

Summer internship at Tata Elxsi

Duration- 6th May to 6th June

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Internship at **TATA ELXSI LIMITED**

- Place- Pune
- Design company
- Blends technology, creativity and engineering
- World-class products and solutions



My work

- **Main project-** Pitch project
- **Other projects-** Helped other designers in their projects
- **Project Guide-** Mr. Sandeep Thombre
(Sr.Design Manager (ID) Tata Elxsi, Pune)
Mr. Dipesh Parmar
(Industrial Designer (ID) Tata Elxsi, Pune)

A red rectangular button with rounded corners, a white dashed border, and a subtle drop shadow. The text 'Main Project' is centered in white.

Main Project

LED Luminaires

- A pitch project for LED luminaire manufacturing company
- The Design methodology I followed-

LED Luminares

- A pitch project for LED luminaire manufacturing company
- The Design methodology I followed-



Market study



Fig. 2

Desk



Fig. 3

Ceiling



Fig. 4

Wall



Fig. 5

Outdoor



Fig. 6

Intelligent



Fig. 7

Health



Fig. 8

- Desk mounted Luminaires
- Ceiling mounted Luminaires
- Wall mounted Luminaires
- Other outdoor Luminaires
- Intelligent Luminaires
- Lamps used for health and well being

Competitor's Products



Fig. 9



Fig. 14

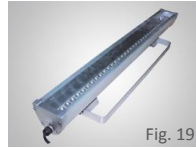


Fig. 19



Fig. 24



Fig. 29



Fig. 34



Fig. 39



Fig. 44



Fig. 10



Fig. 15



Fig. 20



Fig. 25



Fig. 30



Fig. 35



Fig. 40

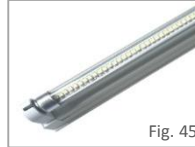


Fig. 45



Fig. 11



Fig. 16



Fig. 21



Fig. 26



Fig. 31



Fig. 36



Fig. 41



Fig. 46



Fig. 12



Fig. 17



Fig. 22



Fig. 27



Fig. 32



Fig. 37



Fig. 42



Fig. 47



Fig. 13



Fig. 18



Fig. 23

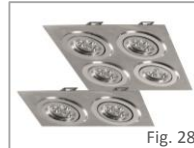


Fig. 28



Fig. 33



Fig. 38



Fig. 43



Fig. 48

Data Analysis

								
Indoor lights								
Ceiling lamps	✓	✓	✓	✓	✓	✓	✓	✓
Wall lamps	✓	✓	✓	✓	✓	✓	✓	✓
Table lamps	✓	✓	✓	✓	✓	✓	✓	✓
Spot lamps	✓	✓	✓	✓	✓	✓	✓	✓
Night lamps	✓	✓	✓	✓	✓		✓	✓
Emergency lamps	✓	✓	✓		✓			✓
Torch	✓	✓	✓		✓			✓
Outdoor lights								
Step lights	✓	✓					✓	✓
Walkover lights	✓	✓						✓
Undewater lights	✓	✓						✓
Flood lights	✓	✓	✓	✓		✓	✓	✓
Flexi lights	✓	✓				✓		
street lights	✓	✓	✓	✓	✓	✓	✓	✓

Data Analysis



Fig. 49

Method 1

Method 2

Data Analysis



Fig. 49

Method 1

Comparison method

Observation- The client-Company has luminaires in most of the categories

Conclusion- Product quality needs to be improved
or
New segment needs to be introduced in market

Method 2

Data Analysis



Fig. 49

Method 1

Comparison method

Observation- The client-Company has luminaires in most of the categories

Conclusion- Product quality needs to be improved
or
New segment needs to be introduced in market

Method 2

Graphical method (Technology Vs Aesthetics)

Observation- The luminaires of the client-Company in lower left corner

Conclusion- Luminaires of the client-company lagging in both Technology as well as aesthetics

Data Analysis



Fig. 49

Method 1

Comparison method

Observation- The client-Company has luminaires in most of the categories

Conclusion- Product quality needs to be improved
or
New segment needs to be introduced in market

Method 2

Graphical method (Technology Vs Aesthetics)

Observation- The luminaires of the client-Company in lower left corner

Conclusion- Luminaires of the client-company lagging in both Technology as well as aesthetics

Graph-



Design Direction

Design statement- To introduce a new segment in LED luminaires.

