1. We must check if the lid level adjusts by half of the water that’s poured on the kettle. We can check that by dividing the amount of water poured “500ml” by 2 giving us an average of “250ml” and by adding both “500ml + 250ml” should give us “750ml” which is a mark where the lid should be sitting at. Other test scenarios would be:

* 100ml /2 = 50ml then our lid should be sitting at 150ml mark
* 200ml /2 = 100ml then our lid should be sitting at 300ml mark
* 300ml /2 = 150ml then our lid should be sitting at 450ml mark
* 400ml /2 = 200ml then our lid should be sitting at 600ml mark
* 500ml /2 = 250ml then our lid should be sitting at 750ml mark

And note that the above-mentioned test scenarios are positive tests, meaning that we are expecting the kettle lid to behave in that manner based on the amount of water poured in, and if the expected behavior is not met the test case should fail.

1. We must check if the kettle turns on only when the water level >= 250ml. we can check that by starting with negative tests i.e., pouring water that is below the expected range like 200ml/150ml

Then we need to do positive tests by pouring water that’s greater/equal the expected level i.e., 250ml and above.

1. We must check if the kettle switches off when it reaches a boiling point of 110 degrees Celsius, and air is released through the lid. For checking the water temperature, we can use tools like thermometer to verify if the boiling point is 110 degrees Celsius.
2. We must check that the lid valve remains closed when the water temperature reaches 95 degrees Celsius to maintain a temperature above 90 degrees for up to 45 minutes.

We can do that by placing the thermometer to check the water temperature, when the temperature reaches 95 degrees then we can examine if the lid valve remains closed and we can take temperature readings for the next 45 minutes to see if the temperature remains above 90 degrees Celsius.