

1.4.2_5 Test implementation

During test implementation and execution, we take the test conditions and make them into test cases and testware and set up the test environment. This means that, having put together a high-level design for our tests, we now start to build them. We transform our test conditions into test cases and procedures, other testware such as scripts for automation. We also need to set up an environment where we will run the tests and build our test data. Setting up environments and data often involves significant time and effort, so you should plan and monitor this work carefully.

Test implementation and execution have the following major tasks, in approximately the following order:

- **Implementation:** - Develop and prioritize our test cases, using the techniques you'll see in Chapter 4, and create test data for those tests. We will also write instructions for carrying out the tests (test procedures). For the driving examiner this might mean changing the test condition 'junctions' to 'take the route down Mayfield Road to the junction with Summer Road and ask the driver to turn left into Summer Road and then right into Green Road, expecting that the driver checks mirrors, signals and maneuvers correctly, while remaining aware of other road users.' We may need to automate some tests using test harnesses and automated test scripts. We'll talk about automation more in Chapter 6.
- Create test suites from the test cases for efficient test execution. A test suite is a logical collection of test cases which naturally work together. Test suites often share data and a common high-level set of objectives. We'll also set up a test execution schedule.
- Implement and verify the environment. We make sure the test environment has been set up correctly, possibly even running specific tests on it.