iMO

A COMPANION FOR THE LONLEY ONES

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Abstract

As the world moves ahead, people are getting more busy with their work. They hardly find time for their own kids, which is eventually leading to loneliness and emotional instability in children. Imo is a companion to those lonely ones.

imo is an interactive toy which communicates with kids by lighting up differently in different scenarios. Imo is designed with a new organic form unlike the usual pet toys. This helps in encouraging children to imagine and perceive the toy very differently.

The project concludes giving the toy a new look with interesting ways of interaction with the kids.

Keywords

Companion

Personal

Emotional

Communicative

Experience

1. **Introduction**

Design has been undergoing transition in the past few years from problem solving to something really creative and philosophical which has stories. Today it is time to demolish the myth that design is just creative problem solving.

Hence, I wanted to explore different way of working towards a solution. Thus, I decided to take the medium of light as my theme to do further research and use it in a different way in my design. Light is a very exciting and miraculous medium in itself. Today many new technologies of lights like LED, OLED's were making revolutions in the industry and this fact also made me keen to explore this area.

The main objective of the project is to learn and explore new ways of working. Therefore, I decided to go for scenario based approach to find opportunities to develop design.

The whole journey of my project is an exploration in coming up with a design solution which is simple, aesthetically appealing and poetic in nature by making use of the existing technologies.

2. Research

2.1 Light

I started my project studying light. Light is a form of energy which is an essential element of life without which we cannot exist. It's the part of the electromagnetic spectrum visible to the human eyes and is the fastest in speed. Light is a remarkable medium that can be exciting, mysterious, magical or terrifying. It's these features of the light which made me take it up as a medium to be explored in the project.

2.1.1 Light and Emotions

Lighting can affect the behavioural and psychological well-being of people. It is an essential element of life which can transform life. Lighting also has positive and negative effects on a person's health. It is a remarkable medium that can be exciting, mysterious, magical or terrifying.

2.1.2 Light Sources

Light sources are generally classified into two:

1. Natural Source
2. Artificial source

Natural sources include direct sources of light from sun, moon and stars. It also includes indirect light as a reflection from clouds, structures and landscapes.

Artificial sources of lighting include incandescent lamps, halogen lamps, fluorescent lamps, HID lamps, fibre optic lighting and LED's.

2.1.3 Trends and Future of Light

LED

LED or light emitting diode is the emerging and the new wave in the lighting technology. Its main advantages are that it has longer life, low energy consumption and better efficiency, compact size, flexibility in design, free from UV and IR radiations and resistance to breakage.

OLED

OLED or organic light emitting diode is another technology creating ripples in the industries. It's making revolutions in revolution in laptop screens, mobiles and PDA. Its main advantages are that it draws less power, thinner and lighter than LCD, better contrast than LCD and it does not need backlight to function.

Frozen Light

Frozen light is an area where a lot of research is happening in the present days. It's about controlling the speed of light and the finding says that the speed of light could be brought to even zero. It will be a breakthrough for the electronic industries and can create revolutions in products.

2.1.4 Types of Lighting

1. General Lighting.
2. Task Lighting.
3. Accent Lighting.
4. Decorative lighting

General Lighting

Lighting generally used to lit up houses, buildings etc for the sake of visibility is generally classed as general lighting. It is done to provide uniform lighting to a space. Its also known as ambient lighting.

Task Lighting

Lighting which is done to enable user to see the critical details of an activity. It is a direct form of lighting.

Accent Lighting

The purpose of accent lighting is to highlight an object and thereby get attention to the space. It is generally used in exhibition halls etc to highlight art pieces.

Decorative Lighting

Lighting which is more like ornamentation for the interior is classified as decorative lighting. It's normally used at the time of celebrations.

2.2 Experiments

To study more about natural light some experiments were held in outdoor. Photographs of light at different intervals of time were collected to understand the change in shadows and temperature of light.

5:30 am

6:30 am

11.00 am

6

12:00 pm

1:00 pm

7

2:00 pm

4:00 pm

Observing the change in light helped me better understand the medium of light.

2.3 Renowned Works

As part of the project I also went through the works of renowned designers.

Figure 2.3 A

Works of designers like Ingo Maurer, Ayala Serfaty, Philippe Stark, Karim Rasheed gave me better understanding about the contemporary design and motivation to go ahead with my project.

2.4 Colour

Colours were the area which i wanted to explore next, as it was very closely associated with light. It's the pivotal part of light which has physiological effects on human beings. Light is no more illumination and making environment present. Colour is certain quality of light that the eye recognizes and the brain interprets.

2.4.1 Common Effect of Colours

Red : Studies prove that it has arousal effects on humans. It is also exciting, stimulating, aggressive and passionate.

Orange : Its said to be cheering and blustering.

Yellow : It's a happy and enlighting colour.

Green : It's the most calm colour to the eye. It also has natural and relaxing effect.

Blue : It's said to be sober and calm.

These qualities of colours were something very inspiring and an area to explore.

2.5 Primary Research Conclusion

From the primary research, it was concluded that the product developed need to have emotional effects on the users by exploring the magical features of light and colour by making use of the recent technologies of light.

3.4 Light Cube

3.4.1 Light cube Scenario

The previous scenario was on a lighted toy for the kids which could be carried along with them wherever they go. Its aim was to keep the kids engaged when parents are busy shopping.

3.5 Pet Toy

3.5.1 Pet Toy Scenario
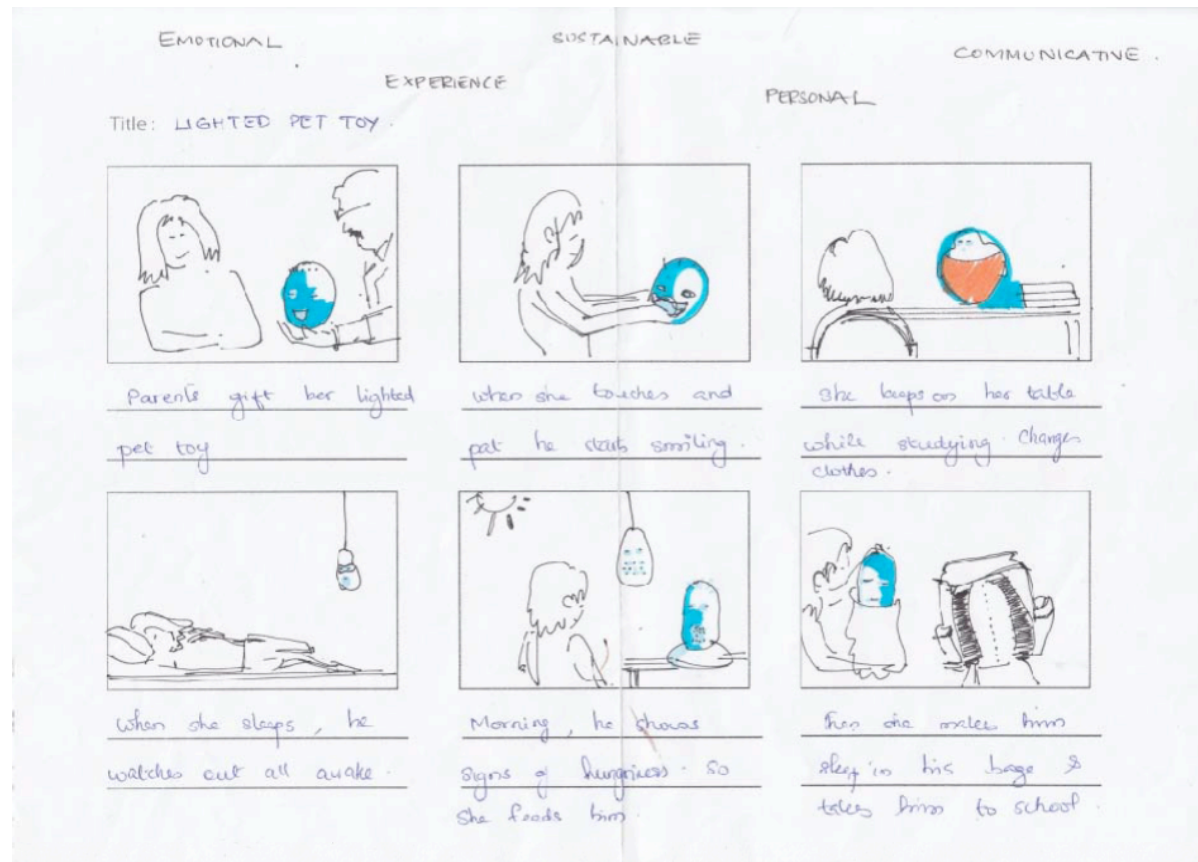
4. IDEATION

4.1 Initial Concept Generation

Initial ideation was done by taking inspiration from nature.

4.1.1   Idea Sketch
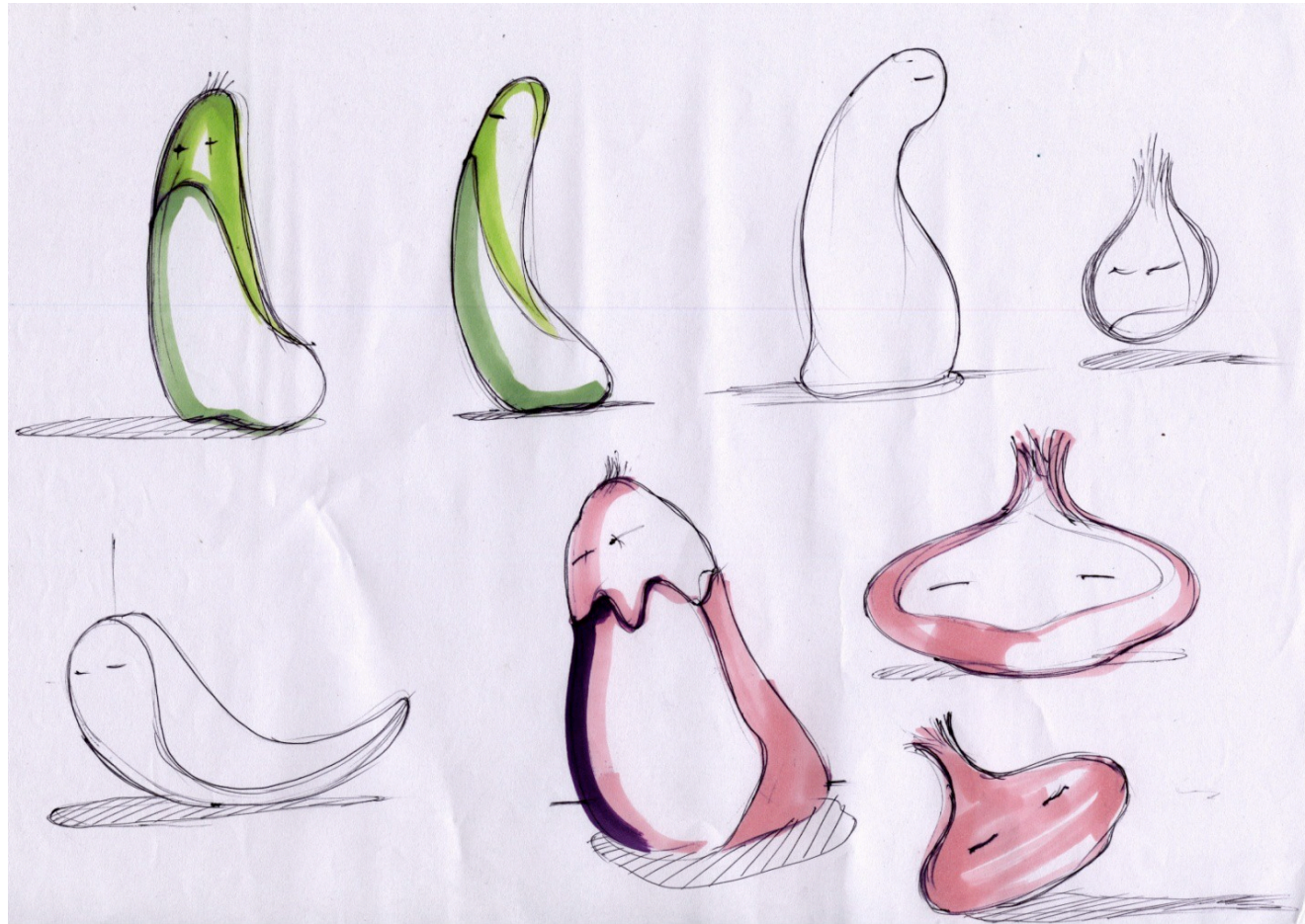
Inspirations were generally takes from animal, vegetables etc which all looked cute.

