

Test Case ID	Software Feature	Steps	Expected	Actual	Passed / Failed
1	Successful Admin Login	<ol style="list-style-type: none"> 1. Run the program file main.py 2. Look up for the text file Data/admin.txt for login credentials 3. Enter the username from the file. Default is admin 4. Enter the password. Default is 123 	<p>Hospital Management System App starts successfully and then asks for the username . After user enters the username , the program asks for the password . If the credentials are correct , then the user menu is displayed.</p>	<pre>Welcome to Hospital Management System Please login first to continue... ----- Login Enter the username: admin Enter the password: 123 Successfully Logged in as : admin Choose the operation: 1- Register/view/update/delete doctor 2- Admit/View/Discharge Patients 3- View discharged patient 4- Assign doctor to a patient 5- Reallocate Doctor to Patient 6- View Management Report 7- Update admin details 8- View Grouped Patient's By Family 9- Make an appointment 10- Quit Option: █</pre>	Passed

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2	Failed Admin Login (Incorrect Password)	<ol style="list-style-type: none"> 1. Run the program file main.py 2. At the prompt "Enter the username: ", enter "admin". 3. At the prompt "Enter the password: ", enter "wrongpass". 	<p>The program raises an exception and displays "incorrect username or password". It loops back to prompt for username and password again.</p>	<pre>-- Welcome to Hospital Management System Please login first to continue... -----Login----- Enter the username: admin Enter the password: wrongpass incorrect username or password -----Login----- Enter the username: </pre>	Passed

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3	Register a New Doctor	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "1". At the doctor management menu, enter "1" for Register. At "Enter the doctor's first name: ", enter "Test". At "Enter the doctor surname: ", enter "Doctor". At "Enter the doctor speciality: ", enter "Test Specialty". 	The program displays "Doctor registered." and adds the new doctor to the list (verifiable by viewing doctors later). The doctor.txt file is updated with the new entry.	<pre> Choose the operation: 1- Register/view/update/delete doctor 2- Admit/View/Discharge Patients 3- View discharged patient 4- Assign doctor to a patient 5- Reallocate Doctor to Patient 6- View Management Report 7- Update admin details 8- View Grouped Patient's By Family 9- Make an appointment 10- Quit Option: 1 -----Doctor Management----- Choose the operation: 1 - Register 2 - View 3 - Update 4 - Delete Input: 1 -----Register----- Enter the doctor's details: Enter the doctor's first name : Test Enter the doctor surname : Doctor Enter the doctor speciality : Test Speciality Doctor registered. </pre>	Passed

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4	Register a new Doctor with empty values	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "1". At the doctor management menu, enter "1" for Register. At "Enter the doctor's first name: ", enter "". At "Enter the doctor surname: ", enter "". At "Enter the doctor speciality: ", enter "Test Speciality". At the main menu prompt "Option: ", enter "1". At the doctor management menu, enter "2" to view doctor's data. 	<p>The program should print an error message , "Invalid Input! Input field cannot be empty !" and then re-display the menu options.</p> <p>There should be no doctor registered with no names.</p>	<pre>Option: 1 -----Doctor Management----- Choose the operation: 1 - Register 2 - View 3 - Update 4 - Delete Input: 1 -----Register----- Enter the doctor's details: Enter the doctor's first name : Enter the doctor surname : Enter the doctor speciality : Test Speciality Doctor registered.</pre> <pre>Option: 1 -----Doctor Management----- Choose the operation: 1 - Register 2 - View 3 - Update 4 - Delete Input: 2 -----List of Doctors----- ID Full name Speciality 1 John Smith General Practitioner 2 Aisha Patel Internal Medicine 3 Ahmed Khan Neurology 4 Priya Sharma Endocrinology 5 Robert Clark Psychiatry 6 Laura Robertson Gynecology 7 Michael Adams General Practitioner 8 Sarah Collins Internal Medicine 9 James Patel Cardiology 10 Rebecca Khan Dermatology 11 David Wilson Orthopedics 12 Emma Roberts Pediatrics 13 Thomas Green Endocrinology 14 Test Doctor Test Speciality 15 Test Speciality</pre>	Failed

