

Creative engagement for the Autistic : A design approach

*Semester IV
Design Project III Report*

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What are Autism Spectrum Disorders?

- Neurobehavioral disorder
 - Impairs social interactions
 - Verbal and non-verbal communication skills
 - Repetitive and stereotype behaviour
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- The symptoms are visible from three years from birth.
 - Cause and cure not yet found

Different types of ASD

Autism

Social interaction

Communication (verbal and non-verbal)

Restricted range of Behaviours, activities and interests (stereotypic behaviours)

Asperger's Syndrome

Trouble with social skills

Sensory input Transitions

Need rigid routines.

Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS)

Difficulties in normal behaviour, emotions, anxiety and aggression

Unusual play with products

Lack of eye contact

doctor and research says only

Treatment is...

Behaviour Therapy:

- Development of a regular routine with as few changes as possible.
- Structured class room training, aiming at learning new material and maintenance of acquired learning.
- Positive reinforcement to teach self care skills.
- Speech therapy and/or sign language teaching.
- Behavioural techniques to encourage interpersonal interaction.

Psychotherapy and Pharmacology

Also...

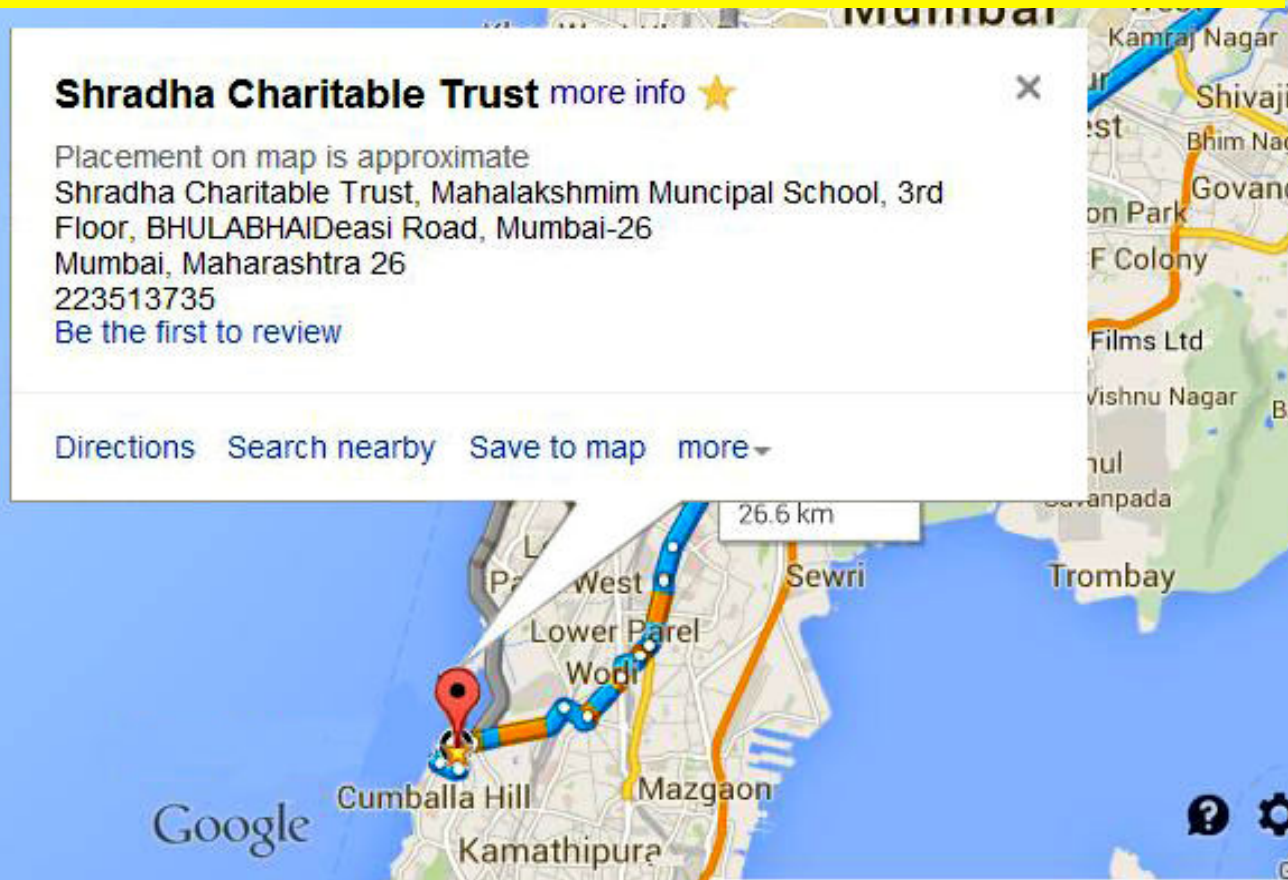
- Autism is non-curable.
 - Only 1-2% become near normal in marital life with kids, be social and occupational functioning.
 - A large majority (about 70%) lead dependent lives.
 - Some may be Employed in mainstream jobs (less than 10%)
 - Only about 25% have IQ of more than 70.
 - More than 50% have severity of mental retardation, absence of speech and underdeveloped motor skills
 - 10 million in India. 1 in 88.
 - Uneven cognitive abilities
 - Emotional difficulties
-
- Some excel in music math and art yet their abilities are unutilized.
 - Other unrecognized skillset

