Construct a **non-deterministic TM** that accepts the language:

$$L(M) = \{ww^R \mid w \in \{a, b\}^*\}$$
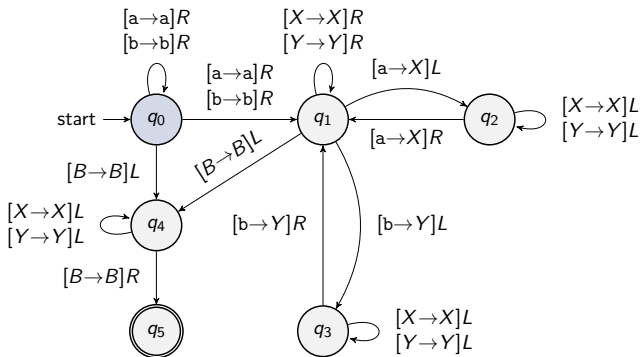
$\cdots$	B	a	b	b	a	B	$\cdots$

1: Find the middle in the input
2: Check if first and second half are reverse of each other

Construct a **non-deterministic TM** that accepts the language:

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	B	a	b	b	a	B	
$\cdots$							$\cdots$

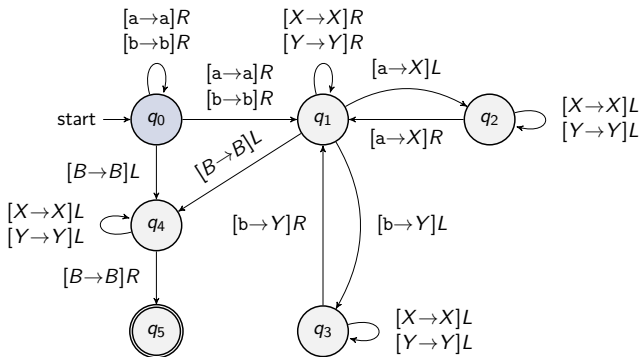

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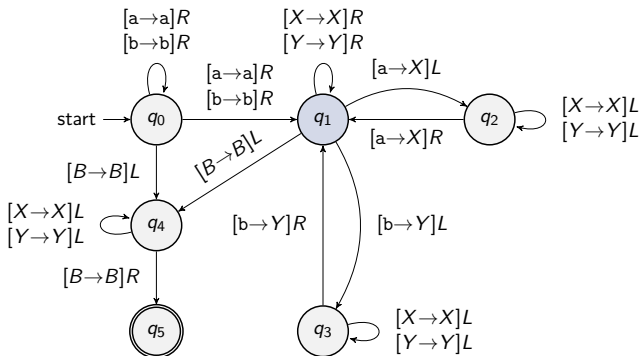| $\cdots$	B	a	b	b	a	B	$\cdots$

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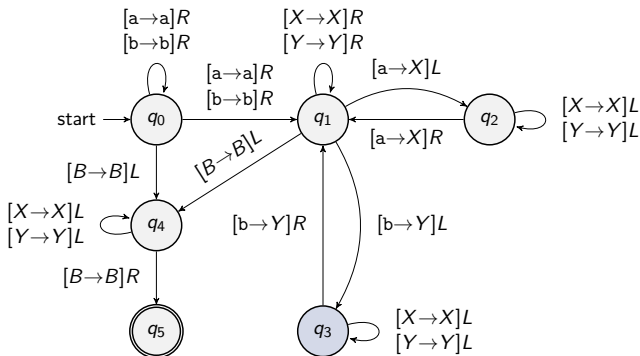|		B	a	b	b	a	B		
$\cdots$								$\cdots$	

Check if first and second half are reverse of each other.