4.1.2   Idea Sketch
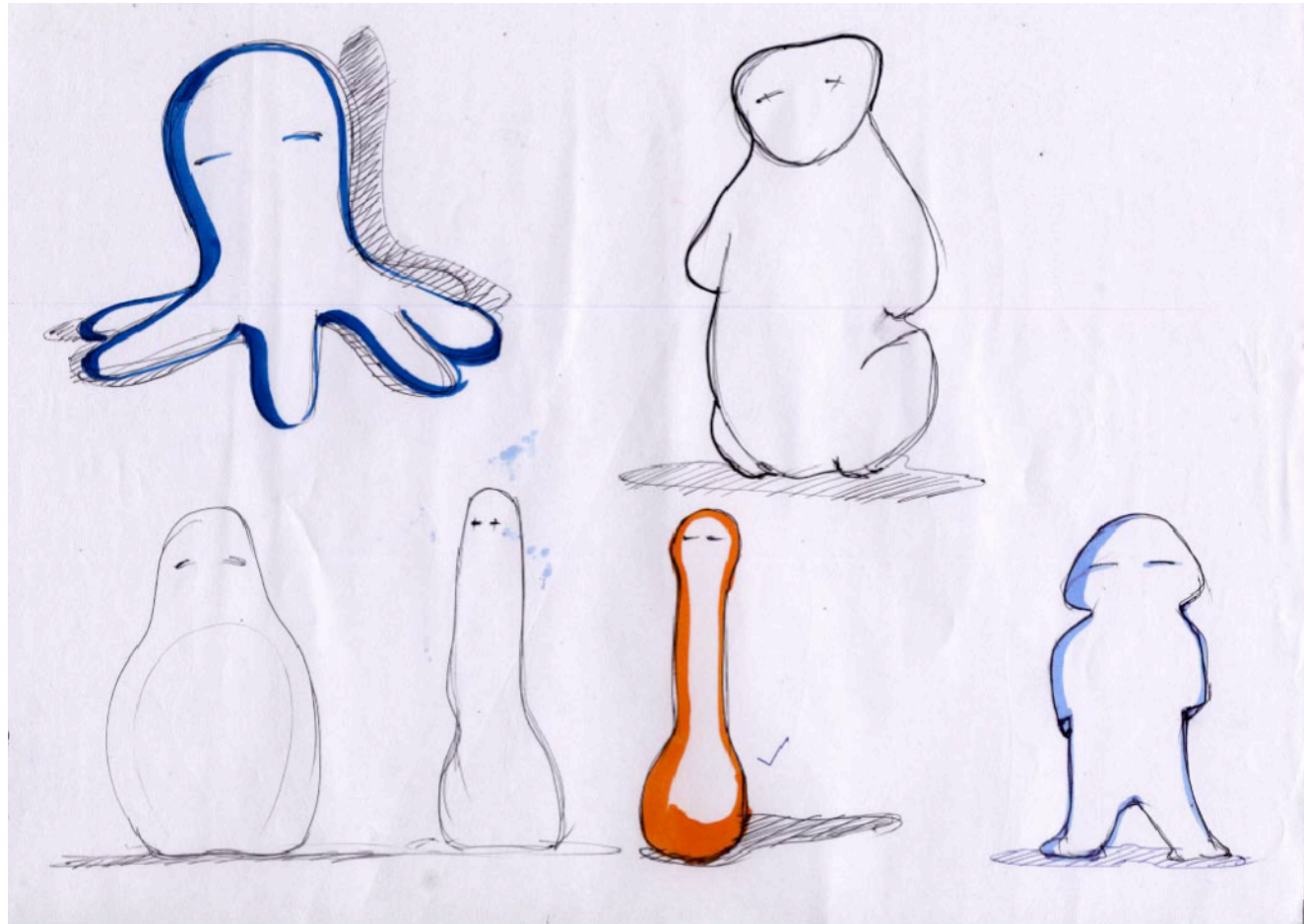
Concepts were tried to make bulky and huggable.

4.1.3 Idea Sketch
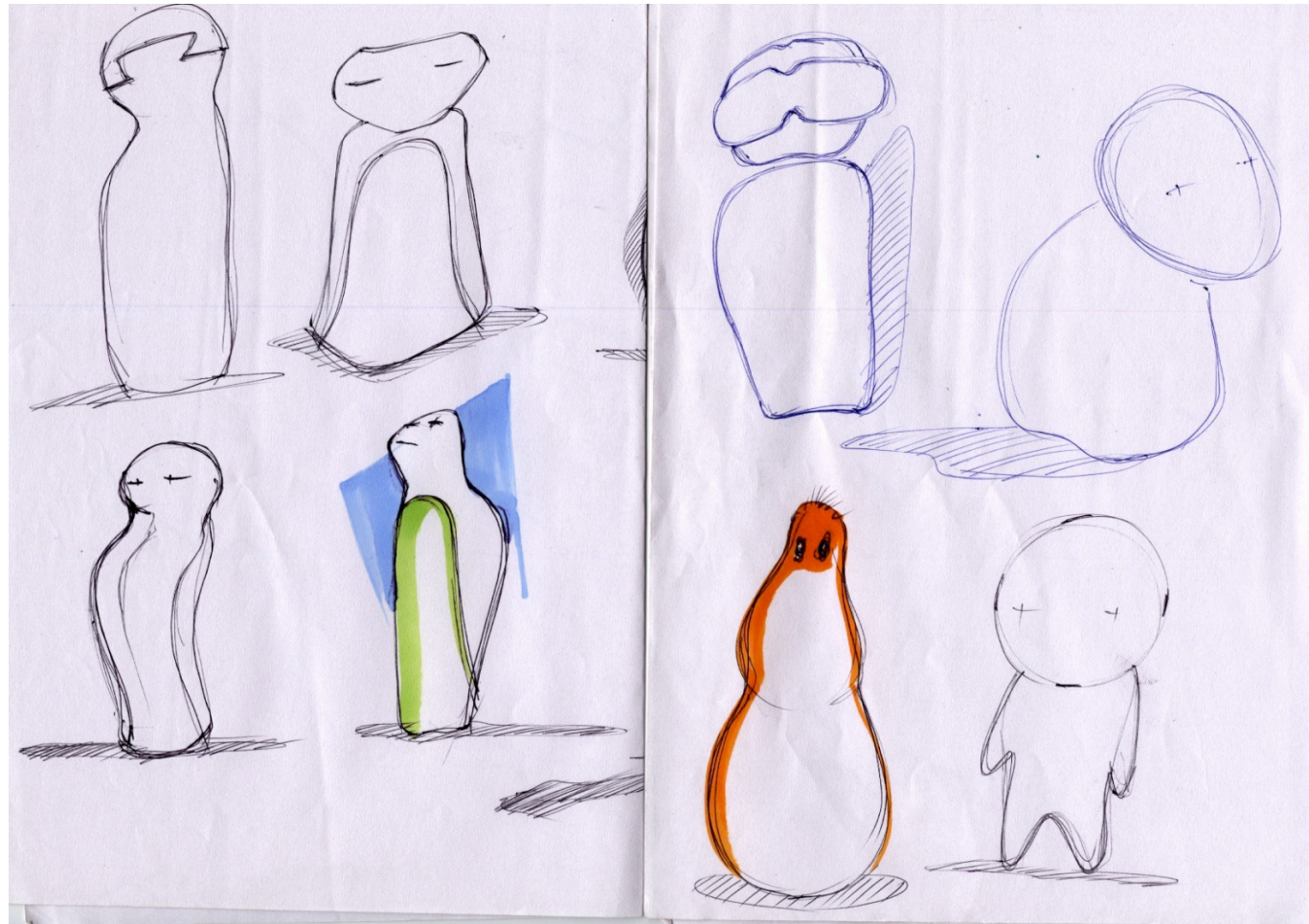
After the initial ideation and the discussion over it, we were feeling its looking more like a stuffed toy and we decided to go for something different and abstract encouraging kids imagine.