Autistic Adults

- There is no treatment available for autistic adults.
- If engaged in some activity their problem again starts increasing.
- Should be engaged in meaningful activities.
- They cannot work in normal work place with normal people.
- Need special environment, tools and training
- Need constant supervision



In depth about autism and possibilities



Shradha Charitable Trust [more info](#) ★

Placement on map is approximate

Shradha Charitable Trust, Mahalakshmi Municipal School, 3rd Floor, BHULABHAIDeasi Road, Mumbai-26

Mumbai, Maharashtra 26

223513735

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Shraddha

- Shraddha Charitable , Mahalakshmi, Mumbai
- Non-Profit NGO
- Fight autism and mental disabilities with love and creativity
- Mission - of making autistic people self-confident through their own creative ability.
- Finished training at SPJ Sadhana School for the Autistic
- Simple job skills, such as, to name a few , sticking, plastering, moulding, pasting, pressing etc
- Workshop training in making eco friendly items



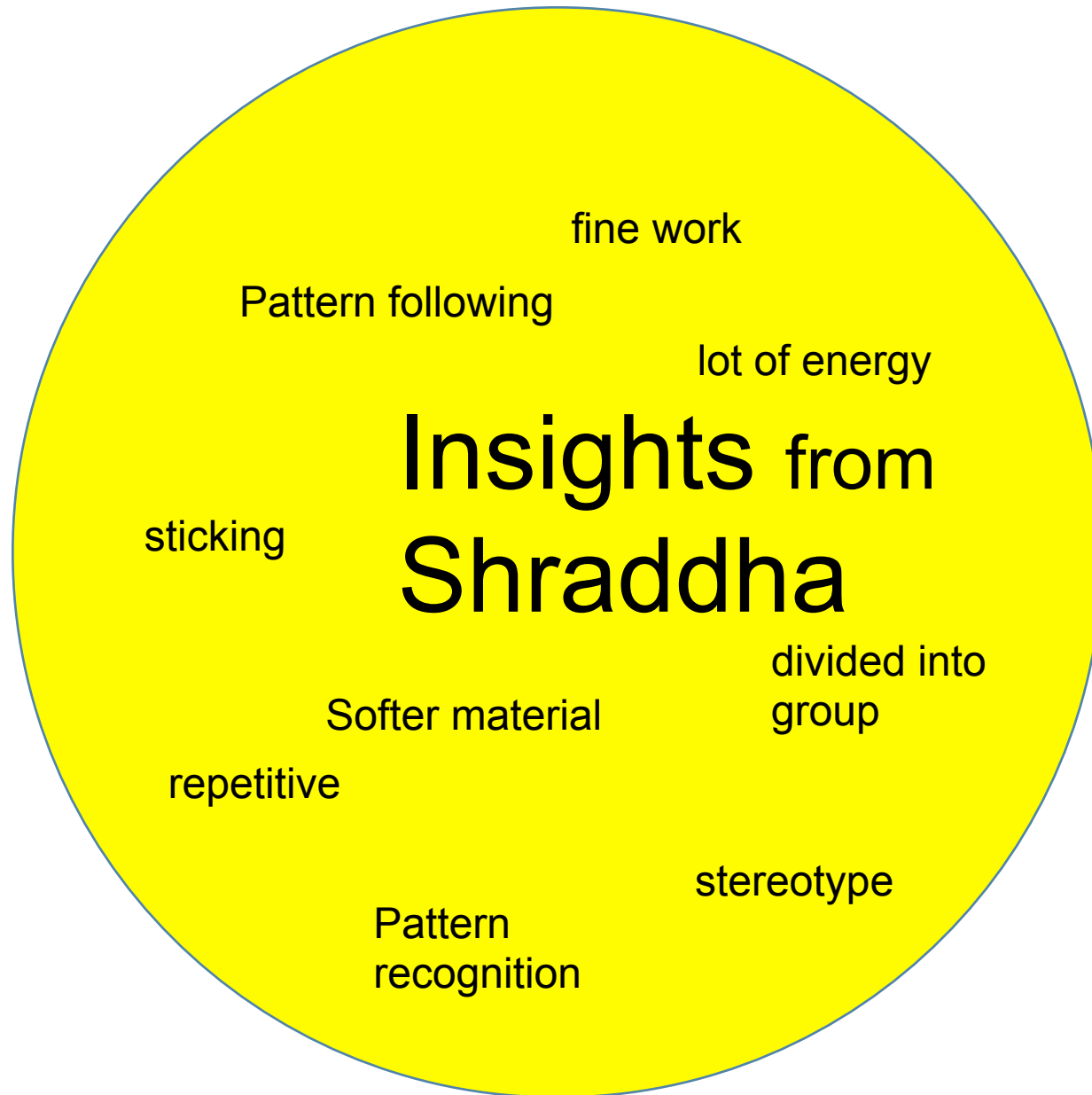
activities





Shraddha products







Mind Map

Scope of work



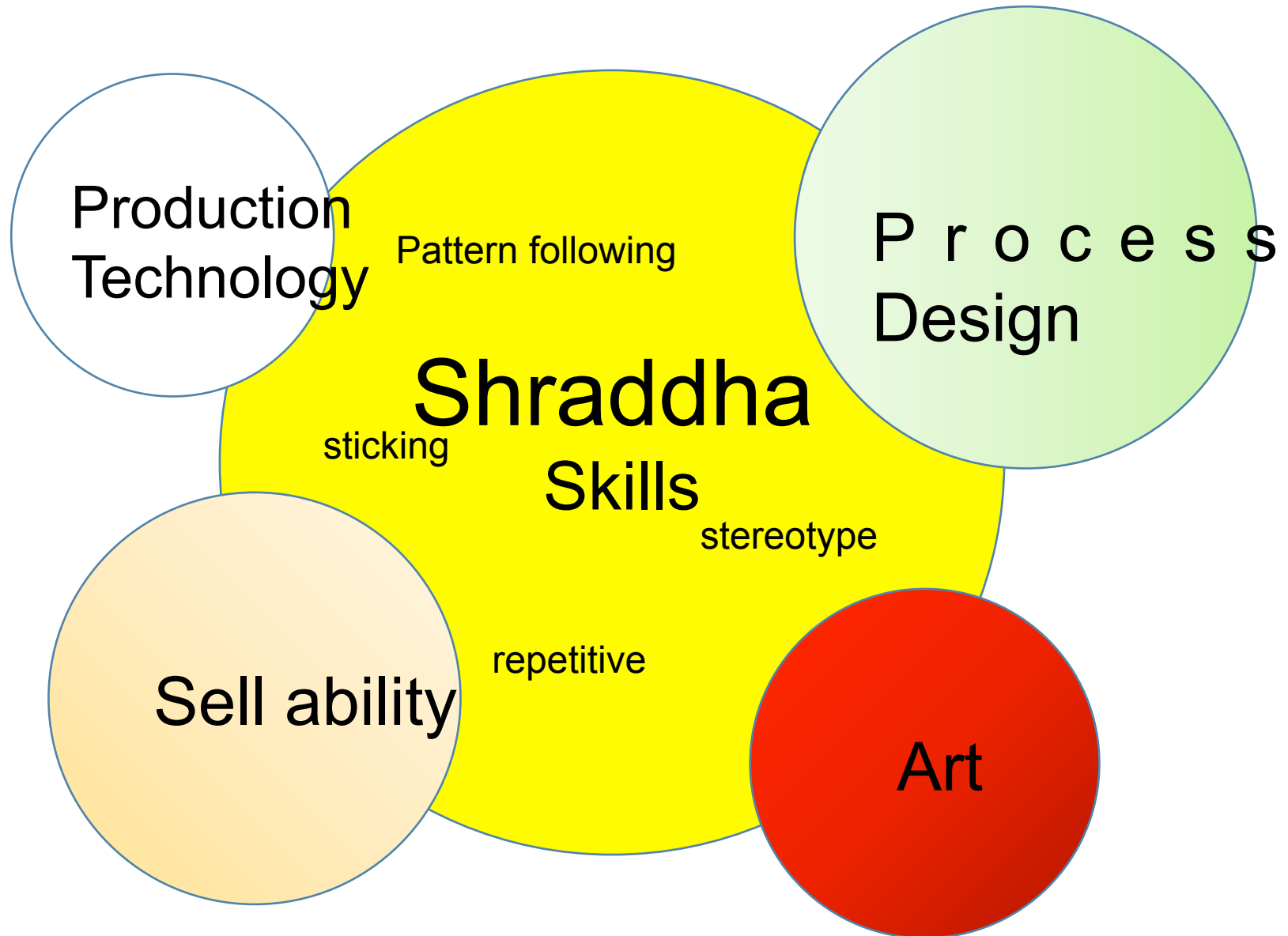
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graph TD; A[Scope of work] --> B[Teaching and e-learning]; A --> C[Crafting and Decorative products]
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Teaching and e-learning Crafting and Decorative products