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5	View All Doctors	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "1". At the doctor management menu, enter "2" for View. 	<p>All the doctor's data will be loaded from doctor.txt file.</p> <p>Then the program displays list of all doctors in the format "ID Full Name Speciality", showing all loaded doctors from doctor.txt. Also the Test Doctor will be shown in the list as it was recently registered.</p>	<pre> Option: 1 -----Doctor Management----- Choose the operation: 1 - Register 2 - View 3 - Update 4 - Delete Input: 2 -----List of Doctors----- ID Full name Speciality 1 John Smith General Practitioner 2 Aisha Patel Internal Medicine 3 Ahmed Khan Neurology 4 Priya Sharma Endocrinology 5 Robert Clark Psychiatry 6 Laura Robertson Gynecology 7 Michael Adams General Practitioner 8 Sarah Collins Internal Medicine 9 James Patel Cardiology 10 Rebecca Khan Dermatology 11 David Wilson Orthopedics 12 Emma Roberts Pediatrics 13 Thomas Green Endocrinology 14 Test Doctor Test Speciality </pre>	Passed

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6	Admit a New Patient	<ol style="list-style-type: none"> 1. Successfully log in as admin (follow Test Case 1). 2. At the main menu prompt "Option: ", enter "2". 3. At the patient management submenu, enter "1" for Admit new Patient. 4. Enter first name: "Furi", surname: "Lama", age: "18", mobile: "1234567890", postcode: "44600". 5. For the prompt "Enter Symptoms." , enter "Fever" then press Enter Key , then enter "Cough" then press Enter Key two times. 	<p>The program displays "Furi Lama added successfully." and adds the patient to patient.txt file.</p>	<pre>Option: 2 1. Admit new Patient 2. View Patients 3. Discharge Patient Enter the operation : 1 ----- Admit Patient ----- Enter Patient's Details Enter patient's first name: Furi Enter patient's surname: Lama Enter the patient's age: 18 Enter the patient's mobile number: 1234567890 Enter the patient's address post code: 44600 Enter symptoms (one per line, empty line and enter Symptom: Fever Symptom: Cough Symptom: Furi Lama added successfully</pre>	Passed