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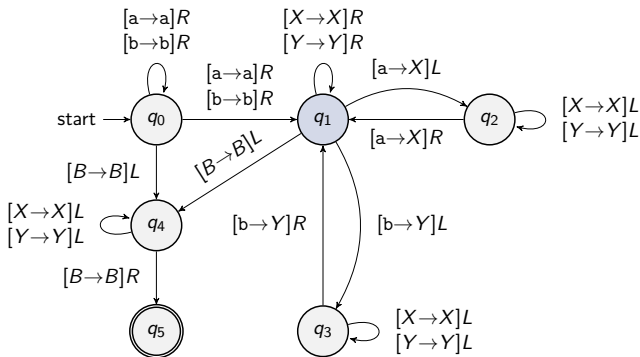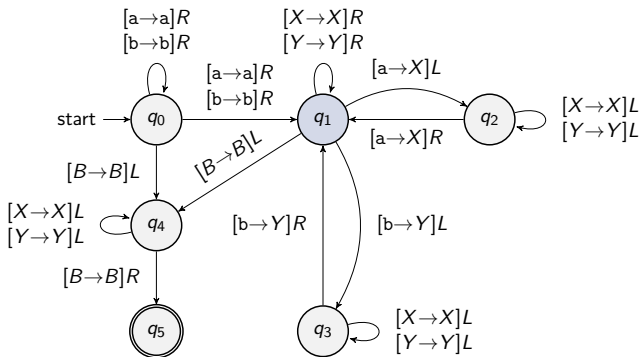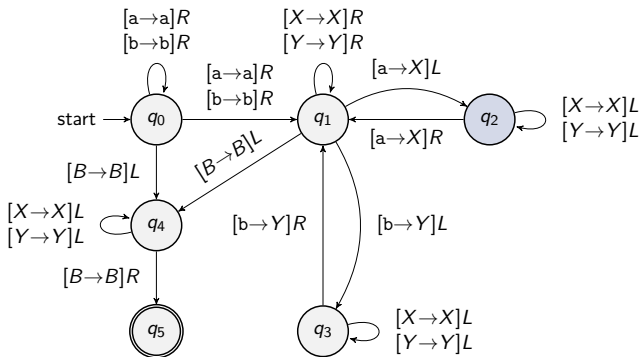
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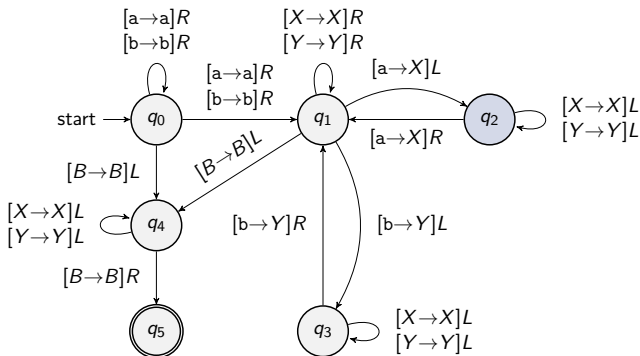
| $\cdots$ | B | a | b | Y | a | B | $\cdots$ |

Construct a **non-deterministic TM** that accepts the language:

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	B	a	Y	Y	a	B	
$\cdots$							$\cdots$

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$\cdots$	B	a	Y	Y	a	B	$\cdots$

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$$L(M) = \{ww^R \mid w \in \{\mathtt{a}, \mathtt{b}\}^*\}$$