Design brief

- Utilizing their abilities creatively and gainfully in the process of making the product
- Designing the step and sequences based on their abilities and disabilities
- Engaging the children in meaningful activities
- Use of jigs, fixtures, templates and molds can be incorporated depending upon the complexity and necessity of the work

If through the process there is development in cognitive and motor skill, it is beneficial



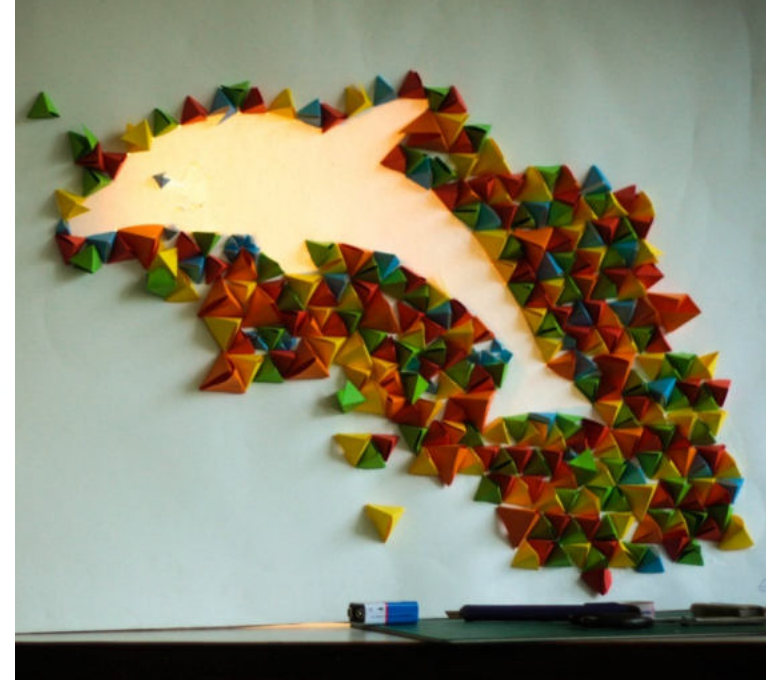
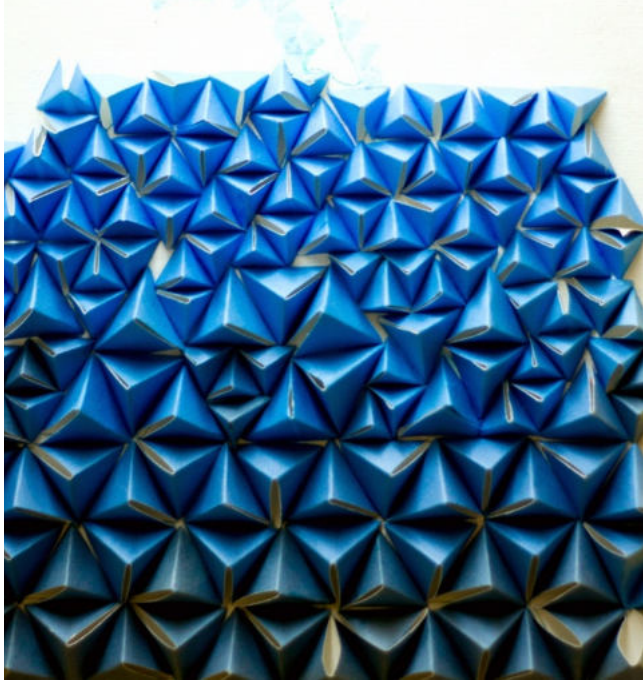
Explorations in various forms of paper-craft