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7	View All Patients	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "2". At the patient management submenu, enter "2" for View Patients. 	<p>All patients data stored in patient.txt will be displayed by program in a table with columns: ID, Full Name, Doctor's Full Name, Age, Mobile, Postcode, Symptoms.</p>	<table border="1"> <thead> <tr> <th>ID</th> <th>Full Name</th> <th>Doctor's Full Name</th> <th>Age</th> <th>Mobile</th> <th>Postcode</th> <th>Symptoms</th> </tr> </thead> <tbody> <tr><td>1</td><td>Joe Brown</td><td>Michael Adams</td><td>32</td><td>447900001111</td><td>SW1A 1AA</td><td>Fever, Cough</td></tr> <tr><td>2</td><td>Emily Brown</td><td>Michael Adams</td><td>27</td><td>447900001112</td><td>SW1A 1AA</td><td>Fever, Sore Throat</td></tr> <tr><td>3</td><td>Daniel Brown</td><td>Michael Adams</td><td>54</td><td>447900001113</td><td>SW1A 1AA</td><td>Chest Pain, Shortness of Breath</td></tr> <tr><td>4</td><td>Liam Smith</td><td>Sarah Collins</td><td>41</td><td>447900002111</td><td>EC1A 1BB</td><td>Back Pain</td></tr> <tr><td>5</td><td>Olivia Smith</td><td>Sarah Collins</td><td>38</td><td>447900002112</td><td>EC1A 1BB</td><td>Headache</td></tr> <tr><td>6</td><td>Ava Wilson</td><td>James Patel</td><td>35</td><td>447900003111</td><td>LS1 4AP</td><td>Fatigue, Nausea</td></tr> <tr><td>7</td><td>Ethan Wilson</td><td>James Patel</td><td>37</td><td>447900003112</td><td>LS1 4AP</td><td>High Blood Pressure</td></tr> <tr><td>8</td><td>Furi Lama</td><td>None</td><td>18</td><td>1234567890</td><td>44600</td><td>Fever, Cough</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>ID</th> <th>Full Name</th> <th>Doctor's Full Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>Joe Brown</td><td>Michael Adams</td></tr> <tr><td>2</td><td>Emily Brown</td><td>Michael Adams</td></tr> <tr><td>3</td><td>Daniel Brown</td><td>Michael Adams</td></tr> <tr><td>4</td><td>Liam Smith</td><td>Sarah Collins</td></tr> <tr><td>5</td><td>Olivia Smith</td><td>Sarah Collins</td></tr> <tr><td>6</td><td>Ava Wilson</td><td>James Patel</td></tr> <tr><td>7</td><td>Ethan Wilson</td><td>James Patel</td></tr> <tr><td>8</td><td>Furi Lama</td><td>None</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Age</th> <th>Mobile</th> <th>Postcode</th> <th>Symptoms</th> </tr> </thead> <tbody> <tr><td>32</td><td>447900001111</td><td>SW1A 1AA</td><td>Fever, Cough</td></tr> <tr><td>27</td><td>447900001112</td><td>SW1A 1AA</td><td>Fever, Sore Throat</td></tr> <tr><td>54</td><td>447900001113</td><td>SW1A 1AA</td><td>Chest Pain, Shortness of Breath</td></tr> <tr><td>41</td><td>447900002111</td><td>EC1A 1BB</td><td>Back Pain</td></tr> <tr><td>38</td><td>447900002112</td><td>EC1A 1BB</td><td>Headache</td></tr> <tr><td>35</td><td>447900003111</td><td>LS1 4AP</td><td>Fatigue, Nausea</td></tr> <tr><td>37</td><td>447900003112</td><td>LS1 4AP</td><td>High Blood Pressure</td></tr> <tr><td>18</td><td>1234567890</td><td>44600</td><td>Fever, Cough</td></tr> </tbody> </table> <p>Same screenshot but different crop for readability : top one is full screenshot</p>	ID	Full Name	Doctor's Full Name	Age	Mobile	Postcode	Symptoms	1	Joe Brown	Michael Adams	32	447900001111	SW1A 1AA	Fever, Cough	2	Emily Brown	Michael Adams	27	447900001112	SW1A 1AA	Fever, Sore Throat	3	Daniel Brown	Michael Adams	54	447900001113	SW1A 1AA	Chest Pain, Shortness of Breath	4	Liam Smith	Sarah Collins	41	447900002111	EC1A 1BB	Back Pain	5	Olivia Smith	Sarah Collins	38	447900002112	EC1A 1BB	Headache	6	Ava Wilson	James Patel	35	447900003111	LS1 4AP	Fatigue, Nausea	7	Ethan Wilson	James Patel	37	447900003112	LS1 4AP	High Blood Pressure	8	Furi Lama	None	18	1234567890	44600	Fever, Cough	ID	Full Name	Doctor's Full Name	1	Joe Brown	Michael Adams	2	Emily Brown	Michael Adams	3	Daniel Brown	Michael Adams	4	Liam Smith	Sarah Collins	5	Olivia Smith	Sarah Collins	6	Ava Wilson	James Patel	7	Ethan Wilson	James Patel	8	Furi Lama	None	Age	Mobile	Postcode	Symptoms	32	447900001111	SW1A 1AA	Fever, Cough	27	447900001112	SW1A 1AA	Fever, Sore Throat	54	447900001113	SW1A 1AA	Chest Pain, Shortness of Breath	41	447900002111	EC1A 1BB	Back Pain	38	447900002112	EC1A 1BB	Headache	35	447900003111	LS1 4AP	Fatigue, Nausea	37	447900003112	LS1 4AP	High Blood Pressure	18	1234567890	44600	Fever, Cough	Passed
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8	Discharge a Patient	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At main menu prompt "Option: ", enter "2". At patient management submenu, enter "3" to Discharge Patient. View patients (automatically shown), then at "Do you want to discharge a patient(Y/N):", enter "Y". Enter patient ID to discharge (e.g., "1"). Then the program asks for "Do you want to discharge a patient(Y/N):", enter "N" to exit At the main menu prompt "Option: ", enter "3" to view discharged patients. 	<p>The patient is removed from patients list and <i>patient.txt</i>, added to <i>discharged_patient.txt</i>, and message "Joe Brown was discharged." is shown.</p> <p>Joe Brown should be shown in <i>discharged_patient.txt</i> which can be confirmed by step 7 in test case 8 .</p>	<pre> Option: 2 1. Admit new Patient 2. View Patients 3. Discharge Patient Enter the operation : 3 Do you want to discharge a patient(Y/N):Y -----View Patients----- ID Full Name Doctor's Full Name 1 Joe Brown Michael Adams 2 Emily Brown Michael Adams 3 Daniel Brown Michael Adams 4 Liam Smith Sarah Collins 5 Olivia Smith Sarah Collins 6 Ava Wilson James Patel 7 Ethan Wilson James Patel 8 Furi Lama None -----Discharge Patient----- Please enter the patient ID: 1 Joe Brown was discharged Do you want to discharge a patient(Y/N):N Choose the operation: 1- Register/view/update/delete doctor 2- Admit/View/Discharge Patients 3- View discharged patient 4- Assign doctor to a patient 5- Relocate Doctor to Patient 6- View Management Report 7- Update admin details 8- View Grouped Patient's By Family 9- Make an appointment 10- Quit Option: 3 -----View Patients----- ID Full Name Doctor's Full Name 1 Leo Clark Emma Roberts 2 Oliver Thompson Rebecca Khan 3 Noah Smith Sarah Collins 4 Henry Taylor Thomas Green 5 Grace Hall John Smith 6 Joe Brown Michael Adams </pre>	Passed