$\cdots$	B	a	Y	Y	X	B	$\cdots$

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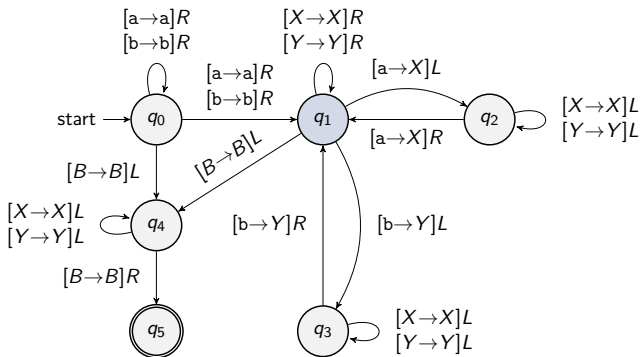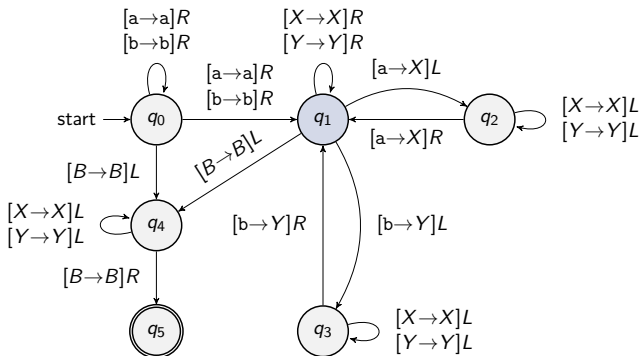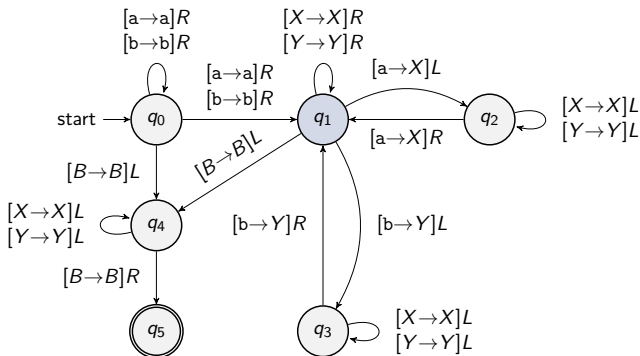|	B	a	Y	Y	X	B	
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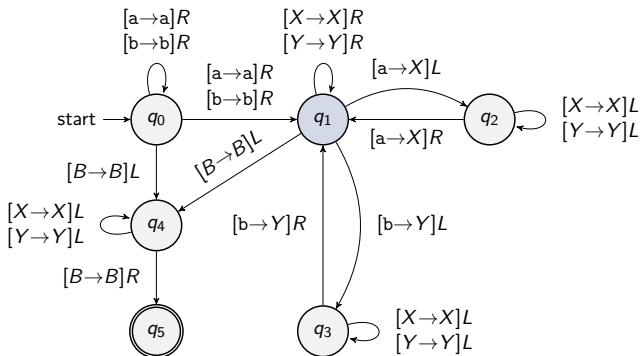| $\cdots$	B	X	Y	Y	X	B	$\cdots$

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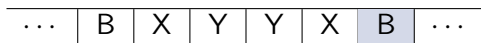|	$\cdots$	B	X	Y	Y	X	B	$\cdots$

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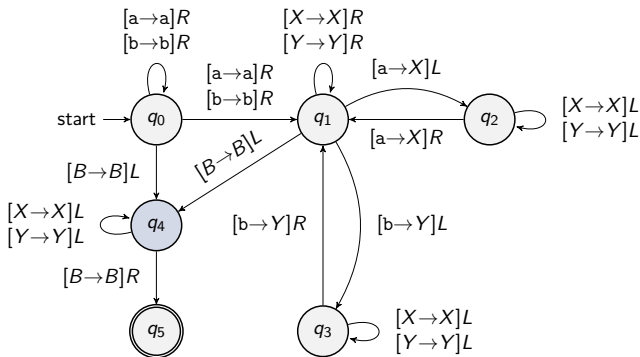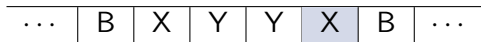
$$L(M) = \{ ww^R \mid w \in \{a, b\}^* \}$$