3D abstract forms

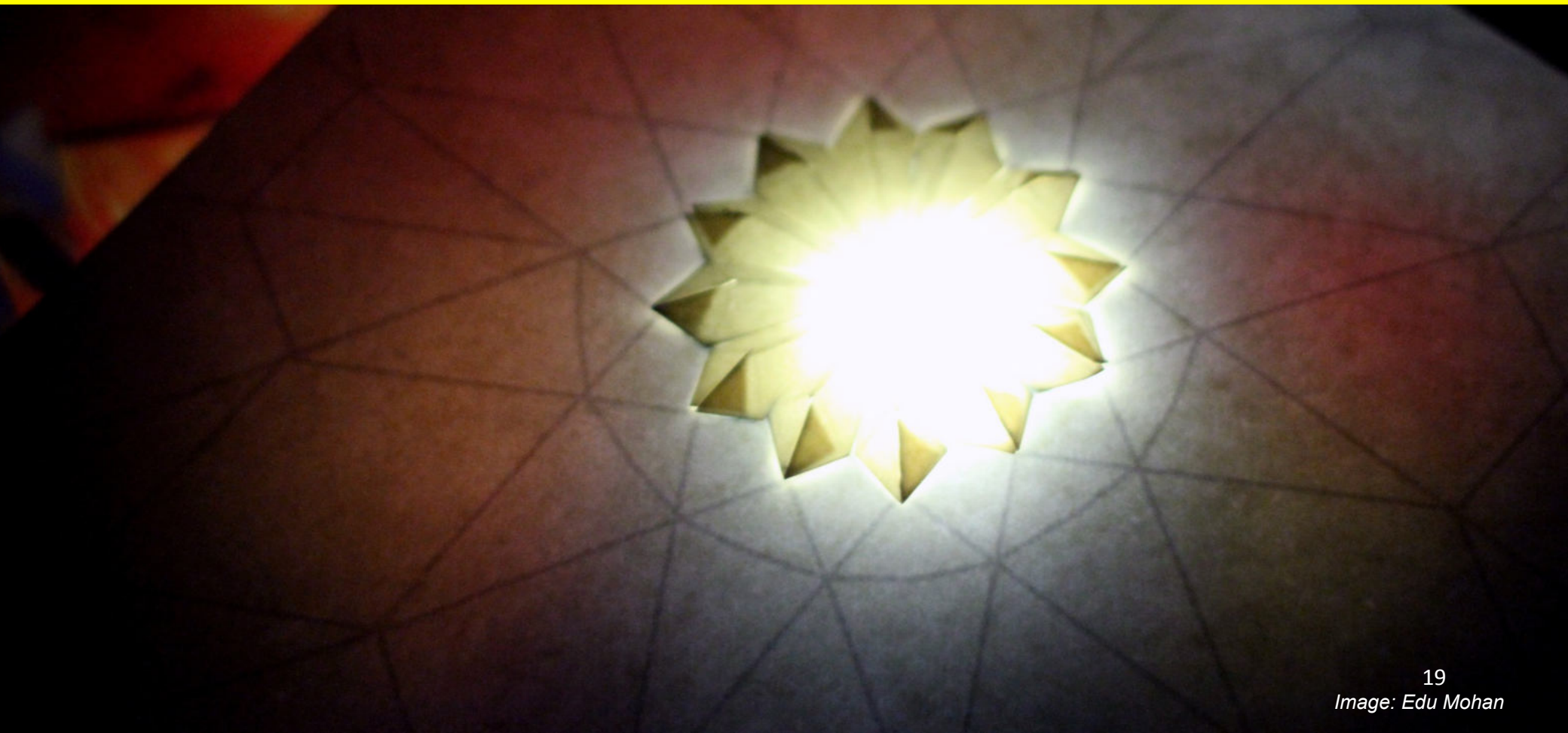
2D geometric forms



Basic geometric shapes



then came in **Light**





A3 and A4
LED light source on perimeter

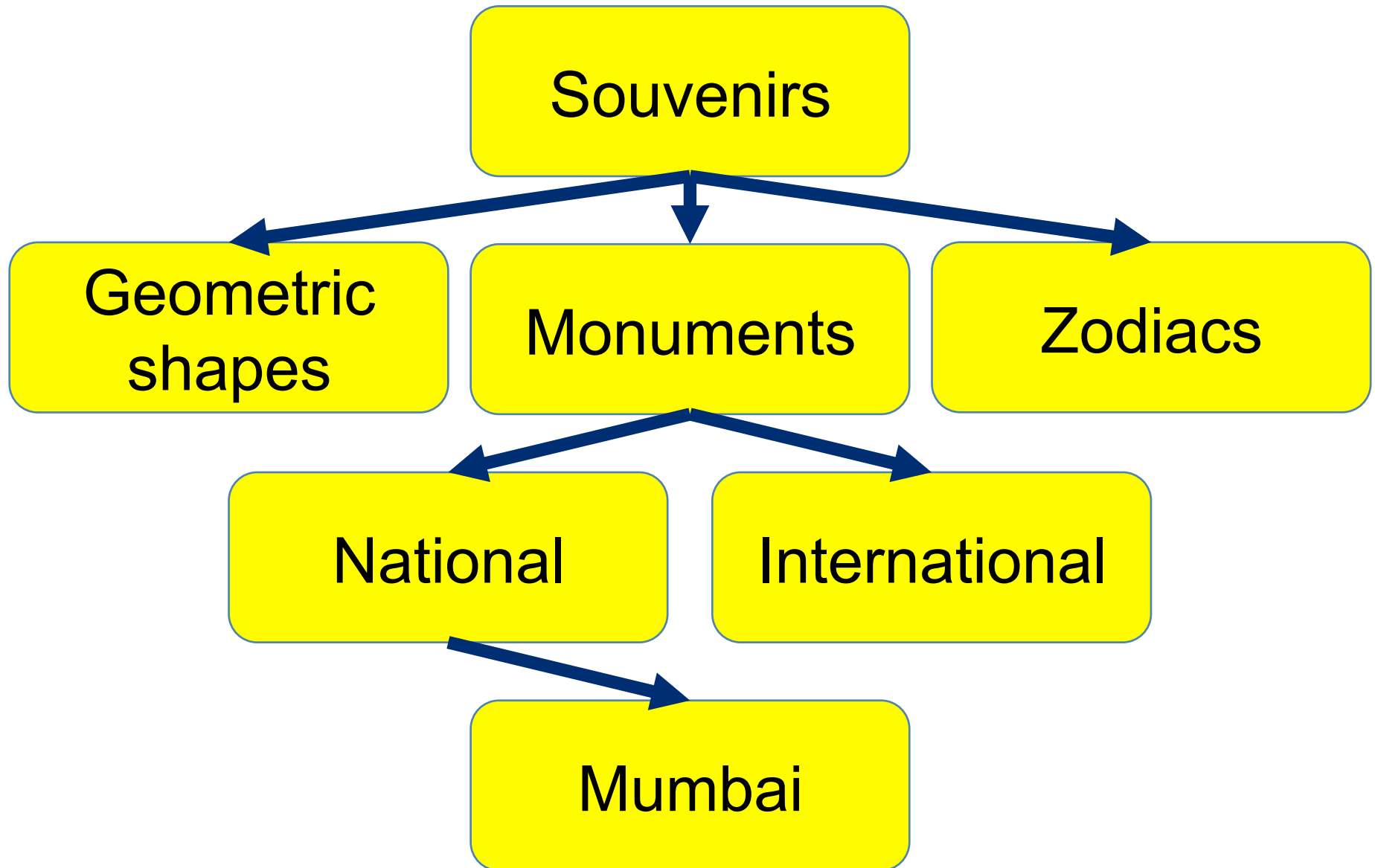
The TEST RIG

Directions explored

1. Packaging solutions
2. Technology and Paper-Craft

Final Design Approach

- The discussions with Shraddha management, Ms.Parul, Ms.Arti and my guide
- A stand-alone or be part of a larger system as a game
- Recently formed an alliance with Mumbai tourism development corporation(MTDC).
- Led to souvenirs or memorabilia
- LED, paper cut-outs, pop-up





