Test Case #	Requirement	Test description and Input Data	Expected result/output
1	Validate scheduling on a non-weekday.	**Test Description**: Ensure that appointments cannot be scheduled on weekends. **Input Data**: `Date: 12/7/2024 (Saturday)`, `Patient: John Doe`, `DOB: 12/13/1989`, `Doctor: John Harper`	Appointment scheduling fails with "Appointment date: 12/7/2024 is Saturday or Sunday.".
2	Validate scheduling on today's date or a date before today.	**Test Description**: Confirm that scheduling an appointment for today's date or before fails. **Input Data**: `Date: [Today's Date]`, `Patient: John Doe`, `DOB: 12/13/1989`, `Doctor: John Harper`	Appointment scheduling fails with "Appointment date: [Today's Date] is today or a date before today.".
3	Check response for scheduling past the six-month limit.	**Test Description**: Verify that the system does not allow appointments beyond the permitted range. **Input Data**: `Date: 6/30/2025`, `Patient: Jane Doe`, `NPI: 23`.	Appointment scheduling fails with "Appointment date: 6/30/2025 is not within six months."
6	Validate future (or today) DOB for a patient.	**Test Description**: Check that appointments with a future DOB or DOB today for a patient are rejected. **Input Data**: `Patient DOB: 12/25/2025`	Scheduling fails with "Patient dob: 2025-12-25 is today or a date after today.".
7	Validate duplicate appointment check.	**Test Description**: Confirm that scheduling fails if the patient already has an appointment at the same timeslot. **Input Data**: Schedule the same appointment for `John Doe` at `2/3/2025 10:00 AM` after one already exists.	Scheduling fails with "John Doe 12/13/1989 has an existing appointment at the same time slot."
8	Validate provider unavailability for specific slots.	**Test Description:** Ensure the system reports when a provider is unavailable for a given time slot. **Input Data:** Schedule an appointment for `John Doe`, `Date: 2/3/2025`, `Slot: 1`, `Provider: ANDREW PATEL`.	"[ANDREW PATEL ...] is not available at slot 1."
9	Validate unavailable service.	**Test Description**: Check that scheduling fails when an unavailable service is requested and there are no available technicians **Input Data**: `Date: 11/5/2024`, `Patient: John Doe`, `DOB: 12/13/1989`, `Service: MRI, Timeslot: 2`	Scheduling fails with "Cannot find an available technician at all locations for MRI at slot 2.".

10	Cancel existing appointment.	• **Test Description**: Verify that an existing appointment can be canceled successfully. • **Input Data**: `Date: 2/3/2025, Timeslot: 3, Patient: John Doe`	Cancellation succeeds and updates the schedule.
11	Cancel non-existent appointment.	• **Test Description**: Ensure that the system properly handles attempts to cancel non-existent appointments. • **Input Data**: `Date: 2/3/2025, Timeslot: 5, Patient: Duke Ellington`	Cancellation fails with "[Appointment data] - appointment does not exist.".
12	Reschedule appointment to a valid new slot.	• **Test Description**: Confirm that rescheduling an appointment to an available slot is successful. • **Input Data**: `Old Date: 2/3/2025, Old Timeslot: 3, New Timeslot: 4, Patient: April March`	Rescheduling succeeds.
13	Reschedule to an unavailable slot.	• **Test Description**: Ensure that rescheduling to an unavailable slot fails. • **Input Data**: `Old Date: 2/3/2025, Old Timeslot: 3, New Timeslot: 6, Patient: Kate Lindsey`	Rescheduling fails with "[Provider info] -] is not available at slot 3".
14	List all appointments by location.	• **Test Description**: Check that the system correctly lists appointments sorted by location. • **Input Data**: Command	Appointments are displayed, sorted by county name, date, and time.
15	Schedule a new appointment successfully.	• **Test Description**: Verify that an appointment can be scheduled without errors when valid data is provided. • **Input Data**: `Date: 10/30/2024, Time: 9:00 AM, Patient: Jane Doe, DOB: 5/1/1996, Provider: ANDREW PATEL`	"10/30/2024 9:00 AM Jane Doe 5/1/1996 [ANDREW PATEL 1/21/1989, BRIDGEWATER, Somerset 08807][FAMILY, #01] booked.
16	Successfully book an imaging appointment.	• **Test Description**: Ensure that an imaging appointment is successfully scheduled with a valid technician and service type. • **Input Data**: `Date: 2/3/2025, Time: 10:00 AM, Patient: Kate Lindsey, DOB: 7/15/2002, Service: XRAY, Technician: MONICA FOX`	"2/3/2025 10:00 AM Kate Lindsey 7/15/2002 [MONICA FOX 10/10/1995, BRIDGEWATER, Somerset 08807][rate: $130.00][XRAY] booked."

17	Successfully display billing statements by patient.	• **Test Description**: Ensure that the system generates and displays a billing statement ordered by a patient. • **Input Data**: Command	Billing statements ordered by patient with details including total due amounts are displayed in output area.
18	Display All Appointments	• **Test Description**: Verify that selecting the "Display All" tab shows all appointments currently in the system. • **Input Data**: Command	The table shows all appointments sorted by Date and Time, or displays "Schedule calendar is empty." if none are available.
19	Display Appointments Sorted by Patient	• **Test Description:** Verify that selecting the "Display By Patient" displays appointments sorted by patient. • **Input Data**: Command	The table shows appointments or displays "Schedule calendar is empty." if none are available.
20	Display Office Appointments	• **Test Description**: Verify that selecting the "Display Office Appointments" tab shows only those appointments categorized as office visits. • **Input Data**: Command	The table shows only office appointments, or displays "Schedule calendar is empty." if none are available
21	Display Imaging Appointments	• **Test Description**: Verify that selecting the "Display Imaging Appointments" tab shows only appointments for imaging services. • **Input Data**: Command.	The table shows only imaging appointments, or displays "No content in table" if none are available.
22.	Provider Credits	• **Test Description**: Checks if the system displays all providers and their credit amounts. • **Input Data**: Command	The output area displays a list of provider names and their credit amounts, sorted by Name and Amount.