4.1.4 Idea Sketch
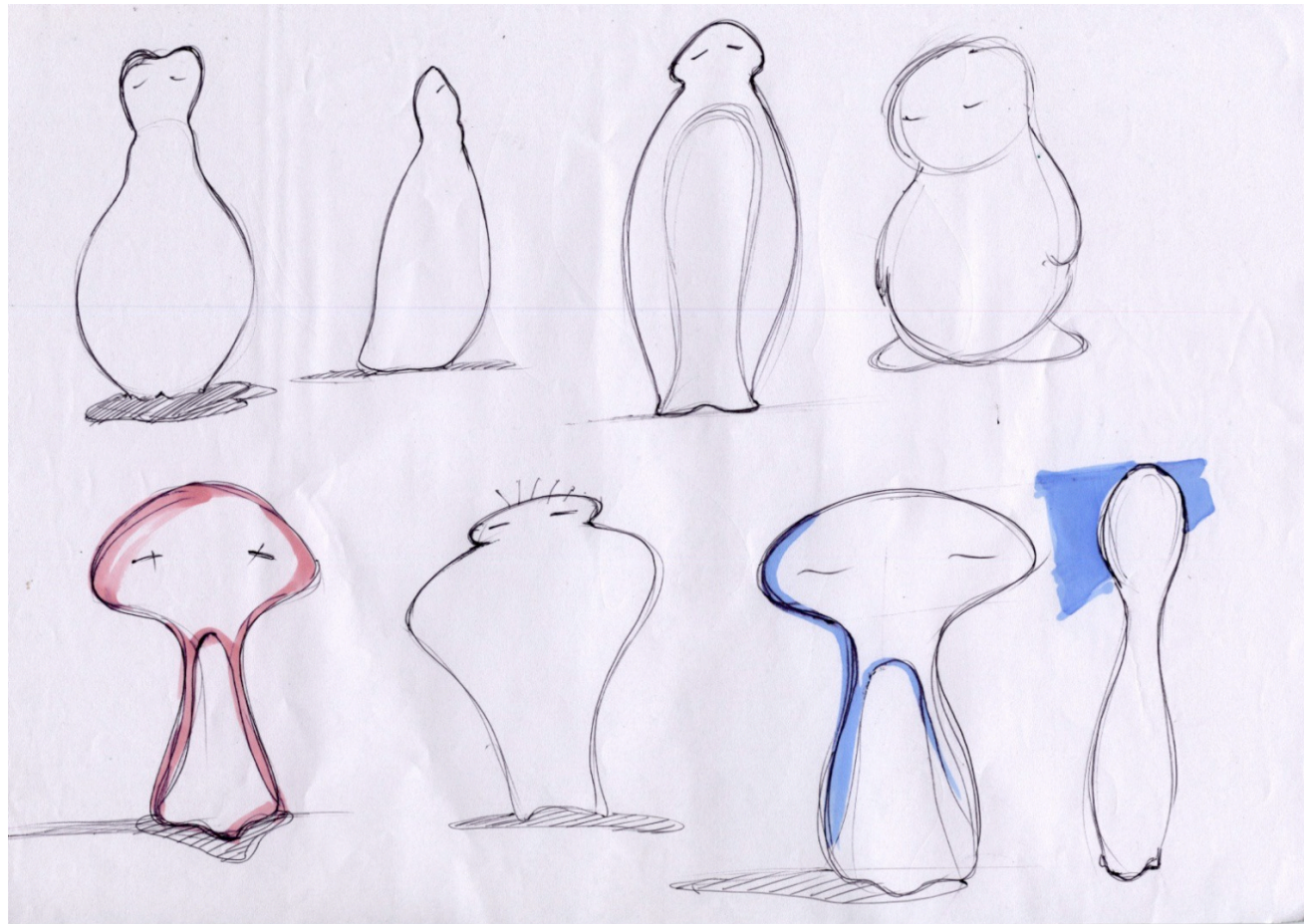
Inspirations were taken from things which surrounded kids like pillow,
water bottles, Pencil boxes etc.

4.1.5 Idea Sketch
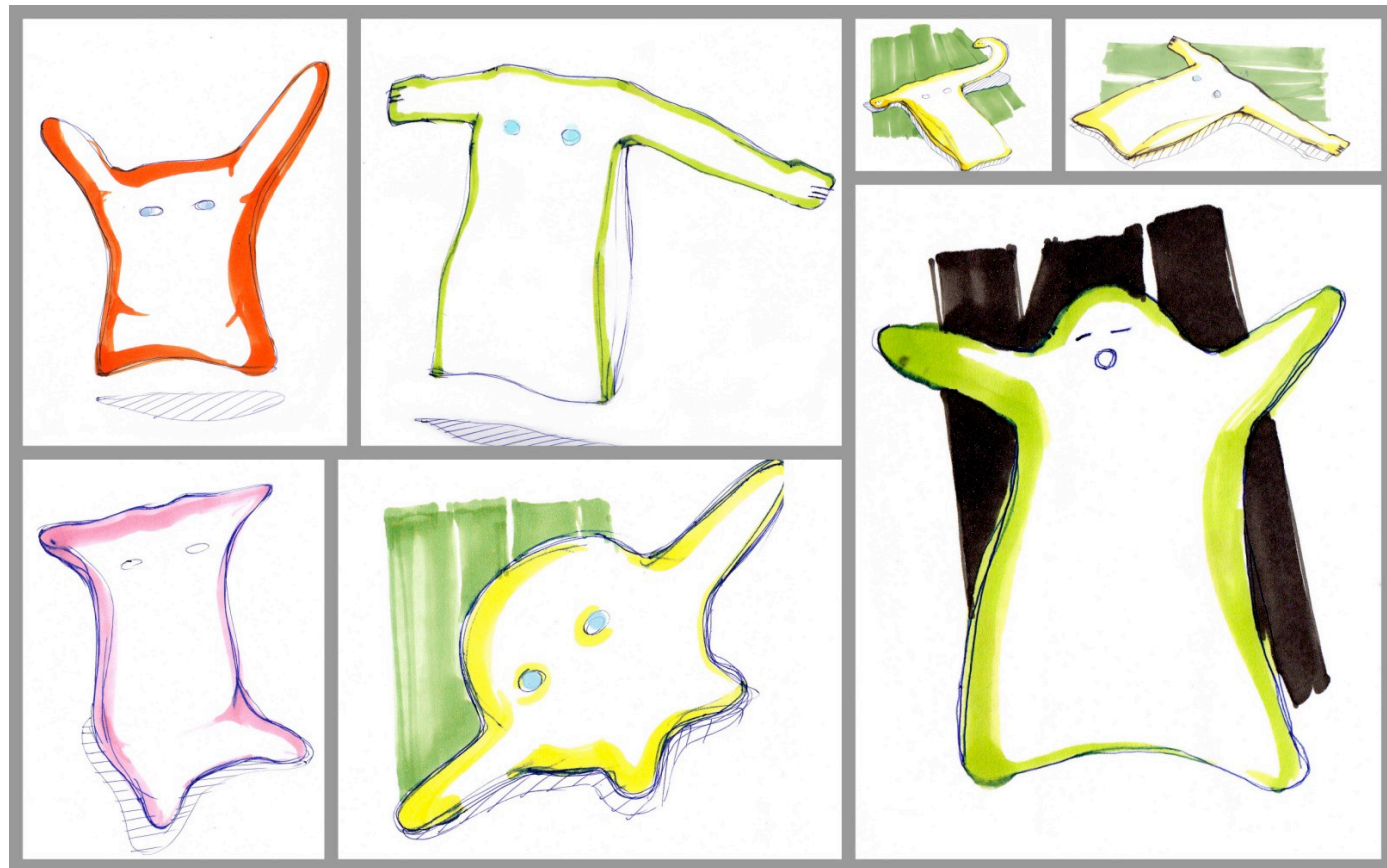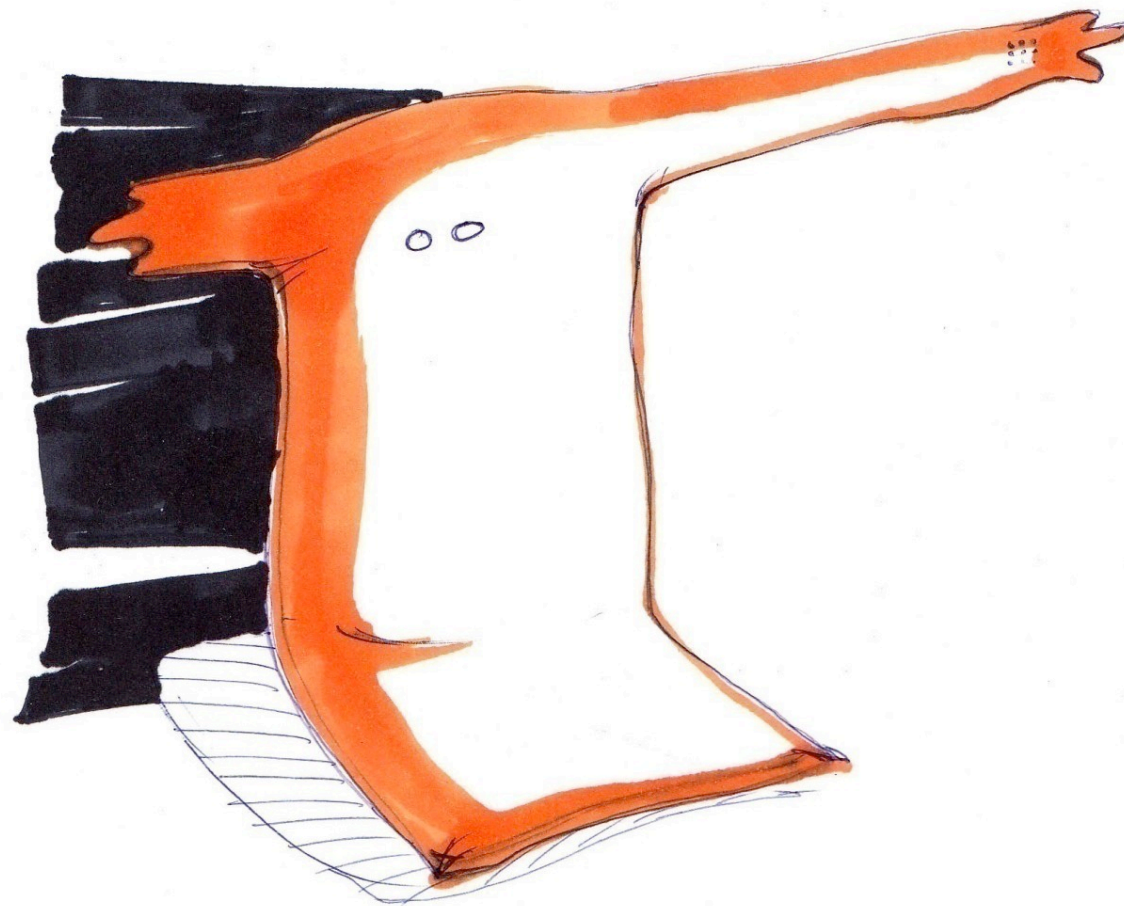
The new concept was unlike the existing characters which are directly inspired from animals and other living beings. Same time, wanted imo to be huggable and cuter than this as it was a companion.

5. Concept

5.1 Image Board

As I wanted imo to be huggable, abstract, hold able and cute; image
board was also prepared accordingly.

Figure 5.1 A

5.2 Initial Concept Rendering

New concept is huggable and friendly. Imo is lighted interactive toy which could be carried by kids along with them always like a close friend. It will interact with kids lighting up differently in different situations.