International monuments

The Opera
house,
Sydney



The Moai statues of Easter Island





The Leaning tower of Pisa



National monuments

The Taj Mahal

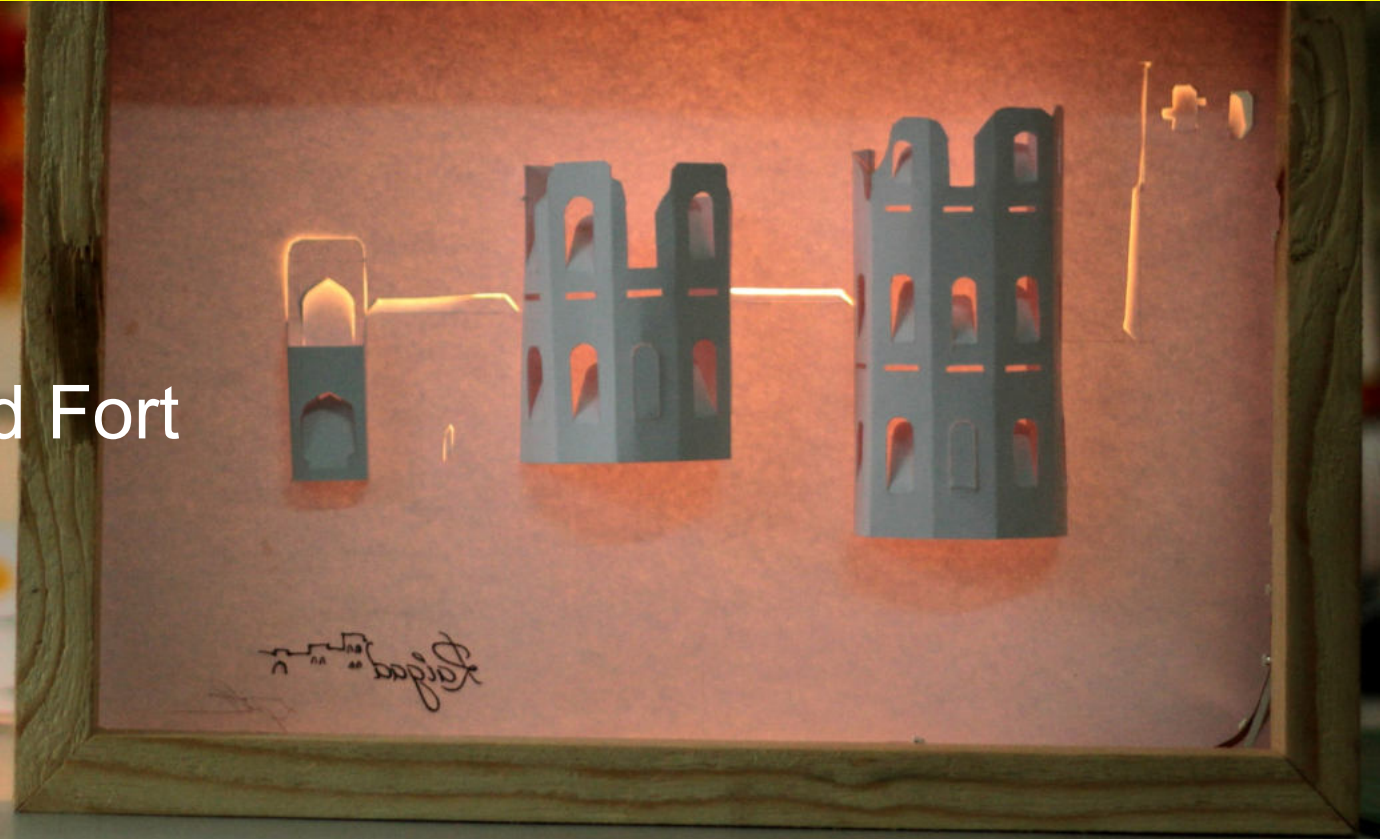




The Gateway of India

Mumbai and Maharashtra

