# Cookie Barrel POS — Prototype Specification (v1.0)

**Author:** Student (Name, ID)  
**Audience:** Lecturer/Marker, Teaching Team  
**Project Type:** Academic case study & prototype specification  
**Context:** Semester project to design a POS system that supports ordering and invoicing for a bakery business.  
**Environment:** Australia/Perth (AWST).

**Reference Data:** <https://docs.google.com/spreadsheets/d/19B8IWm8OLRJaaJkT0i_YiveUIbDmeHnL8IWHPVYVRWI/edit?usp=sharing>

# 1. Scope & Objectives

**In scope (prototype level):**

* POS system (staff-facing) for order entry, invoicing, and delivery scheduling.
* Enforce GST (10%), delivery zones & fees, free-delivery threshold, and weekday cut-offs by product group.
* Basic production/packing and delivery run views.
* Prototype UI mockups, diagrams, data model, and test scenarios.

**Out of scope (for this academic version):**

* Live integrations to payment gateways or accounting systems.
* Advanced inventory costing/stock management.
* Route optimisation and hardware integration (printers/scanners).
* Production data migration or organisational rollout.

**Learning objectives:**

* Practice requirements elicitation and formalisation.
* Model system with UML diagrams and data schemas.
* Define functional & non-functional requirements at prototype level.
* Validate scope with acceptance criteria and test cases.

# 2. Business Rules & Assumptions

* **Pricing & Tax:** Prices GST-exclusive; 10% GST added at checkout/invoice.
* **Delivery Coverage:** Perth Metro + optional additional zones.
* **Free Delivery:** Orders ≥ AUD $50 (ex-GST) → free delivery; else zone fee applies.
* **Delivery Days:** Monday–Friday, based on zone schedule.
* **Cut-offs:**
  + Muffins, Loaves, Savouries, Vanilla Slices → 12:00 cut-off.
  + All other products → 16:00 cut-off.
* **Proof of Delivery (POD):** Signature or photo required.

*Assumption:* Data is hypothetical and based on public information only.

# 3. Roles & Permissions

* **Admin:** Full access (settings, orders, invoicing, reports).
* **Sales/Counter:** Create/edit orders, view invoices.
* **Production/Kitchen:** View production list, mark items packed.
* **Dispatch/Driver:** View assigned runs, capture POD.
* **Accounts:** Access invoices, payments, and reports.

# 4. Key Pages (Prototype POS)

Each page is defined with purpose and primary actions (prototype scope).

1. **Login & Dashboard** – Secure login, daily snapshot (orders due, production, deliveries).
2. **Orders (List & Detail)** – Create new orders, view/edit existing ones, enforce cut-offs and delivery rules.
3. **Order Entry** – Customer lookup, items, delivery date, GST, totals, free delivery threshold.
4. **Production View** – Show items to prepare for the day, grouped by category.
5. **Delivery Runs** – Assign orders to runs, capture POD.
6. **Invoices** – Generate Tax Invoices with GST breakdown.
7. **Reports** – Simple reports (sales by day/product, GST summary).
8. **Settings (Prototype)** – Manage products, users, delivery zones, cut-off rules.

# 5. Core Workflows

* **Order to Delivery:** Create order → validate cut-offs → generate invoice → mark as packed → assign to run → capture POD.
* **Cut-off Enforcement:** System checks basket items; if cut-off missed, suggest next available delivery date.
* **Free Delivery:** Automatically applies at ≥ AUD $50 ex-GST.

# 6. Data Model

* **Customer:** ID, name, contacts, delivery addresses, price tier.
* **Product:** ID, name, category, price (ex-GST), cut-off group.
* **Order:** ID, customer, items, delivery date, subtotal, GST, total, status.
* **Invoice:** ID, order link, issue date, GST breakdown, total.
* **Delivery Run:** ID, date, zone, assigned orders, POD record.
* **User:** ID, role, login credentials.

# 7. Acceptance Criteria & Test Scenarios

* **Cut-off:** Orders with Muffins placed at 12:05 push to next delivery day.
* **Free Delivery:** Order subtotal = $49.99 (ex-GST) → fee applies; $50.00 → free delivery.
* **POD:** Order cannot be marked Delivered without signature/photo.
* **Invoice:** Must show subtotal (ex-GST), GST 10%, total inc-GST, ABN, and “Tax Invoice” label.

# 8. Non-Functional Requirements

* Usability: Simple, intuitive UI suitable for staff with basic training.
* Reliability: Order rules (cut-offs, delivery zones) must always be enforced.
* Security: Role-based access control.
* Performance: Basic queries (orders, reports) should return in under 2 seconds (prototype assumption).

# 9. Glossary

* **POS:** Point of Sale.
* **GST:** Goods and Services Tax (10% in Australia).
* **POD:** Proof of Delivery.
* **Zone:** Delivery area with defined days/fees.
* **Cut-off:** Time limit for placing orders for next day delivery.