5.3 Concept Scenarios

Imo lights up and shows that it is happy when he meets his new friends.
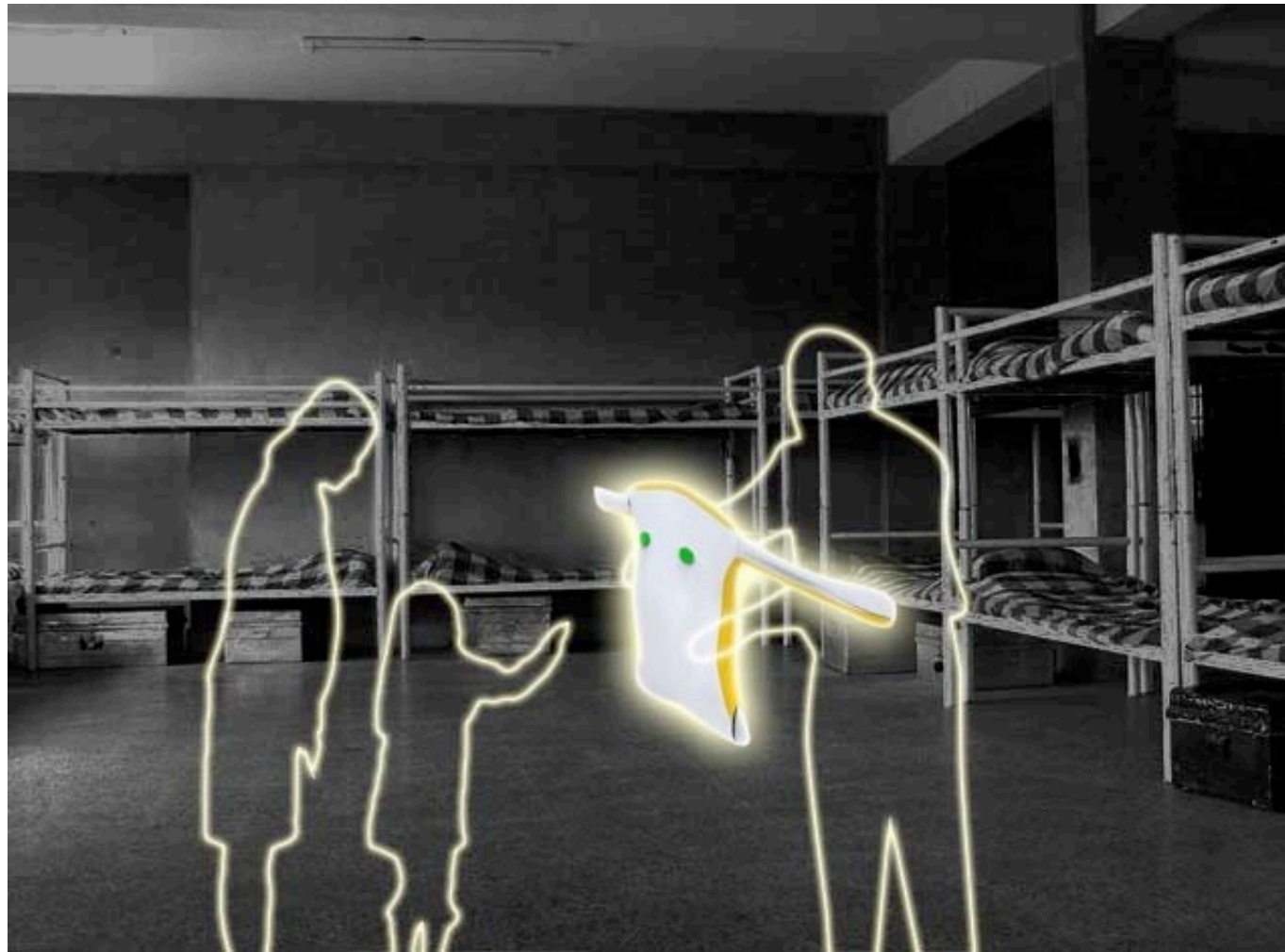
Figure 5.3 A

As she goes nearer to imo, he lights up differently making her happier. Colours like orange were chosen according to the research findings to excite the kids.
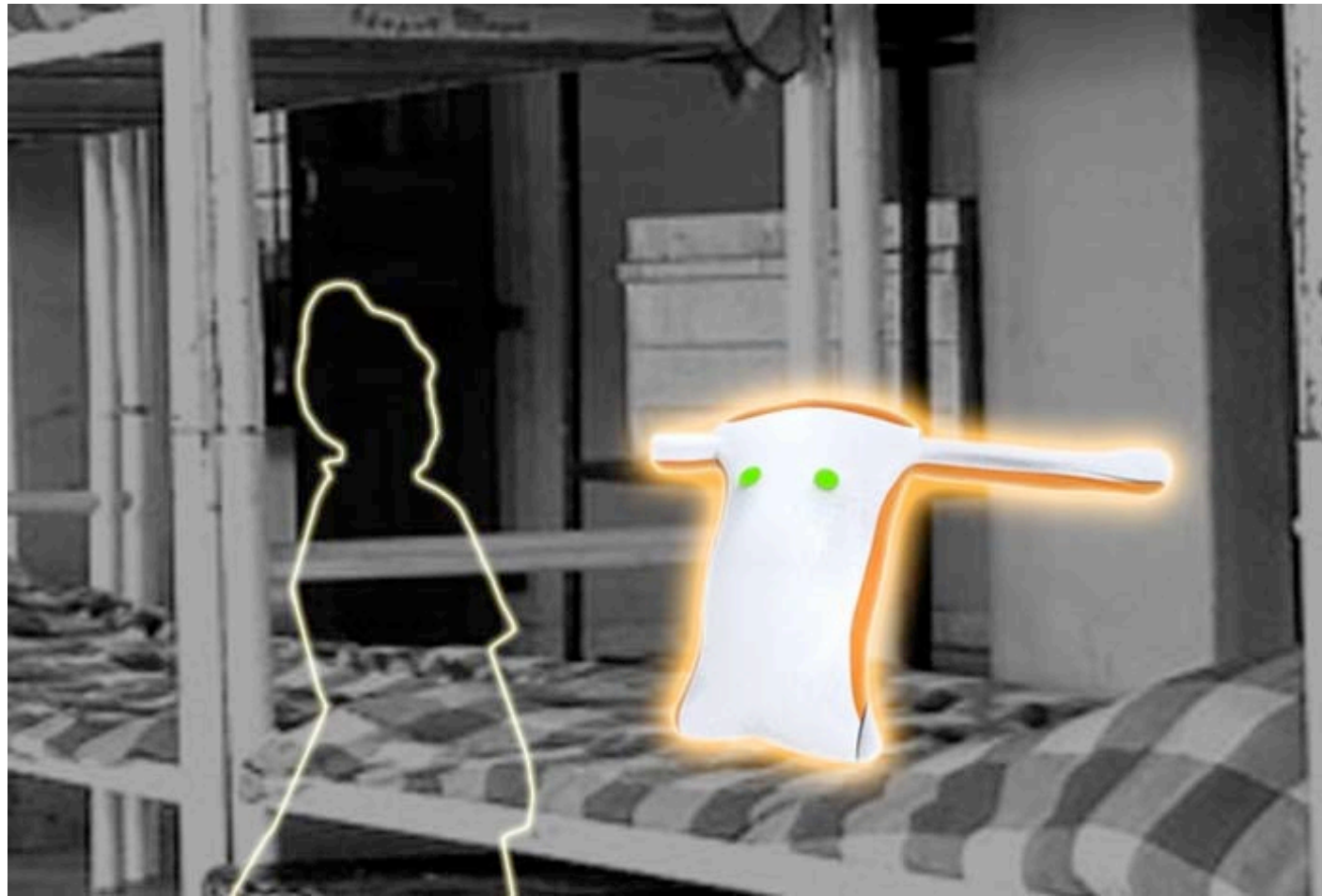
Figure 5.3 B

When she kisses him, his head lights up and starts blushing.
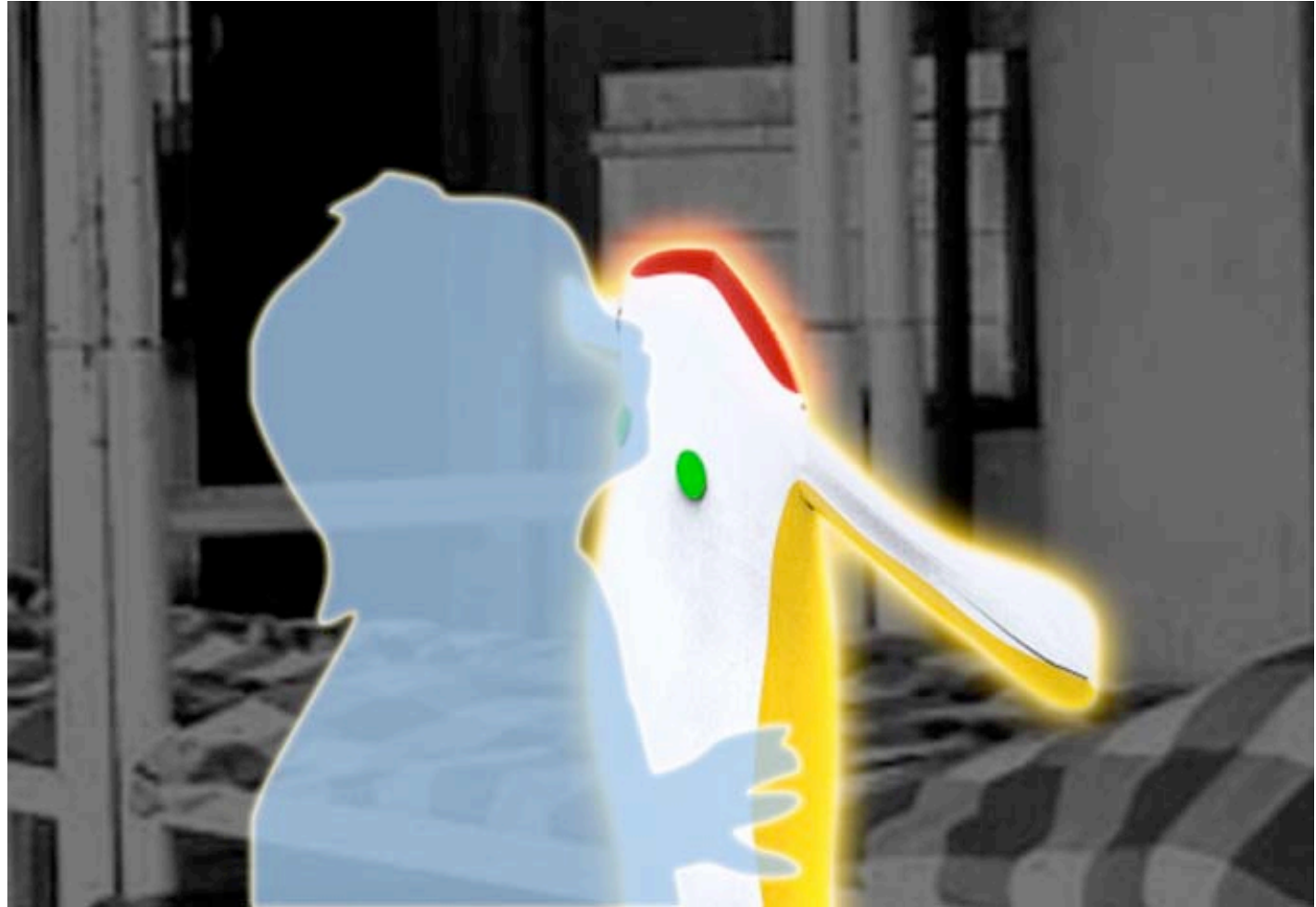
Figure 5.3 C

When she hugs, imo turns red showing that its shy and opening way
for kids to imagine wild.

