Task 1: Product Analysis

Product Name: - boAt Rockerz 400 Wireless Bluetooth Headphones

Product Features + Issues: -

Features:

- Wireless Bluetooth & wired AUX mode
- 40mm dynamic drivers for deep bass
- 8-hour battery life
- Lightweight & foldable design
- Built-in microphone for calls

X Issues:

- Average battery life compared to competitors
- Plastic build feels less durable
- Tight fit may cause discomfort over long use
- Mic quality is not ideal for noisy environments

Inference & Ideas for Improvement: -

To enhance boAt Rockerz 400, the brand can improve battery life (minimum 15 hours), enhance build quality (using metal reinforcements), and upgrade the microphone for better voice clarity. A noise-cancelling feature could also be introduced to compete with premium brands.

Task 2: Complex Problem Table

S.no.	Application Domain	Complex Problem Identified	Justification
1	Battery Performance	Short battery life limits usability during long travels	Users need longer playback time without frequent charging
2	Sound & Noise Handling	No active noise cancellation (ANC), affects experience in noisy areas	Competing brands provide ANC, making this a competitive disadvantage
3	Comfort & Build	Tight fit and plastic body reduce long- term comfort and durability	Prolonged use can cause discomfort, and material quality affects lifespan

Task 3: Case Study Using Design Thinking Phases

<u>Case Study: Improving boAt Rockerz 400 Headphones for User Satisfaction –</u>

Design Thinking Phase	Solution Found	
Empathize	Conducted surveys and found users face battery	
Empanize	issues, discomfort, and mic clarity problems.	
	The problem was framed as: "How might we	
Define	enhance the comfort, durability, and battery life of	
	boAt Rockerz 400 for a better user experience?"	
	Brainstormed ideas like increasing battery life to	
Ideate	15+ hours, using memory foam ear cushions, and	
	adding noise reduction for clearer calls.	
	Created an upgraded model with a 300mAh battery,	
Prototype	memory foam ear cushions, and an improved	
	microphone.	
	User testing showed better comfort and extended	
Test	battery life. Some users requested an Active Noise	
Test	Cancellation (ANC) feature for better performance	
	in noisy environments.	

Task 4

Product Configurator & C-K Theory for Optimization

Fixing the Product Configurator: -

A product configurator allows customers to customize products before purchase. For boAt Rockerz 400, users might want options for battery life, colour, noise cancellation, and comfort levels.

<u>Solution using C-K Theory (Concept-Knowledge Theory):</u>

C (Concept Space)	K (Knowledge Space)
Customizable headphones where users select battery size, ear cushion material, and noise cancellation level	Knowledge of modular product design, replaceable batteries, and memory foam technology
AI-powered product recommender suggests ideal configurations based on usage (gaming, office, travel)	Existing data on user preferences, sound profiles, and machine learning recommendation algorithms
Dynamic pricing based on selected features	E-commerce models, supply chain cost structures, and competitor pricing strategies
Voice assistant integration for hands-free controls	Knowledge of AI voice recognition and Bluetooth firmware capabilities
C (Concept Space)	K (Knowledge Space)

Inference: -

A smart, modular version of boAt Rockerz 400 can be designed where users choose battery capacity, ear cushions, and noise-cancelling features. This would create a customized experience and improve user satisfaction while making the product competitive.

Conclusion: -

By applying design thinking and C-K theory, boAt Rockerz 400 can be improved significantly in terms of battery life, comfort, and microphone performance. A configurable product model can also be introduced, allowing users to personalize their headphones based on needs.