- User need oriented
- Technologically advanced
- Aesthetically appealing



Fig. 50

User activity Analysis

Four main users of an Indian family-

Husband



Fig. 51

Wife



Fig. 52

Elderly person



Fig. 53

Children



Fig. 54

Ideations



Fig. 55

Ideations

- Modified emergency lamp



Fig. 55

Ideations



Fig. 55

- Modified emergency lamp
- Modular system

Ideations



Fig. 55

- Modified emergency lamp
- Modular system
- Focus adjustable ceiling lamp

My learning

- How the market trends affect the industry
- Design should be user need oriented
- How to design an innovative product
- How to convey my idea to manager/client



Other Projects: 1

Elderly assistance device



Fig. 56

A device for- Elderly person with partial hearing loss
to guide him through day to day activities

Parts- a projector, a speaker, an indicator and a button.



Concept 1

Concept 1



This form is inspired by the “Kalash”

Elderly people- Lack of proper hand grip

The characteristic shape of kalash provides better grip

Concept 1





Concept 2

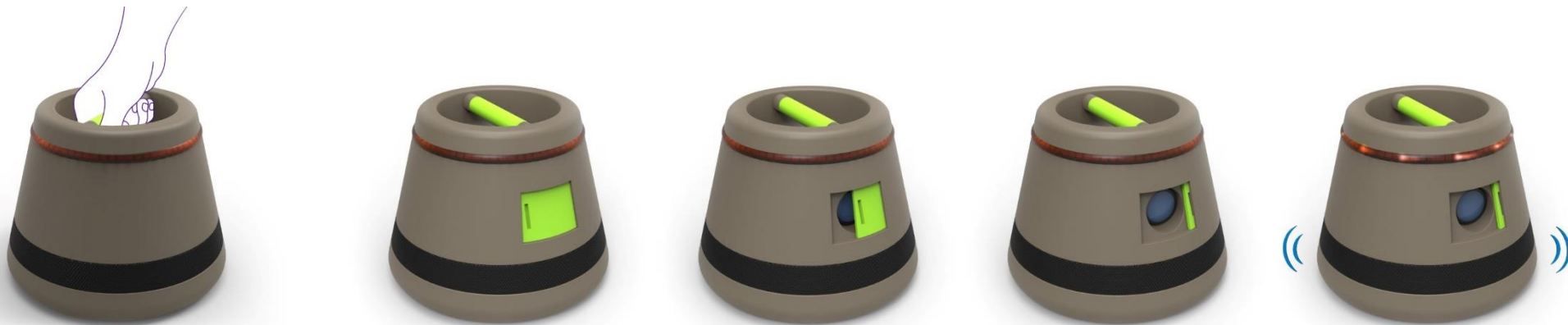
Concept 2



Tapered cylindrical form with separate handle on top

The LED strip and speaker around the periphery

Concept 2



My learning

- Understood the importance of user activity analysis
- Understood the importance of retaining company's product-language
- Creative use of Keyshot for rendering
- Importance of time/dead lines

A red rectangular button with rounded corners and a white dashed border, featuring a subtle drop shadow.

Other Projects: 2

Tamper evident packaging

Design statement- To design a container for liquid-pesticide with tamper evident feature, to eliminate adulteration.



Concept 1

Concept 1

Three main parts- Bottom portion
Separating wall
Top portion



Concept 1

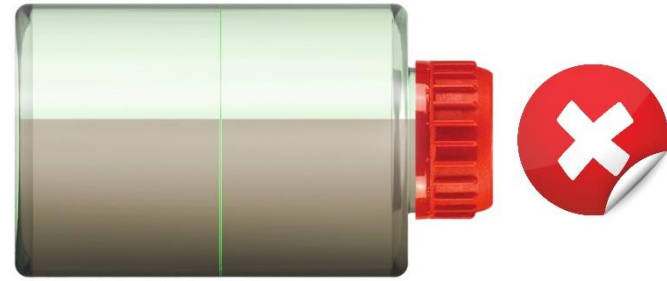
Pesticide filled in both compartments in **unequal** amount



Concept 1

Separate demarcation- Genuine

No separate demarcation- Adulterated



My learning

- Understood the importance of tamper evident packaging
- How to look at my design from 3rd point of view
- Understood the importance of 'Branding area' in packaging