Figure 5.3 D

She can carry imo with her like a bag where ever she goes. She can take him out even when she goes for a walk with her friends.

Figure 5.3 E

When her friends tickle imo, he starts giggling.
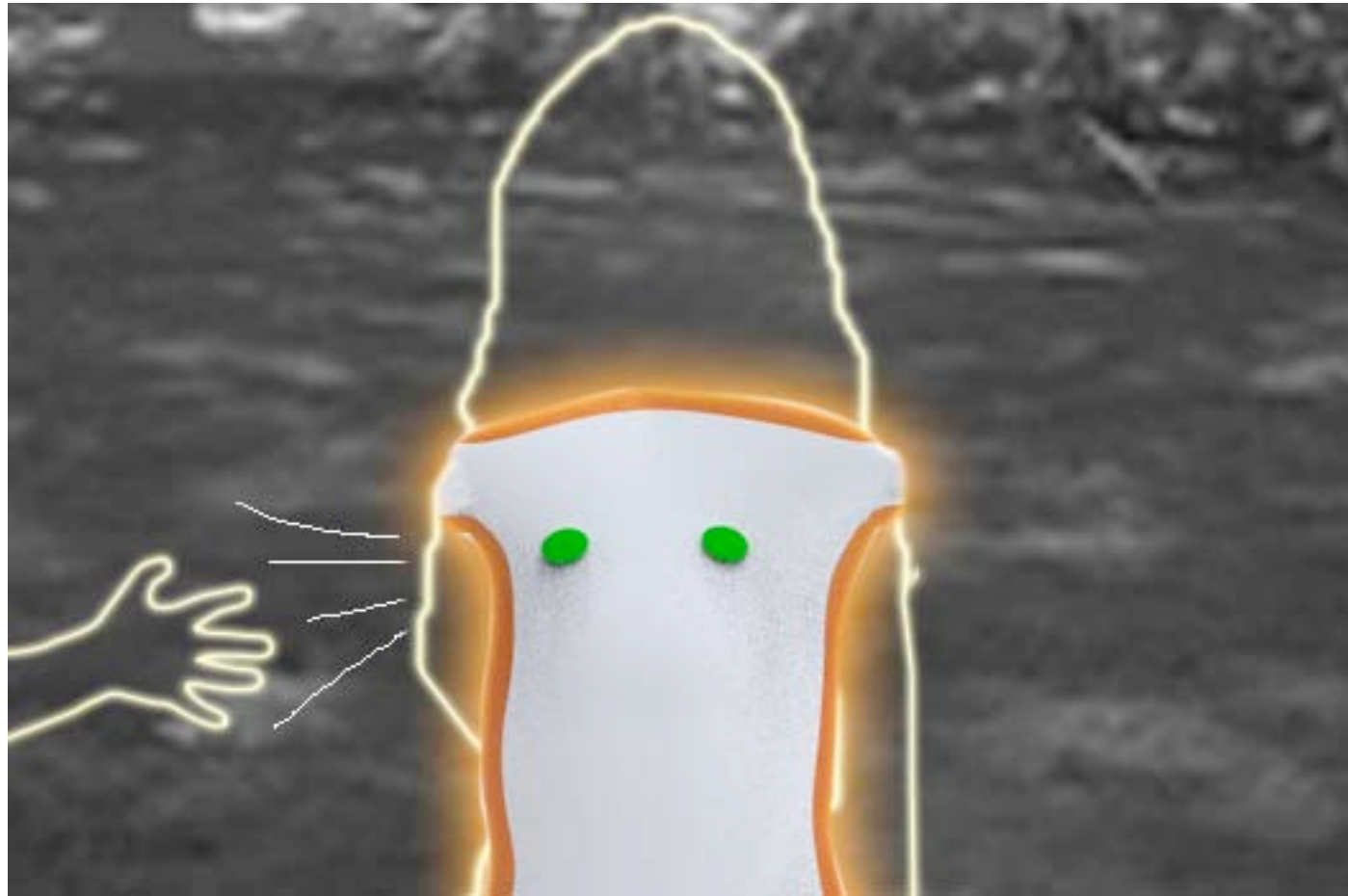
Figure 5.3 F

When she goes to sleep, imo will tell her stories. Imo is a companion at all places which will change the life of kids who were lonely by being a true companion.

Figure 5.3 G

6. IDEATION

6.1 Revisiting Concept Sketches

After the concept discussion with my guides, we decided to revisit the ideation phase to make imo more abstract and interesting.
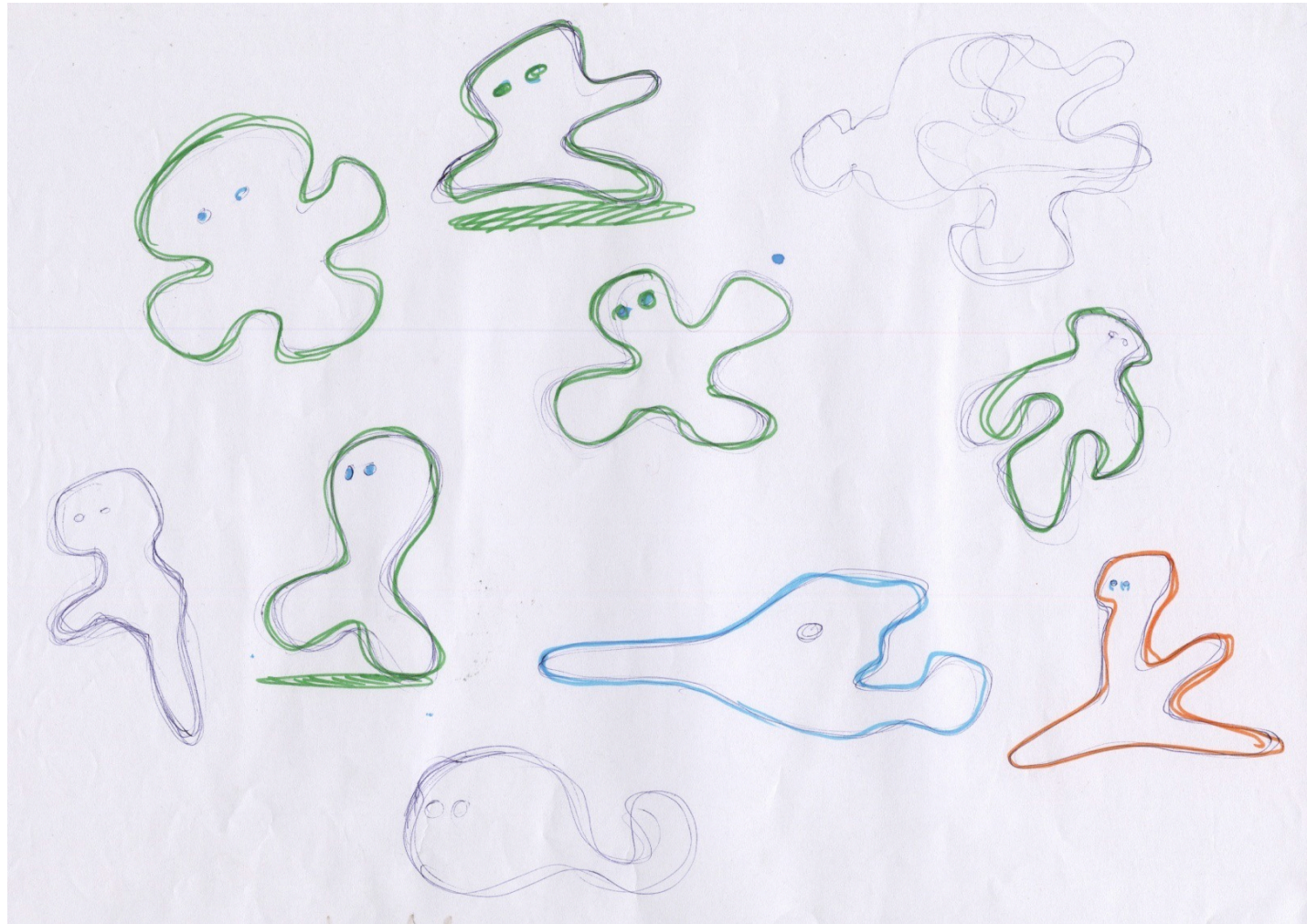

Figure 6.1 A

As we wanted the form to be abstract, inspirations were taken from puzzles. Emphasis was to make the form very interesting.
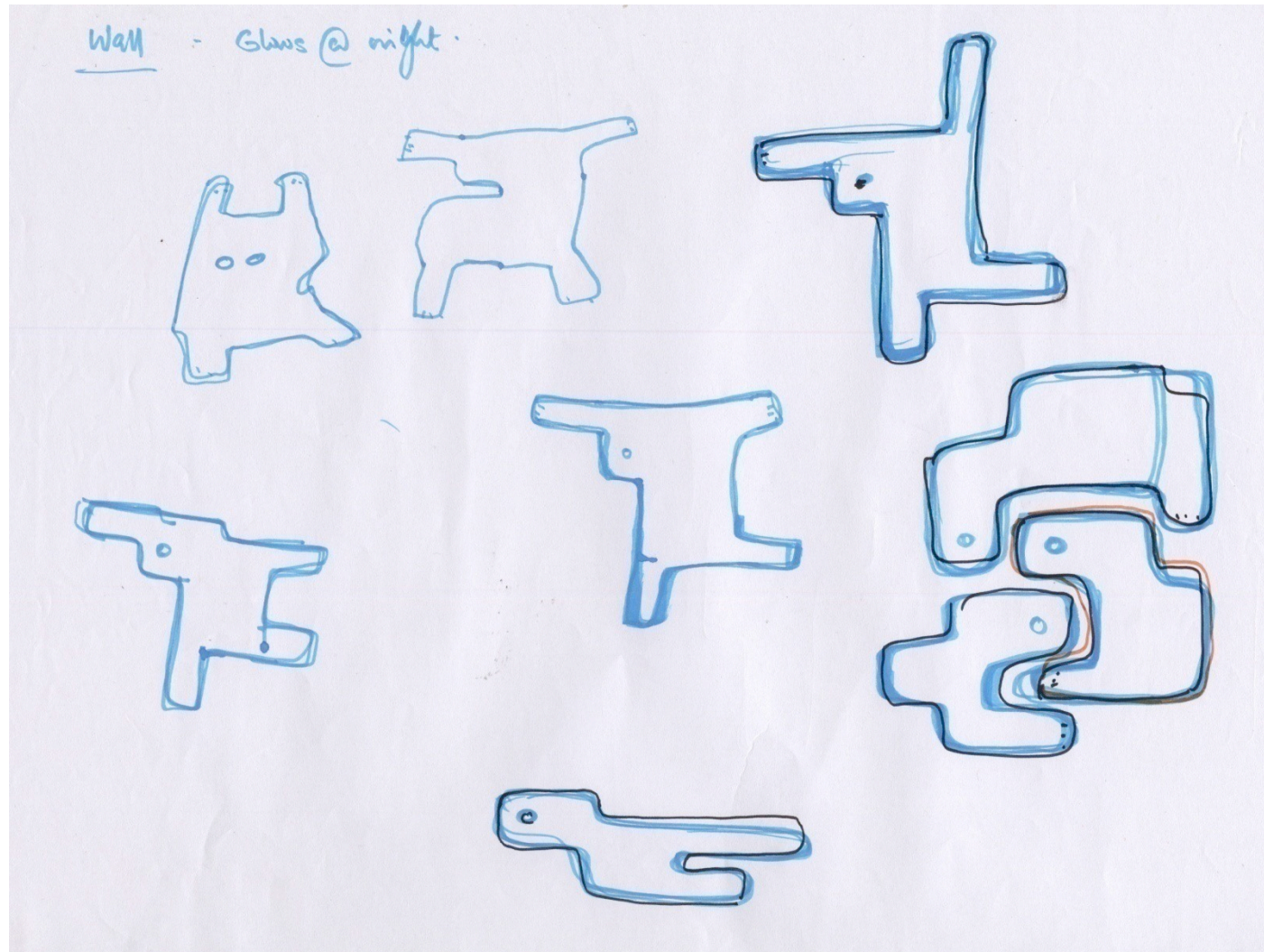

