**Part 1:**

The code output is "The element in position 5 is: undefined" five times.

This is because var is function-scoped, and by the time the setTimeout callback runs after 5 seconds, the loop has completed, and i equals 5. Since array[5] is out of bounds, it's result is undefined. If we use let instead of var for i, we capture the current value of i for each iteration because it's block-scoped.