**Q2.** Explain the output of the above-given code and explain why?

```
for (var i = 0; i < 5; i++) {

  setTimeout(() => console.log(i), 100)

}
```

Answer 2: Output for the above program is going to be 5 5 5 5 5 in new lines. This happened since for loop works in a synchronous way however the setTimeOut function on the other hand works in an asynchronous way. In every iteration, the javascript engine will create a new context corresponding to the setTimeOut function and will place that context in the call stack. The setTimeout() executes and will create a timer component, when the timer expires, the callback function that was passed in the setTimeOut() is placed to the callback queue.

The Event Loop has a habit of monitoring both the call stack and the callback queue, it will remove the callback function from the callback queue and will place it to the call stack when the call stack is empty.

Once the callback function is on the call stack it is executed. This is the reason why I think we will see five 5's in new lines.