Figure 6.1 B

Finally, I decided to make a family for imo by designing little imos.
Children also have a great interest in indulging in family games.
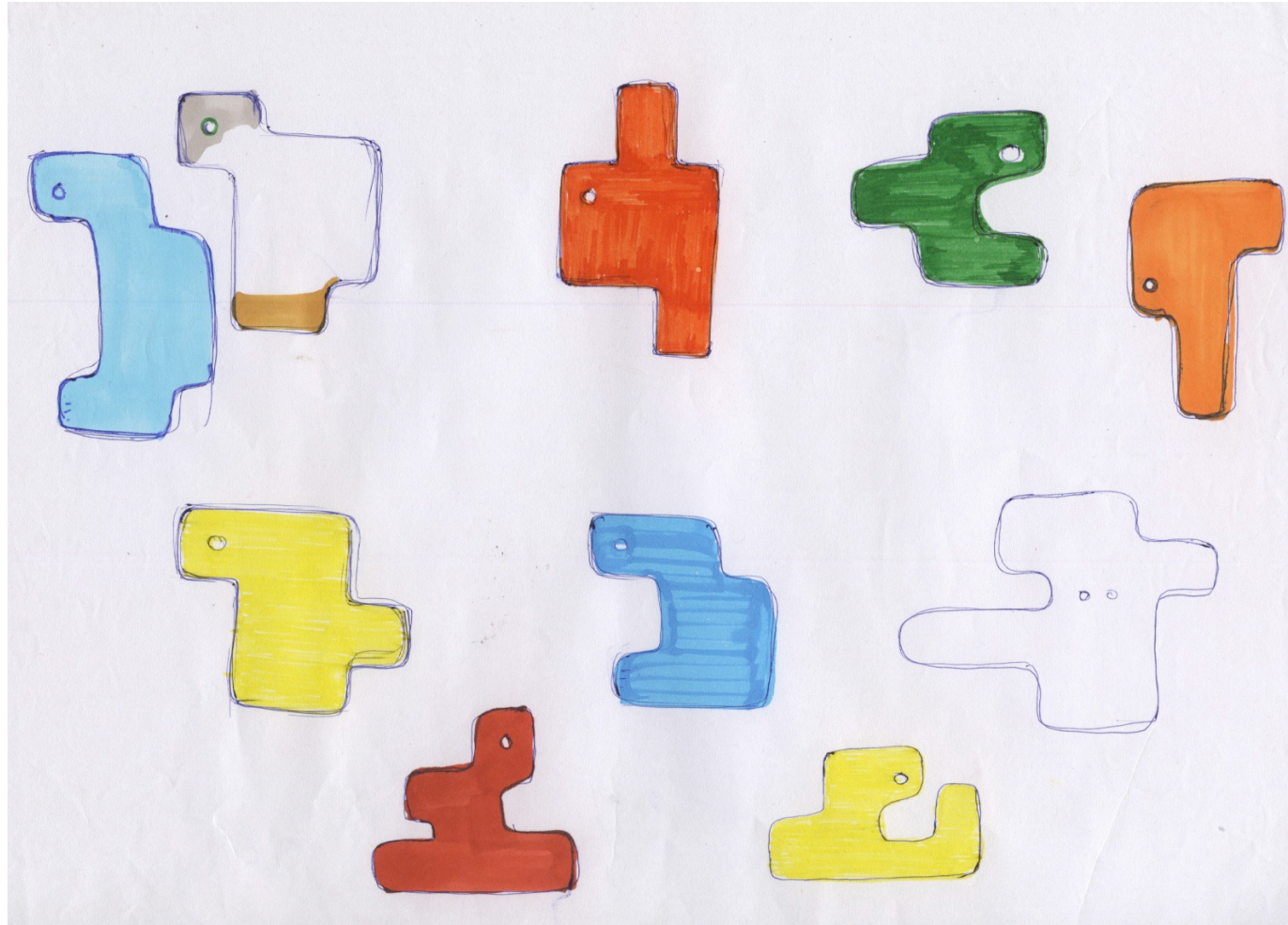
Figure 6.1 C

7. Mock-ups

7.1 Rough Mock-ups

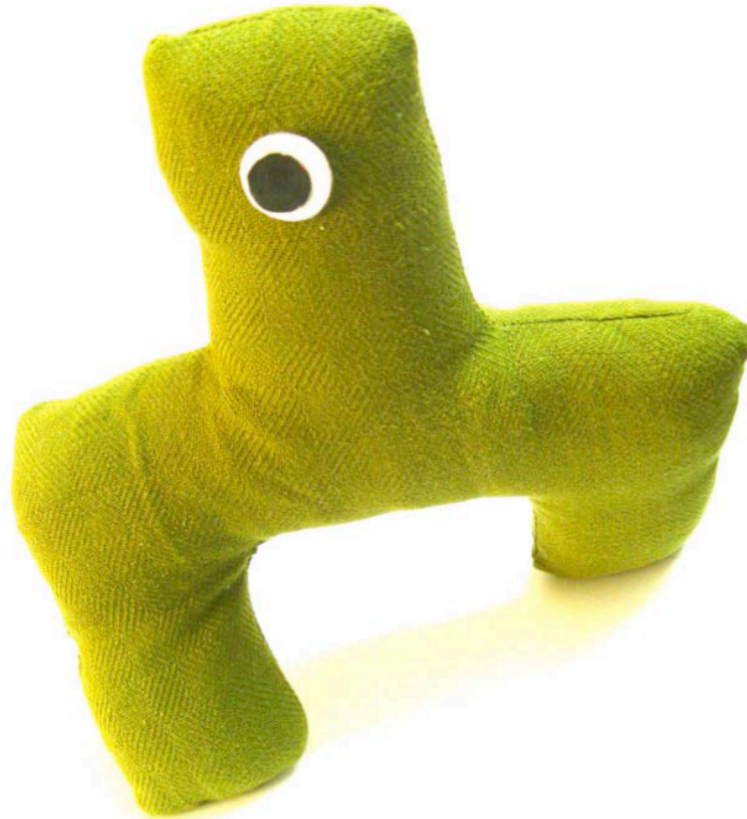Rough mock-ups were made with fabrics to get the look and feel of the products.

Figure 7.1 A

Explorations were done with many materials and shapes.

Figure 7.1 B

Contrast in colours and features were also tried.

Figure 7.1 C

7.2 Mock-up Validation

Mock-ups were also taken to the nearby schools to know how children are responding to the form and character. This helped in getting some more insights.

Figure 7.2 A

New behaviours were also shown by them while playing while playing
with the little imos.
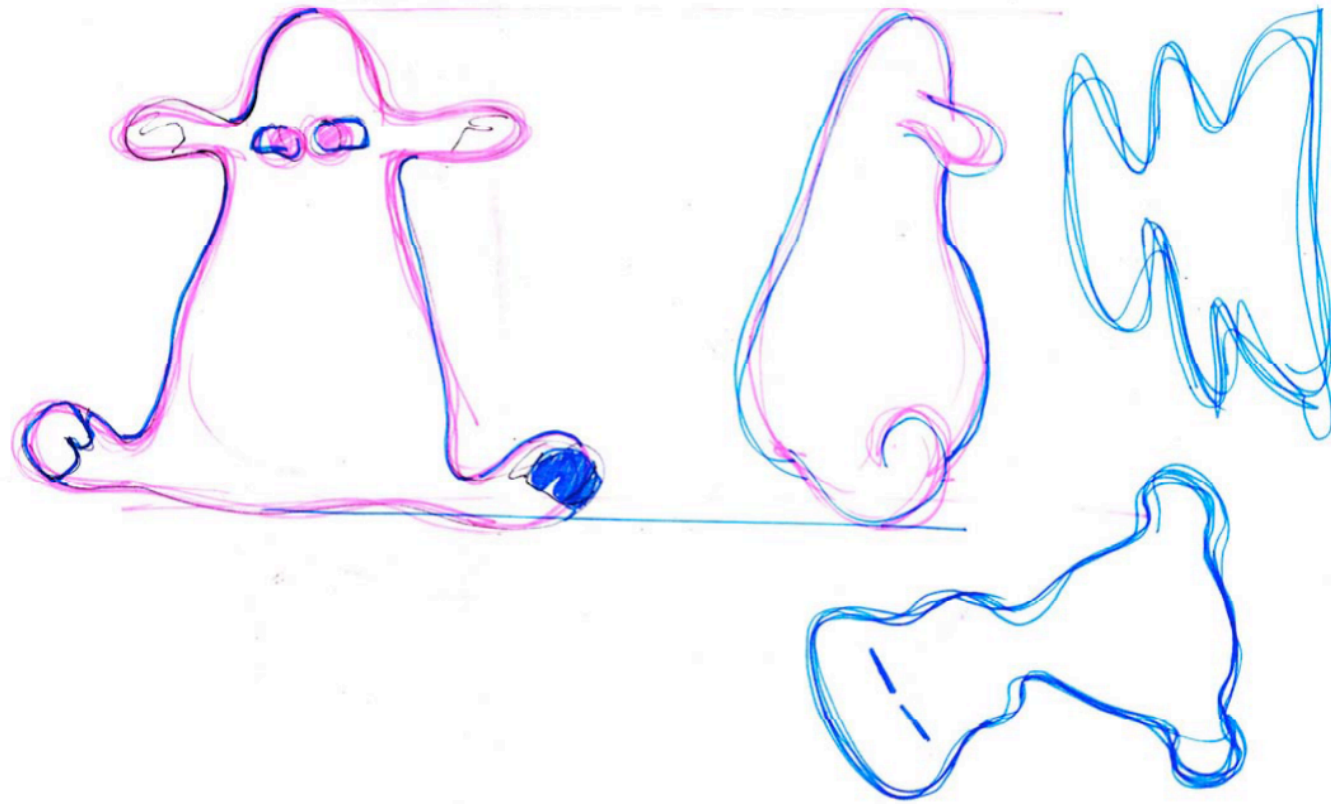
Figure 7.2 B

