Submission Plan Update:

- Finished everything by April 21st

Name	Role
Arhaan Wazid	Developer + Diagrams
Holly Phamisith	Developer + Diagrams
Nooreen Pasha	Developer + Diagrams
Shafia Ahmed	Developer + Diagrams
Joshua John	Developer + Diagrams

Due date: April 22nd

Schedule:

Mondays at 5pm
Fridays at 4pm

High-Level Use Cases:

1. View Insulin Pump Status

Display home screen with battery level, insulin fill gauge, and CGM data.
Show insulin on board (IOB) status.

2. Set Up and Configure the Pump

Power on/off and sleep mode.
Configure security settings (PIN lock).
Charge and monitor battery level.

3. Manage Personal Profiles (CRUD)

Create, read, update, and delete profiles.
Set basal rates, carb ratios, correction factors, and glucose targets.

4. Deliver Insulin (Bolus and Basal)

Manual Bolus: Input blood glucose and carb intake to calculate the bolus dose.
Extended Bolus: Spread insulin delivery over time.

Quick Bolus: Deliver an immediate correction dose.

5. Automated Insulin Adjustments (Control IQ)

Dynamically adjust insulin delivery based on CGM feedback.
Automatically suspend insulin if glucose drops too low.
Data and Analytics Use Cases

6. Log and Review Insulin Delivery History

Track bolus injections, basal rates, and system alerts.
Store and display event history for analysis.

7. Generate and Visualize Glucose Trends

Graph insulin usage over time.
Analyze weekly patterns for insights.
Error Handling and Safety Use Cases

8. Detect and Respond to Malfunctions

Handle errors like low battery, occlusion, or CGM disconnection.
Provide alerts and troubleshooting guidance.

9. Suspend and Resume Insulin Delivery

Manually or automatically suspend insulin when needed.
Resume previous basal rate after issue resolution.