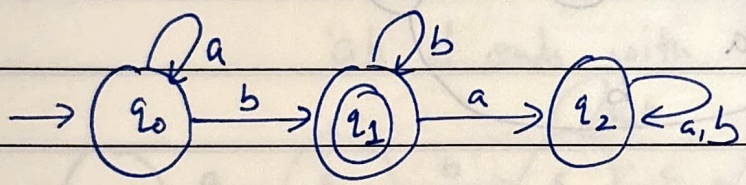
$L = \{a^n b^m \mid n \geq 0, m \geq 0\}$



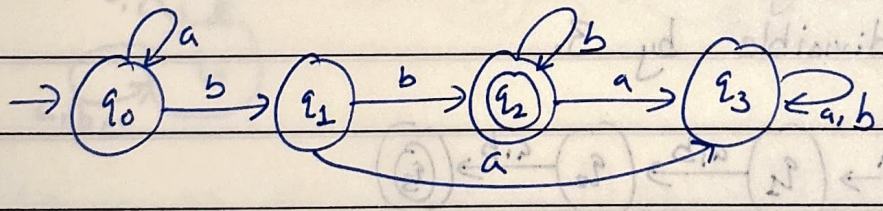
$L = \{a^n b^m c^q \mid n \geq 0, m \geq 0, q \geq 0\}$



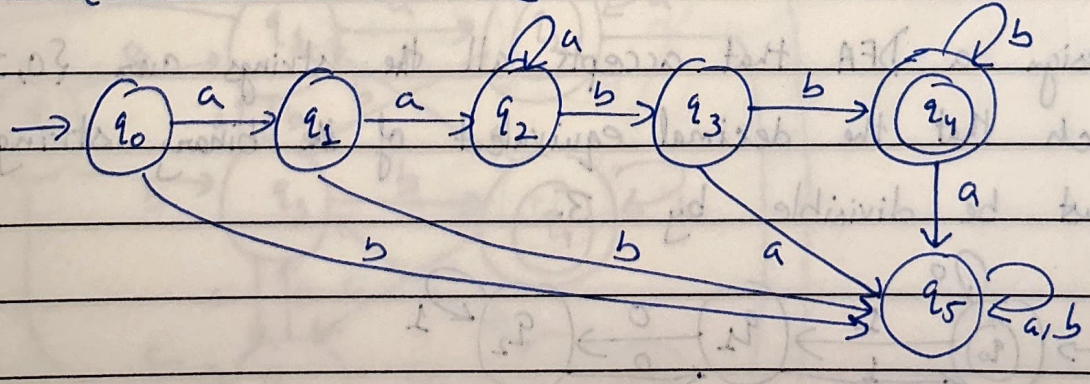
$L = \{a^n b^m \mid n \geq 0, m \geq 1\}$



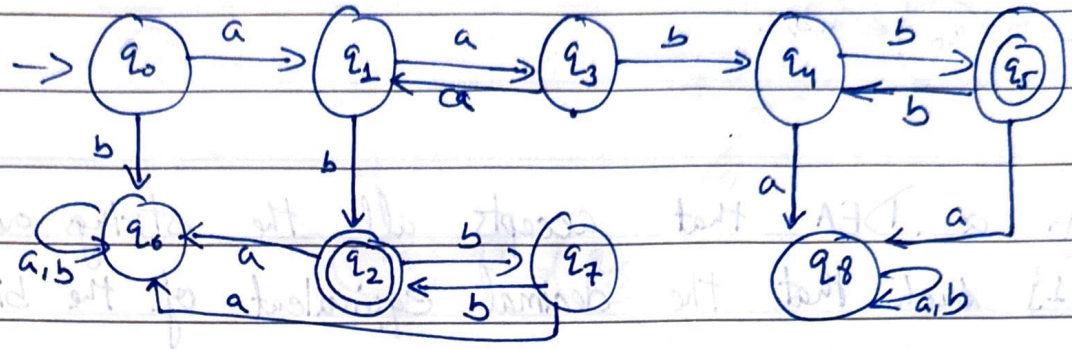
$L = \{a^n b^m \mid n \geq 0, m \geq 2\}$