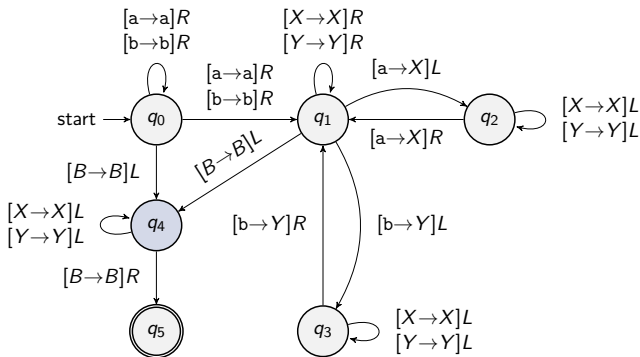|						
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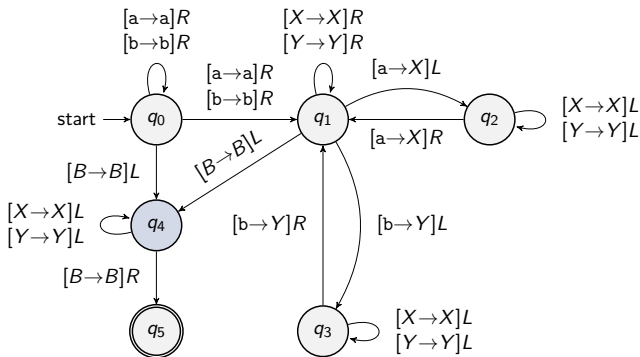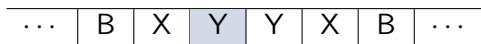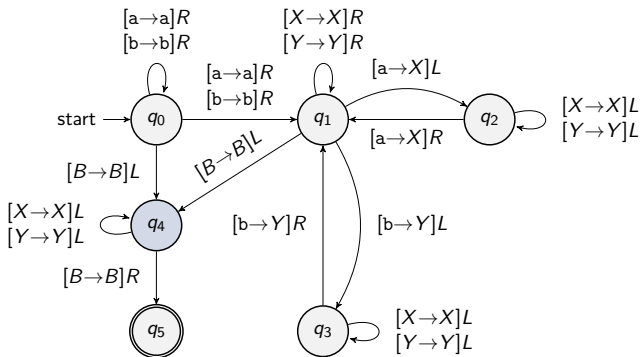Construct a **non-deterministic TM** that accepts the language:

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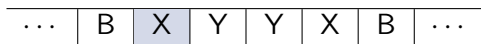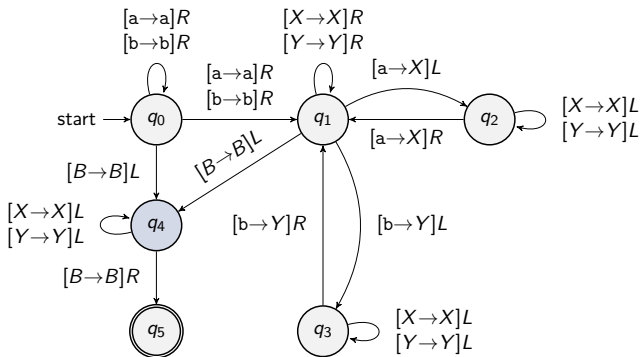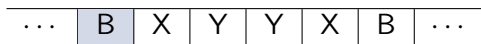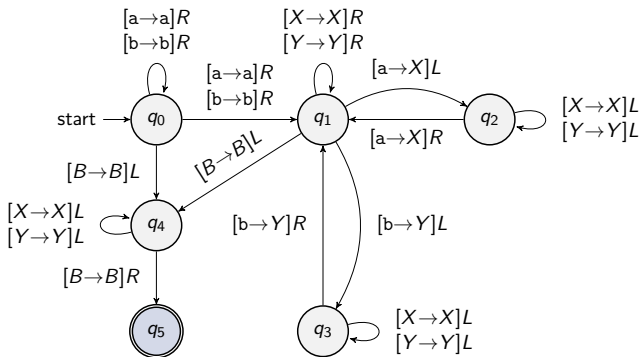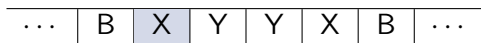$$L(M) = \{ww^R \mid w \in \{\mathtt{a}, \mathtt{b}\}^*\}$$

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	B	X	Y	Y	X	B	
$\cdots$							$\cdots$

Accept!!