8. Concept

8.1 Concept Refinement

Some refinements were also tried out in the concept rendering to make it more huggable.
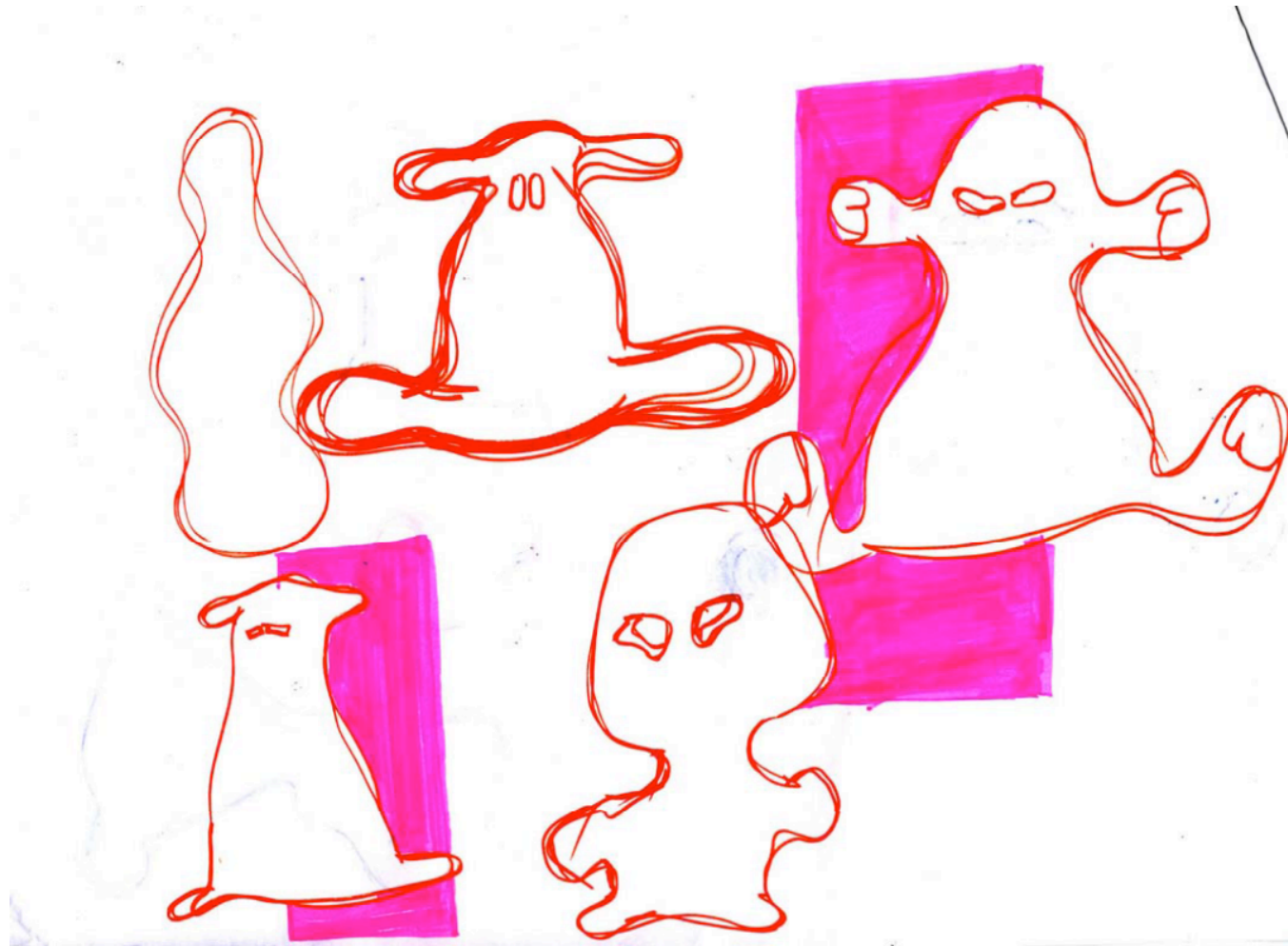
9. Final Form

9.1 Final Explorations

The main idea behind developing the form was to keep it simple and appealing.

9.1.1 Final Ideation
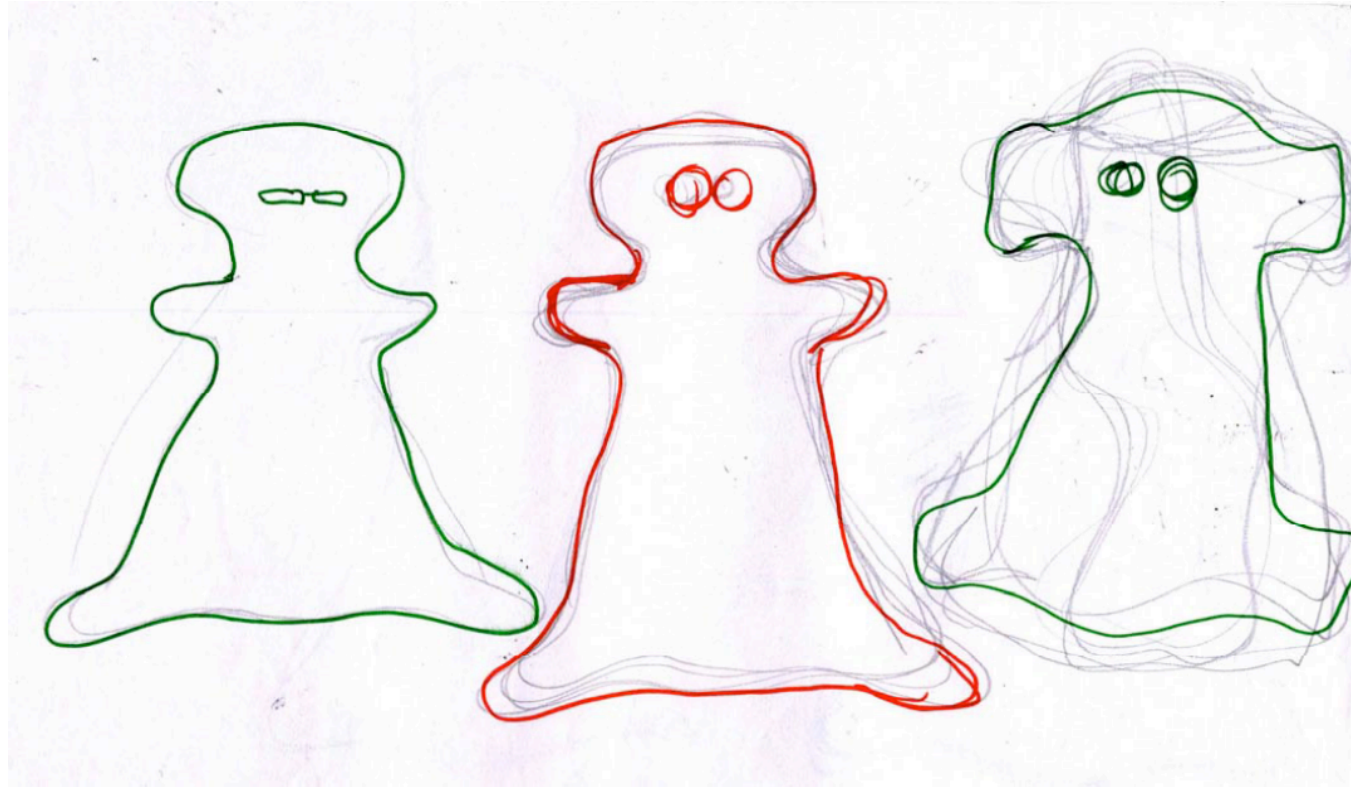
9.1.2 Final Ideation

Figure 9.1 A

There were a lot of interesting discussions happening on the sketches
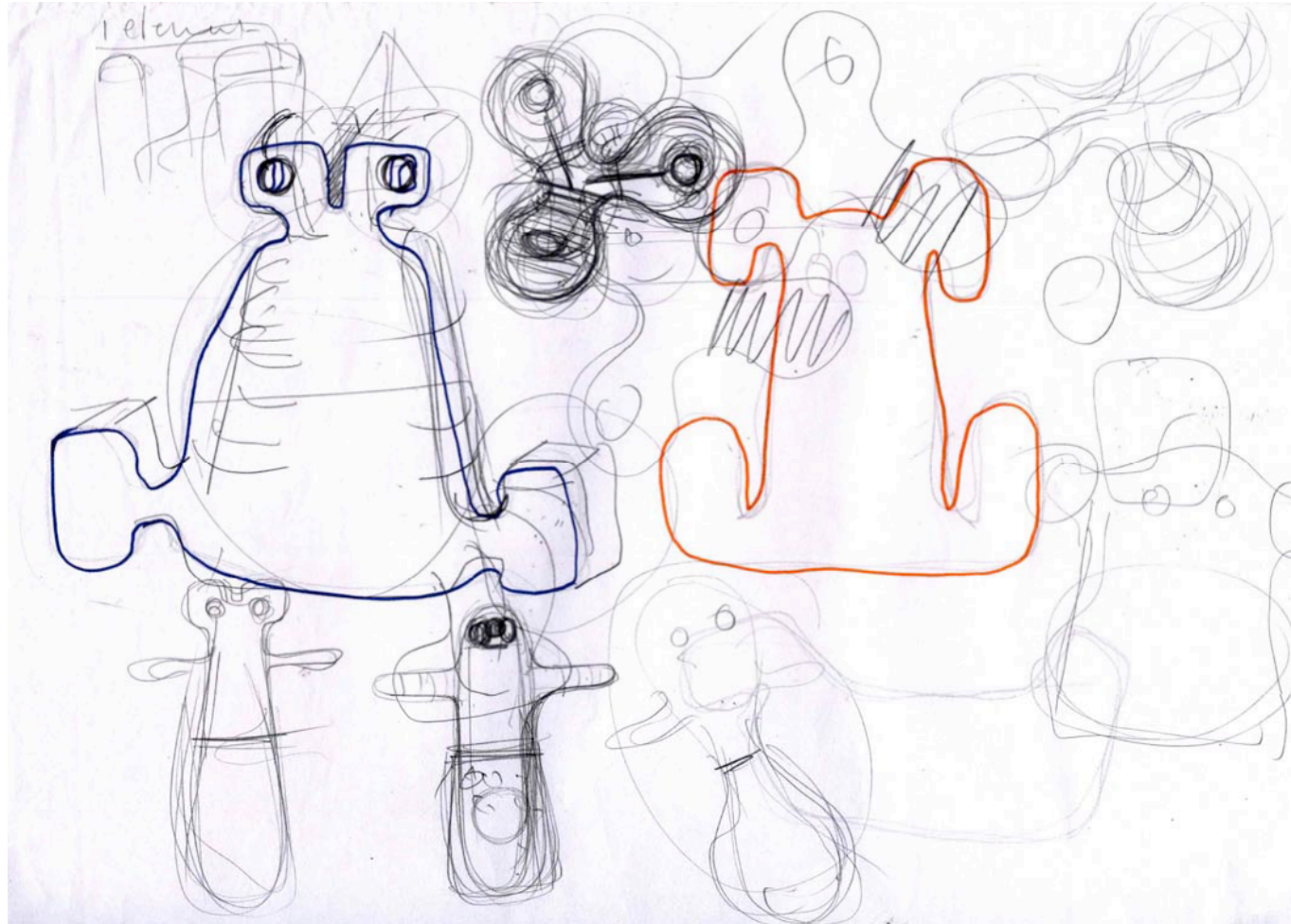with my friends and guides leading to new findings.