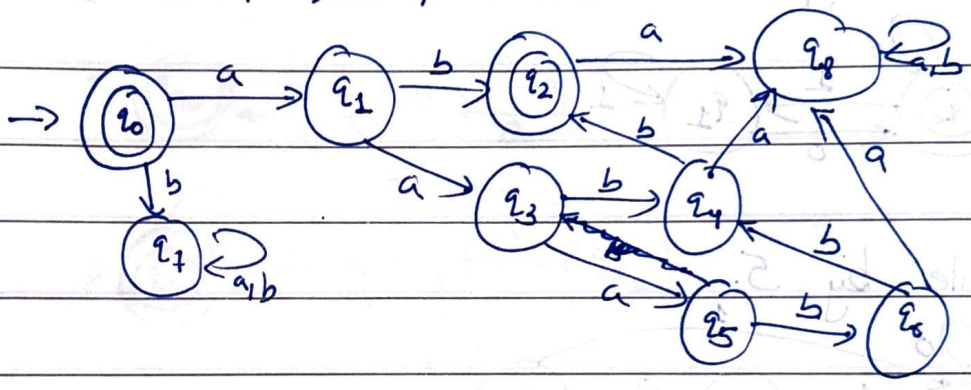
$L = \{a^n b^m \mid n \geq 2, m > 1\}$



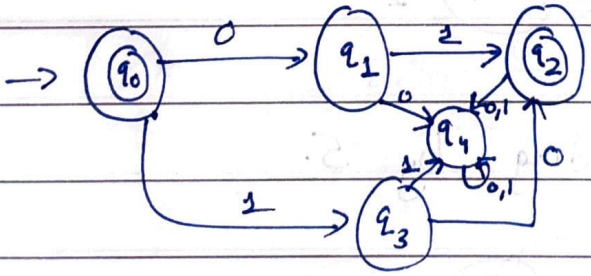
$L = \{a^n b^m \mid n, m \geq 1,\ n+m \text{ is even}\}$



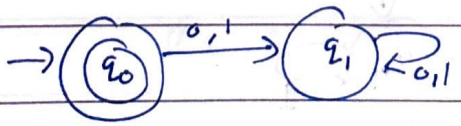
$L = \{a^n b^n \mid n \geq 0,\ n \leq 3\}$



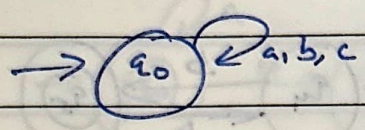
$L = \{\omega \mid \omega \in \Sigma^*,\ \Sigma = \{0,1\},\ |\omega_0| = |\omega_1|,\ |\omega| < 4\}$



$L = \{\omega \mid \omega \in \Sigma^*, \Sigma = \{0,1\},\ |\omega_0| = |\omega_1|,\ |\omega| < 2\}$

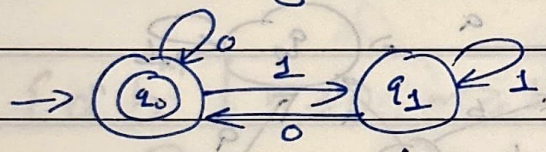


$L = \{\omega \mid \omega \in \Sigma^*,\ \Sigma = \{a, b, c\},$ 'ad' is a substring of $\omega\}$

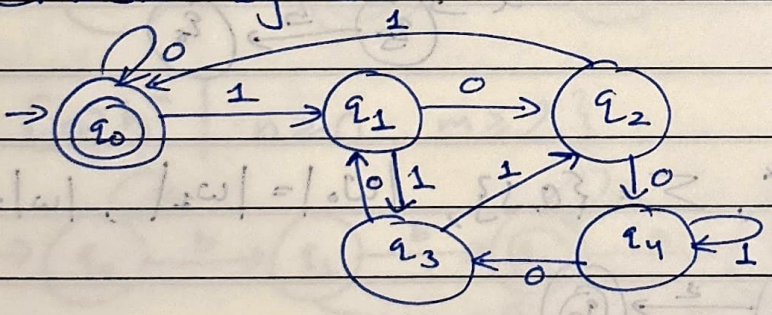


Design a DFA that accepts all the strings over $\{0, 1\}$ such that the decimal equivalent of the binary string must be

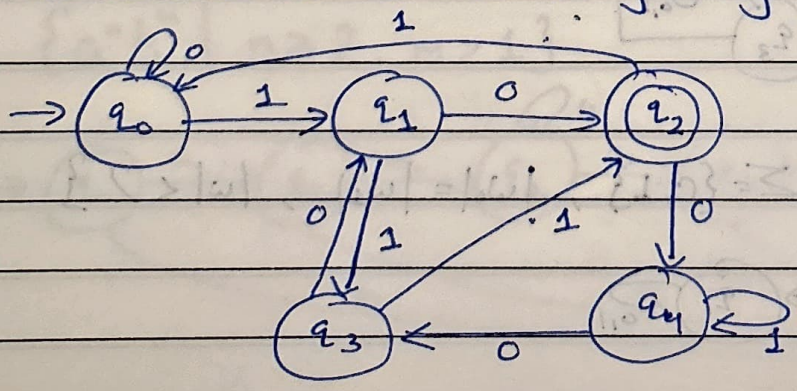
a) divisible by 2.



