Waterfall models and Product Development

Task- 09

Product- Smart Reusable Water Bottle with Hydration Tracker

This bottle tracks water intake, glows to remind users to drink, and syncs data with a mobile app.

Waterfall Development Stages for Smart Bottle-

1. Requirements Gathering 🡪 2. System Design 🡪 3. Implementation (Coding) 🡪 4. Integration & Testing 🡪 5. Deployment 🡪 6. Maintenance

Example Flow with Specifics for Product:

1. Requirements Gathering

- Identify user needs (hydration reminders, app sync)

- Research similar products

- Define bottle features, app functions, tech stack

2. System Design

- Hardware layout: sensor placement, battery, LED

- App wireframes (UI/UX)

- Cloud storage & sync design

3. Implementation

- Develop embedded code for sensors

- Build app (iOS/Android)

- Backend development (database, API)

4. Integration & Testing

- Connect app to hardware

- Test hydration tracking accuracy

- QA test mobile app features

5. Deployment

- Launch MVP

- Release mobile app on stores

- Ship product to early testers

6. Maintenance

- App updates

- Bug fixes in firmware

- Collect user feedback for next version

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