

## Week 4

1. Developed Shopify Admin UI Extension displaying WhatsApp payment status, UPI details, reconciliation state, analytics view, and manual reconciliation interface.
2. Selected and configured WhatsApp Business Solution Provider (BSP), completed WABA setup, verified business number, obtained API credentials, and documented rate limits & pricing model.
3. Implemented WhatsApp API Client with authentication, rate limiting, message sending methods (text, template, interactive, media, button), webhook parsing, and error handling.
4. Built WhatsApp Service Layer for business orchestration, including cart summary, UPI payment request, order confirmation, abandonment reminder, and status updates.
5. Created and submitted WhatsApp message templates (cart summary, payment request, confirmation, order processing, abandonment, etc.) and documented template parameterisation.
6. Developed an Interactive Message Builder utility supporting reply buttons, CTA buttons, list messages, validation, and dynamic payload construction.
7. Integrated WhatsApp messaging with message queue (Celery) and implemented delivery status tracking with retry mechanisms.

**Supervisor's Comments and Signature :**