

Master Test Plan

White Rose Interiors WhatsApp Chatbot

Group 1
University of the West Indies

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1 Introduction

This Master Test Plan (MTP) outlines strategy, resources, and procedures for testing the White Rose Interiors Chatbot. The system is a Node.js app using `whatsapp-web.js` and local JSON storage.

1.1 Objectives

- Verify all functional requirements (UI, pricing, invoicing, dashboard, status, reminders, manage orders).
- Validate file-based storage integrity across updates (`orders.json`, `cleaning_supply.json`, `reminders.json`).
- Ensure chatbot/dash respond within a few seconds under normal load and recover from invalid inputs.

2 Test Environment

Component	Specification
Hardware	Windows 10/11 or Server 2019+
Runtime	Node.js v18+
Storage	Local File System (<code>orders.json</code> , <code>cleaning_supply.json</code> , <code>reminders.json</code>)
Mobile	1 Android + 1 iOS for WhatsApp tests
Browser	Chrome/Edge for Admin Dashboard

Table 1: Test Environment Specifications

3 Entry & Exit Criteria

3.1 Entry

- ☐ `server.js` starts without errors; WhatsApp client QR scanned and "Ready".
- ☐ Baseline data present in `orders.json`, `cleaning_supply.json`.
- ☐ Admin token obtainable via `/api/login`.

3.2 Exit

- ☐ 100% High-priority tests passed; no open High/Critical defects.
- ☐ PDFs generate on host FS; reminder logs written to `reminders.json`.

4 Test Case Execution Log

4.1 Requirement 1: User Interface & Flows

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
UI-01	Main Menu	1) Send "Hi".	Shows: Goods/Services, Manage Orders, Get Order Status, Contact Support, FAQ.			
UI-02	Invalid Input	1) From menu, send "99".	Bot prompts to pick a listed option.			
UI-03	Cleaning Services	1) Select Goods/Services □ Cleaning Services. 2) Send "Need sofa cleaning".	Bot replies that Cleaning Services are currently unavailable, notes the request, and state resets.			
UI-04	Cleaning Supplies	1) Select Goods/Services □ Cleaning Supplies. 2) Choose a category from cleaning_supply.json poll.	Bot prompts "Please leave a message describing what you need," then confirms receipt.			

4.2 Requirement 2: Price Calculator

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
PC-01	Blind Quote	1) Select product. 2) Enter valid width/height.	Price matches grid + install; PDF estimate sent.			
PC-02	Invalid Dim	1) Enter "-5".	Bot rejects, asks for valid number.			
PC-03	Email Estimate	1) Complete quote. 2) Choose "Email me".	Email prompted, PDF emailed (or graceful failure message).			

4.3 Requirement 3: Invoicing

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
INV-01	Confirm Order	1) From estimate, choose "Confirm Order".	New order saved in orders.json with correct status (e.g., PENDING DELIVERY).			
INV-02	Email Failure	1) Request email when SMTP unavailable.	Bot says "Could not send email...", logs error.			

4.4 Requirement 4: Admin Dashboard

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
AD-01	Auth Negative (All Routes)	1) Access /api/orders, /api/report, /api/status without token.	All protected endpoints return 401 Unauthorized.			
AD-02	Update Order	1) Change status to READY.	Persisted to orders.json; notify ready sends WA msg.			
AD-03	Reminder UI	1) Edit reminder time in table.	Picker stays open; saved time matches selection.			
AD-04	Filters/Report	1) Apply text/status/date filters. 2) Download report.	Filters apply; CSV downloads successfully.			

4.5 Requirement 5: Status Updates

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
ST-01	Status Lookup	1) Select "Get Order Status".	Returns orders for caller's phone only.			

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
ST-02	Status Change	1) Admin updates status to "In Progress" or "Ready".	Customer receives WhatsApp notification; status persists in orders.json.			
ST-03	Job Completion	1) Admin updates status to "Delivered" or "Picked Up".	Customer receives the status-change notification; status persists.			

4.6 Requirement 6: Automated Reminders

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
REM-01	Send Reminder	1) Set reminderTime due soon. 2) Wait for scheduler.	WA reminder sent; reminderSent=true; reminders.json log written.			
REM-02	Reset Flag on Edit	1) Reminder already sent (true). 2) Admin updates time.	reminderSent resets to false in JSON to allow re-send.			

4.7 Requirement 7: Manage Orders (Self-Service)

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
MG-01	Retrieve Booking	1) Select "Manage Orders".	Bot lists caller's upcoming orders (max 10).			
MG-02	Reschedule	1) Manage Orders → select order → Reschedule.	New date/time saved to orders.json; dashboard reflects update.			
MG-03	Cancel Booking	1) Manage Orders → Cancel → confirm.	Order removed/updated; bot confirms; dashboard reflects change.			

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
MG-04	Invalid Selection	1) In Manage Orders, choose invalid option.	Bot prompts to select a valid order/action.			

4.8 Data Integrity & Performance

ID	Scenario	Steps	Expected	Stat	Actual Result	Comments
INT-01	JSON Integrity	1) Corrupt cleaning_supply.json.	Bot handles error/logs; no crash (graceful fallback).			
INT-02	Order JSON Corrupt	1) Manually corrupt orders.json (bad syntax). 2) Restart.	Error logged; service does not crash, but data load fails gracefully (no backup expected).			
PERF-01	Response SLA	1) Send 5 rapid messages.	Replies within a few seconds each under normal load.			

5 Requirements Traceability Matrix

Requirement ID	Associated Test Cases
Req 1: User Interface	UI-01, UI-02, UI-03, UI-04
1.1 Display service options	UI-01
1.2 Select options via number/key-word	UI-01, UI-04
1.3 Invalid input detection	UI-02, MG-04
1.4 Correct next-step routing	UI-03, UI-04
Req 2: Price Calculator	PC-01, PC-02, PC-03
2.1 Generate estimate	PC-01
2.2 Send quotation via WA/email	PC-01, PC-03
Req 3: Invoice Generation	INV-01, INV-02
3.1 Generate invoice	INV-01
3.2 Store invoice/order details	INV-01
3.3 Email invoice	INV-01, INV-02
Req 4: Admin Dashboard	AD-01, AD-02, AD-03, AD-04
4.1 Generate report	AD-04
4.2 Filter dashboard data	AD-04
4.3 Display totals, unresolved tickets	AD-04
Req 5: Status Updates	ST-01, ST-02, ST-03
5.1 Query status	ST-01
5.2 Retrieve job status	ST-01
5.3 Proactive updates	ST-02
5.4 Final message after completion	ST-03

Req 6: Automated Reminders	REM-01, REM-02
6.1 Scan upcoming appointments	REM-01
6.2 Send reminder messages	REM-01
6.3 Confirm/reschedule options	REM-01, MG-02
6.4 Log reminder sent	REM-01, REM-02
Req 7: Manage Orders	MG-01, MG-02, MG-03, MG-04
7.1 Retrieve upcoming appointments	MG-01
7.2 Authenticate by phone number	MG-01
7.3 Present reschedule/cancel options	MG-02, MG-03
7.4 Reschedule flow	MG-02
7.5 Cancel flow	MG-03
Non-functional: Performance	PERF-01
Non-functional: Data Integrity	INT-01, INT-02

6 Defect Report Template

Defect ID	Test ID	Sev	Description of Failure

7 Approvals

QA Lead:

(Signature / Date)

Developer Lead:

(Patrick Marsden)

Client Representative:

(White Rose Interiors)