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9	Assign Doctor to Patient	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "4". In the "Enter patient ID" prompt enter "7" which is recently admitted patient's ID with no doctor assigned. In the "Enter doctor ID" prompt enter "14" which is recently registered doctor's ID. 	<p>The program assigns the doctor to the patient, updates patient.txt (i.e. ID "7" patient's doctor name will be updated from "None" to "Test Doctor"), and displays "The patient is now assign to the doctor." in the terminal.</p>	<pre> Option: 4 -----Assign----- -----Patients----- ID Full Name 1 Emily Brown 2 Daniel Brown 3 Liam Smith 4 Olivia Smith 5 Ava Wilson 6 Ethan Wilson 7 Furi Lama Please enter the patient ID: 7 -----Doctors Select----- Select the doctor that fits these symptoms: Symptoms: 1. Fever 2. Cough -----Specialists----- ID Full Name Speciality 1 John Smith General Practitioner 2 Aisha Patel Internal Medicine 3 Ahmed Khan Neurology 4 Priya Sharma Endocrinology 5 Robert Clark Psychiatry 6 Laura Robertson Gynecology 7 Michael Adams General Practitioner 8 Sarah Collins Internal Medicine 9 James Patel Cardiology 10 Rebecca Khan Dermatology 11 David Wilson Orthopedics 12 Emma Roberts Pediatrics 13 Thomas Green Endocrinology 14 Test Doctor Test Speciality Please enter the doctor ID: 14 The patient is now assign to the doctor. </pre>	Passed

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10	Make an appointment	<ol style="list-style-type: none"> Successfully log in as admin (follow Test Case 1). At the main menu prompt "Option: ", enter "9". At "Doctor full name: ", enter "Test Doctor" At "Patient full name: ", enter "Furi Lama" At "Date (YYYY-MM-DD): ", enter "2026-02-20". At "Time (HH:MM): ", enter "14:00". At "Reason : ", enter "Follow-up". 	The program displays "Appointment saved." and appends the entry to appointment.txt.	<pre>Option: 9 Make new appointment (admin only) Doctor full name : Test Doctor Patient full name: Furi Lama Date (YYYY-MM-DD): 2026-02-20 Time (HH:MM) : 14:00 Reason (optional): Follow-up Appointment saved.</pre>	Passed