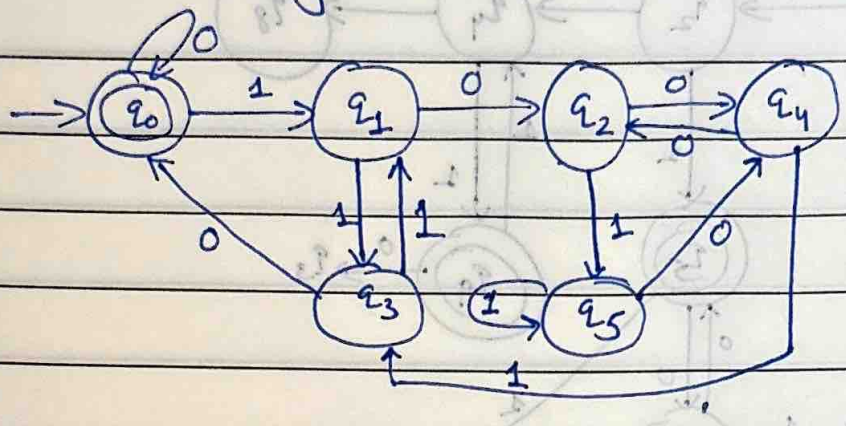
b) divisible by 5.



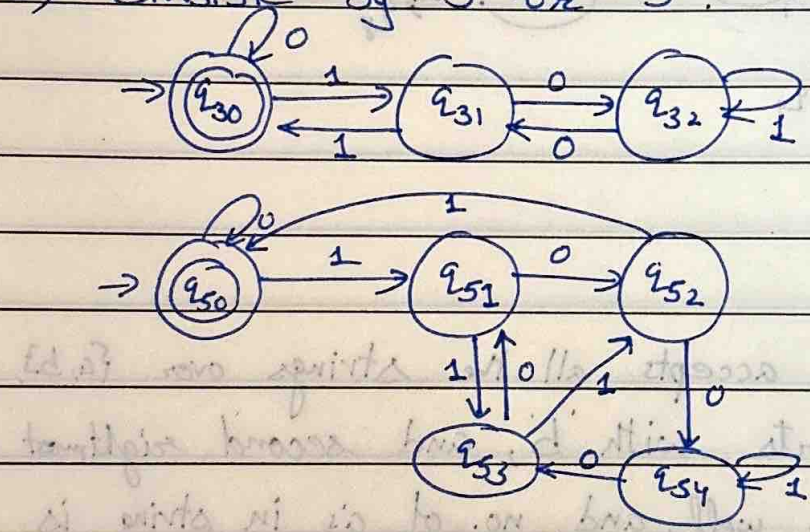
c) Remainder 2 on dividing by 5.



