**Section 1: Test Setup**

**Test Description**

The ‘eMediPal’ system is a web-based medical check-up system designed for easy use by patients from home. The basic functionality allows users to receive medication and treatment from their regular doctor over the internet. The key features of the system are keeping track of patient medical information and allowing that information to be accessed by medical staff.

A patient’s information is centrally stored on the system and is accessible by any qualified healthcare professional registered with the system. Initially the patient’s doctor has to enter the patient’s details into the system to register them. This part of the system is developed in the prototype and a series of tests were performed to ensure the accuracy and performance of the system.

**Test environment**

The prototype is written in HTML using basic client-side scripting. Because the prototype is written in HTML the test setup procedure simply involves opening the HTML source document via a web browser. Doctor’s are only required to enter the patient’s personal details (refer to ‘Input domain definition’ below). Other personalised medical details such as the patient’s Medicare card number, current doctor, age, pre-existing conditions and medication are gathered by the system when the patient is successfully registered. This is tabulated by the system cross-referencing the patient’s details with the Medicare database and is outside the scope of this demonstration.

As ‘eMediPal’ is a web-based interface for the system, tests can be performed within a web page using any stock web browser. Basic JavaScript support is required to perform this test.

**The prototype**

The web page is a mock-up of the main user interface. The idea is the interface represents a patient and doctor version of the webpage. Common user information is stored in the ‘Personal Details’ side-bar on the upper-left hand portion of the page. Specific treatment information relative to the user (e.g. doctor id or patient’s medication requirements) is stored in the ‘Medical Details’ sidebar at the bottom-left. Depending upon whether the user is logged in as a patient or a doctor the relevant information will be populated into those fields. For a patient when their details are registered by their doctor they can immediately use their email and password sent to them to login.

Another difference between the patient and doctor version of the homepage is ‘Forms’. Doctor’s have different kinds of forms for signing up patients (patient registration [this example], prescriptions, hospital bookings etc.). Patients can also have forms to submit for change of medication, or to attach different family members to have access to their homepage, or if they are moving and want to put in a query to request a new doctor or clinic that is closer.

Content tabs also provide doctors and patients with quick access to messages from patients/doctors (depending upon the user), other staff members (doctors), clinics/hospitals (patients/doctors) or health regulation updates from the government (patients/doctors).

**Test Procedure**

1. Insert the CD which contains the files of the website to a computer with a compatible web browser (ex: Internet Explorer, Mozilla Firefox, Google Chrome, etc.)
2. Load ‘homepage.html’ file.
3. Go to the ‘Forms’ tab in the web page to get the ‘Patient Medical Form’.
4. Fill out all the required fields in the form with patient details.
5. Click on ‘Submit’ button to submit entered patient details into the system.

**Input domain definition**

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| **Field Name** | **Valid Inputs** |
| First name | Combination of upper/lower case letters (excludes numbers and special characters) |
| Last name | Combination of upper/lower case letters (excludes numbers and special characters) |
| Email | [example@swin.com](mailto:example@swin.comc)   * a - at least one character * b - at least one character * c - at least two characters |
| Sex | - Male  - Female  (one of the two radio button options) |
| Address | Any combination of characters and numbers |
| City | Any combination of characters |
| State | -ACT  -NSW  -NT  -QLD  -SA  -TAS  -VIC  -WA  (one of the options in the dropdown box) |

**Section 2: Test Design and Results**

Test data for the testing process was checking data validity and the system’s ability to warn the user when an input was missing or invalid.

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| Test 1 - name | |
| **Black box testing** | **Equivalence partition** |
| **Testing objective** | Whether the system returns an error for an empty text field when the form is submit |
| **Partition** | Character data in the text field |
| **Input** | “James” |
| **Expected output** | None – valid entry |
| **Test date** | 01-11-12 |

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| --- | --- |
| Test 2 - email | |
| **Black box testing** | **Equivalence partition** |
| **Testing objective** | Test email format includes ‘@’ and ‘.’ characters |
| **Partition** | xxxxx@yyy.com |
| **TEST INPUT: 1** | 0001000@student.swin.edu.au |
| **Expected output** | None – valid entry |
| **Test date** | 01-11-12 |
| **TEST INPUT: 2** | 0001000student.com |
| **Expected output** | Alert() – missing ‘@’ |
| **Test date** | 01-11-12 |
| **TEST INPUT: 3** | 0001000@student |
| **Expected output** | Alert() – missing ‘.’, and at least 2 following characters |
| **Test date** | 01-11-12 |

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| Test 3 – address | |
| **Black box testing** | **Equivalence partition** |
| **Testing objective** | Test text input in the field |
| **Partition** | ‘10 Example Street’ |
| **TEST INPUT: 1** | Contains numbers and/or text |
| **Expected output** | None – valid entry |
| **Test date** | 01-11-12 |
| **TEST INPUT: 2** | “ ” |
| **Expected output** | Alert() – field contains no data |
| **Test date** | 01-11-12 |

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| Test 4 – city | |
| **Black box testing** | **Equivalence partition** |
| **Testing objective** | Test text input in the field |
| **Partition** | Glenferrie |
| **TEST INPUT: 1** | Contains text |
| Expected output | None – valid entry |
| Test date | 01-11-12 |
| **TEST INPUT: 2** | “ ” |
| Expected output | Alert() – field contains no data |
| Test date | 01-11-12 |

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| Test 4 – state | |
| **Black box testing** | **Equivalence partition** |
| **Testing objective** | Test option selected |
| **Partition** | ACT, NSW, NT, QLD, SA, TAS, VIC, WA |
| **TEST INPUT: 1** | Select one of the list options from the drop down menu |
| Expected output | None – valid entry |
| Test date | 01-11-12 |
| **TEST INPUT: 2** | An option from the drop down list is not selected |
| Expected output | Alert() – no option has been selected |
| Test date | 01-11-12 |