Prototypes / Mock-ups

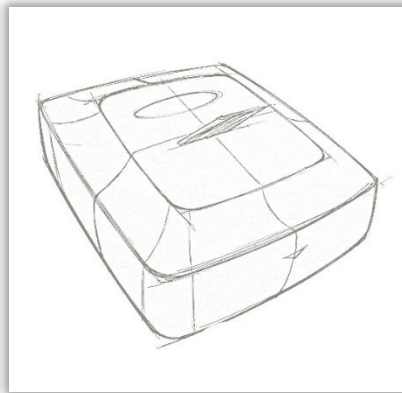
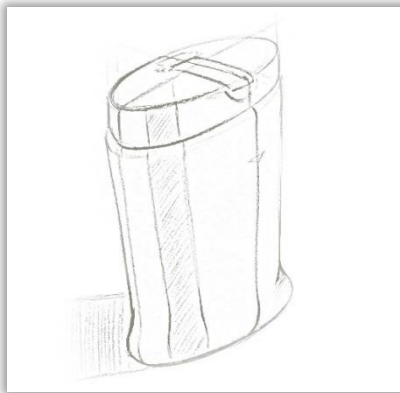
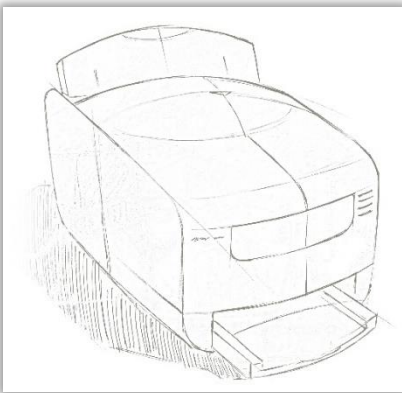
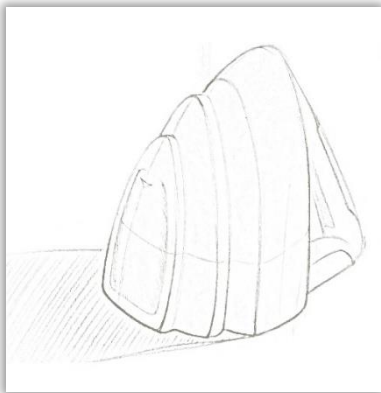
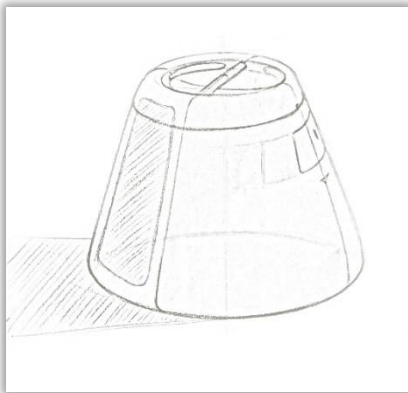
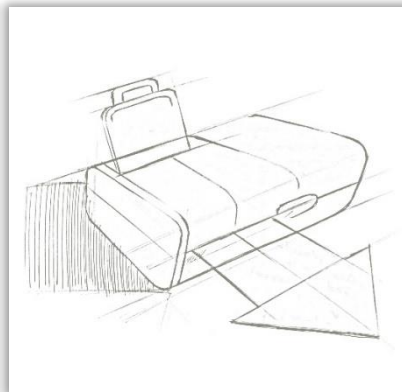
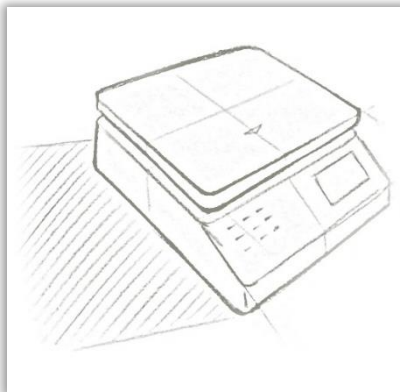
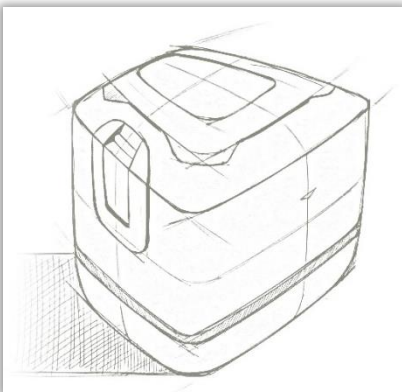
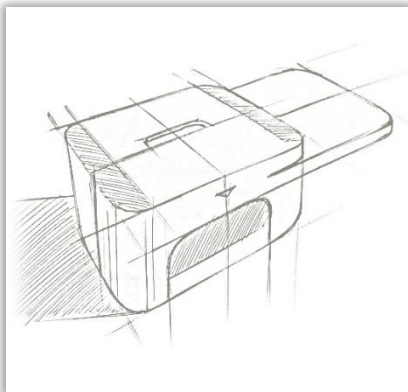


Fig. 57

Helped other designers

- 1) Mock-ups of an Oil jar
- 2) Prototypes of packaging of a chocolate company

My sketches



My Learning



Fig. 58

- An exposure to word class design studio
- How the engineers and designers work together
- Understood the client-customer relationship
- Improved my sketching, solid modeling and rendering skills
- Improved my interactive skills and the ability to convey ideas

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Thank you