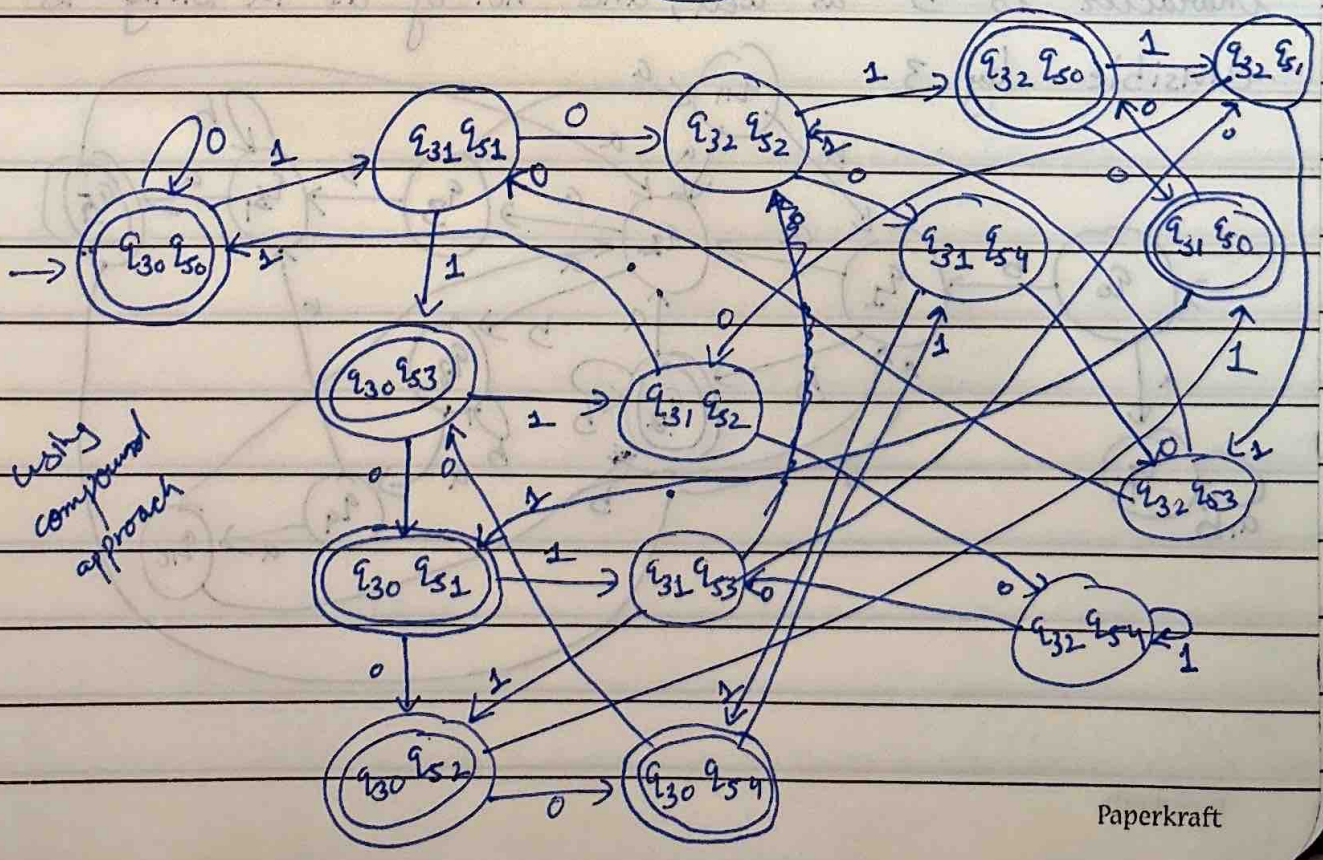
d) divisible by 2 & 3 both

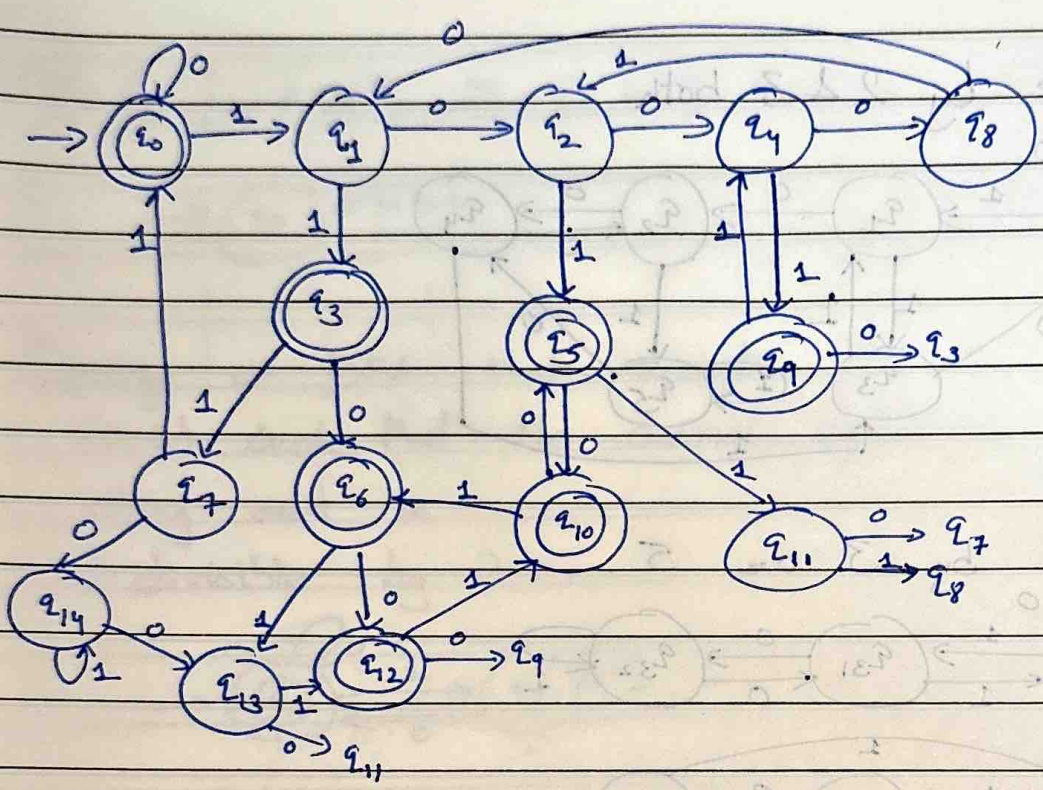


e) divisible by 3 or 5.



using compound approach





Design a DFA that accepts all the strings over {a, b}, such that it starts with 'b', and second rightmost character is 'b' as well, and no. of a's in string is divisible by 3.