Figure 9.1 B

Finally, we decided to go for a form that is familiar in nature, simple and geometric which looks cute.

10. Final Concept

10.1 iMO

The main idea behind developing this form was to keep it simple and appealing.

Figure 10.1 A

The new form was also very familiar one and it was not looking like an alien which was evident in other forms.

Figure 10.1 B

The form is simple, geometric and looks very friendly. These were some of the key features i wanted on imo as it was a companion.

Figure 10.1 C

iMO interacts with the kids with its eyes which lights up differently in different scenarios. It also has speakers like mouth which cries and tells stories for her.

Figure 10.1 D

A family for iMO was also developed so that kids get to build up different scenarios with the little ones as well. It will encourage them also in role play.
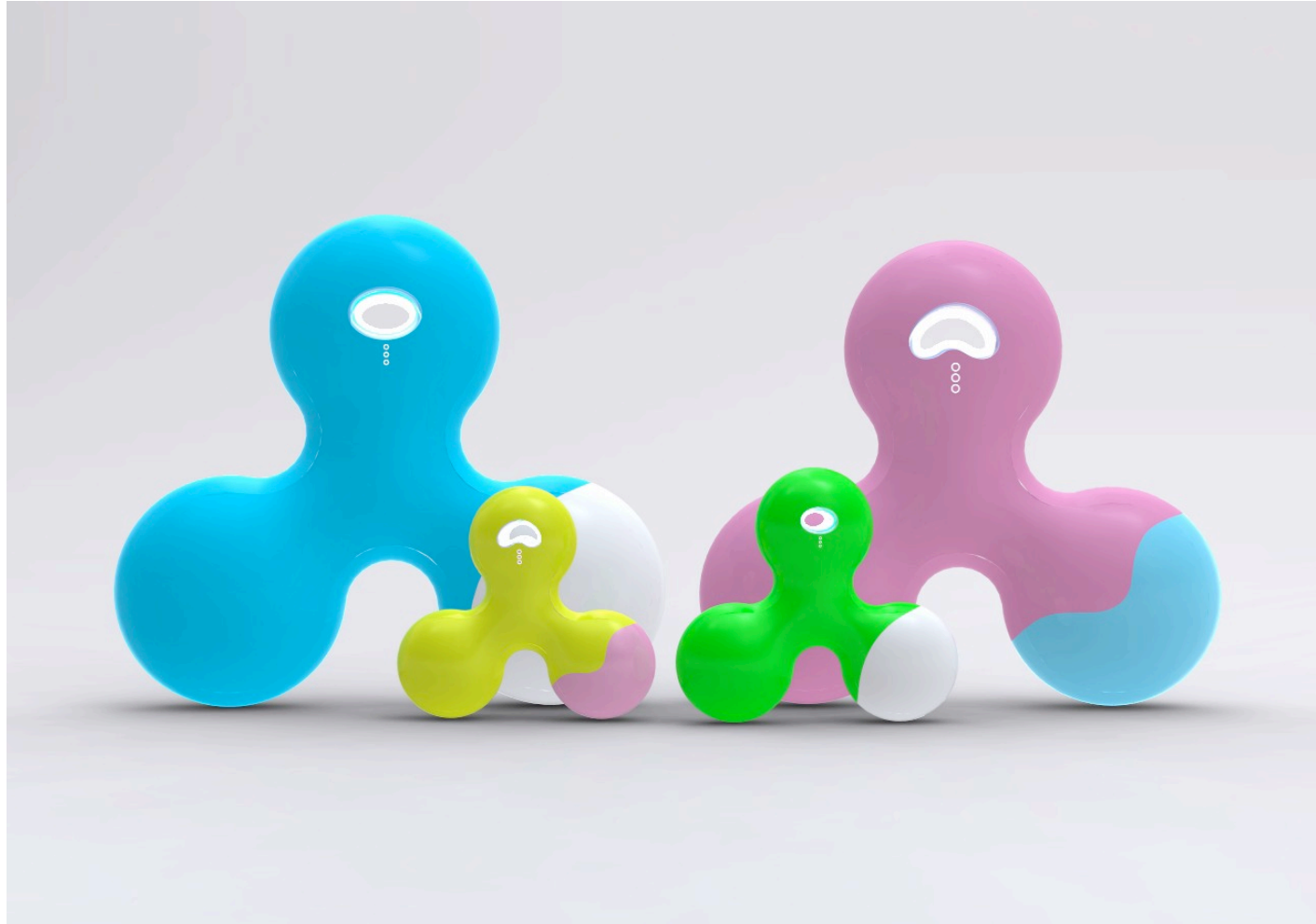

Figure 10.1 E

10.2 Iterations

Many iterations were done on different features of imo to bring the
right character.

Figure 10.2 A

Iterations for speakers and eyes were explored in many forms.

Figure 10.2 B

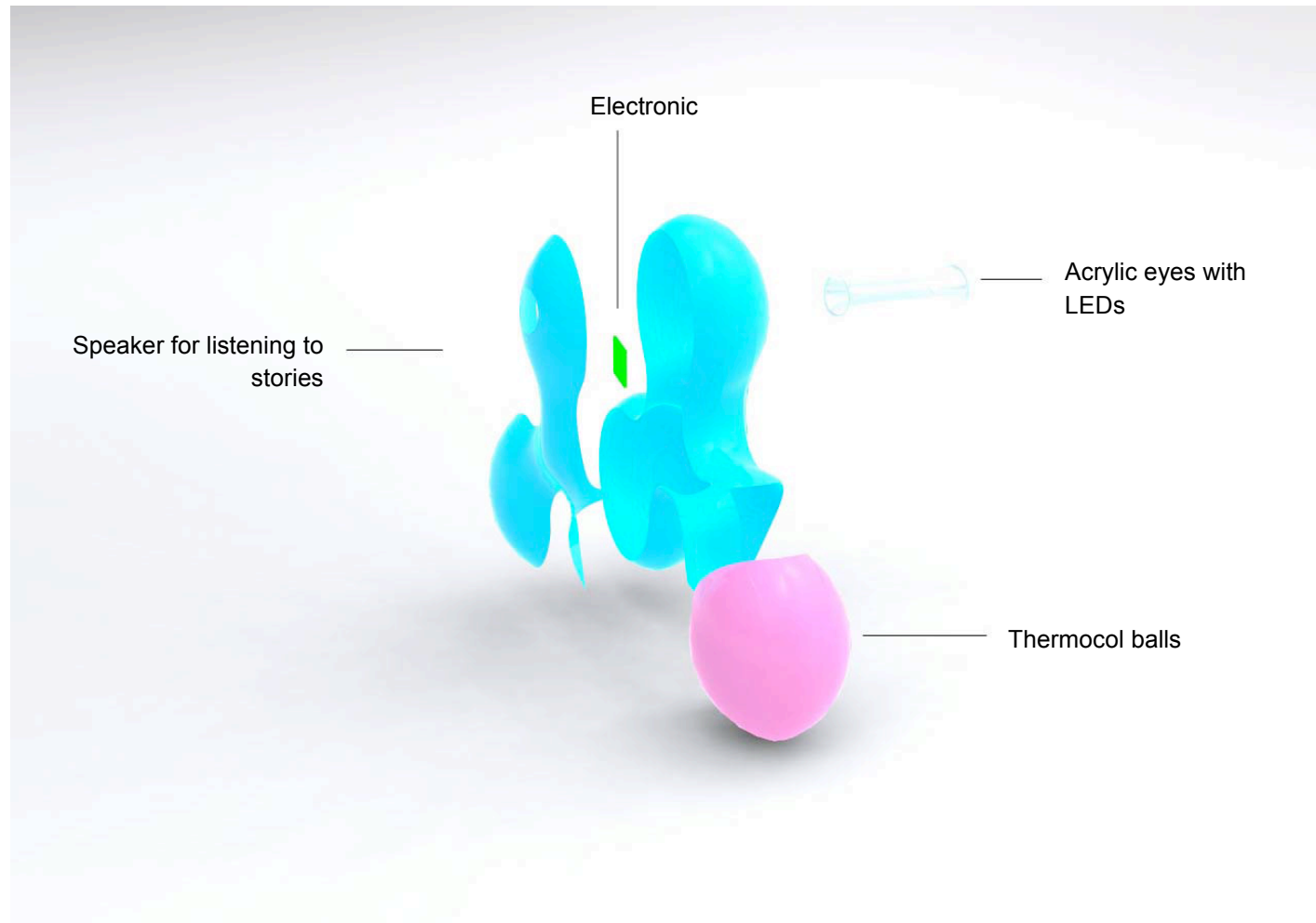Iterations were also done on colours and patterns on the leg.

Figure 10.2 C

Figure 10.2 D

10.3 Product Details

The rendering bellow shows the exploded product view of iMO.

Electronic

Acrylic eyes with LEDs

Speaker for listening to stories

Thermocol balls

10.4 Product Cost

Fabric.. 80/- rs.

Foam / Cotton.............................. 50/- rs.

Acrylic Cost................................. 10/- rs.

Electronics BOM cost.................. 200/- rs.

Stitching....................................... 50/- rs

Total... 390/- rs

11. Conclusion   **iMO**

iMO is designed very differently when compared to the usual stuffed toys which more or less looks like animals and aliens. Here, it is consciously created in an abstract simple form which helps children to perceive the toy very creatively. Its iteractive features in different scenarios will keep the kids engaged and happier.

11.1 Future Work

There is a huge lot of scope to make the toy more interactive and humorous by playing with light and sound. Imo rather than just being a toy, could also be a good companion to the old people who have very few people around to interact. Hence it can also go to old age homes as well. The element of light can also be explored very differently in different scenarios.

11.2 Self Assessment

The whole journey of the project was fun and challenging and it helped me to understand and explore a lot of things. I sincerely believe that this project helped me very well to get a better understanding on many aspects of design while developing a product.

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Table of figures

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