The Raigad Fort

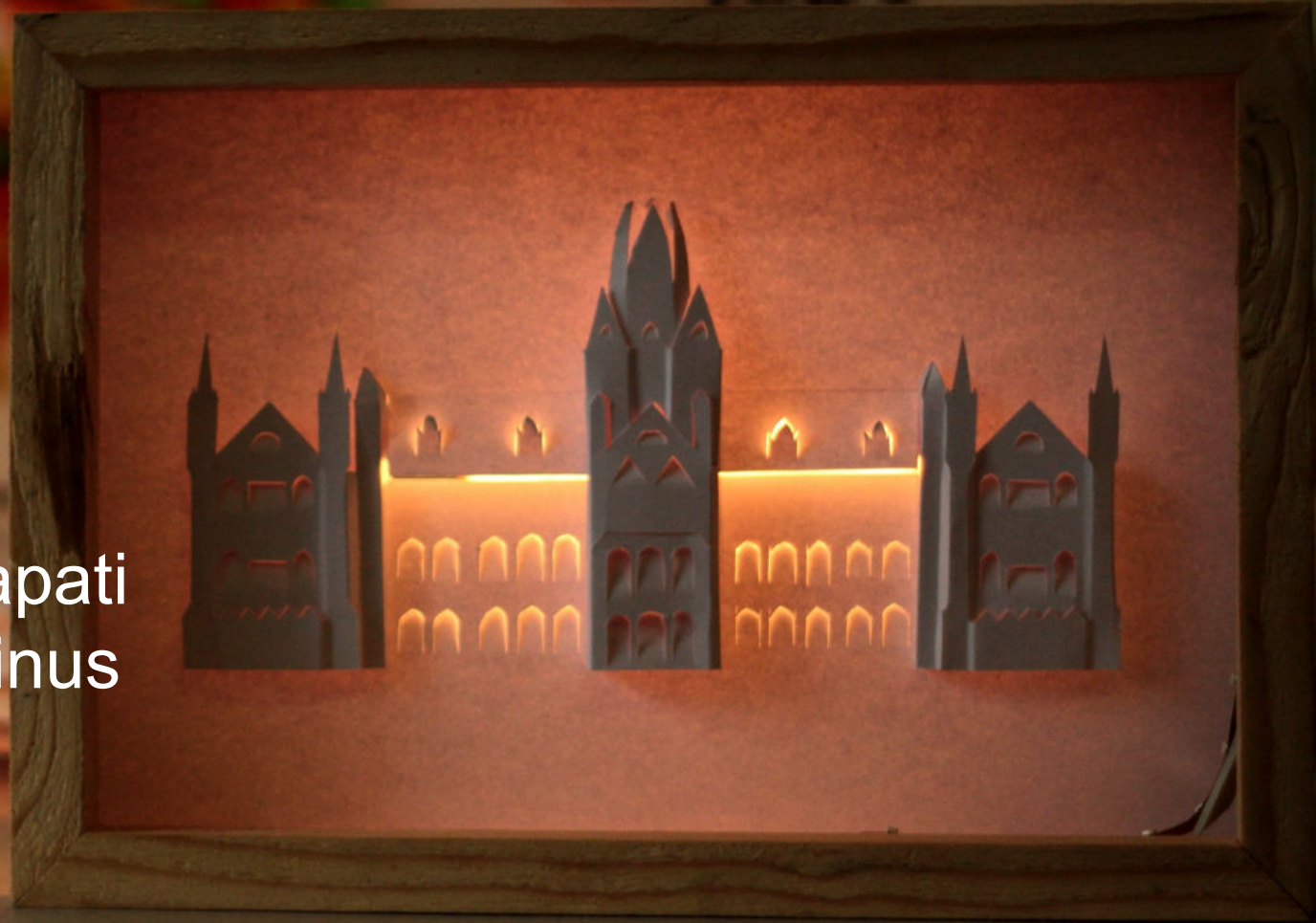




The Elephanta Caves



The Chhatrapati Shivaji terminus



A glowing wooden frame with a paper lantern inside, set against a background of colorful flowers and papers.

The Nehru Center

Final Design

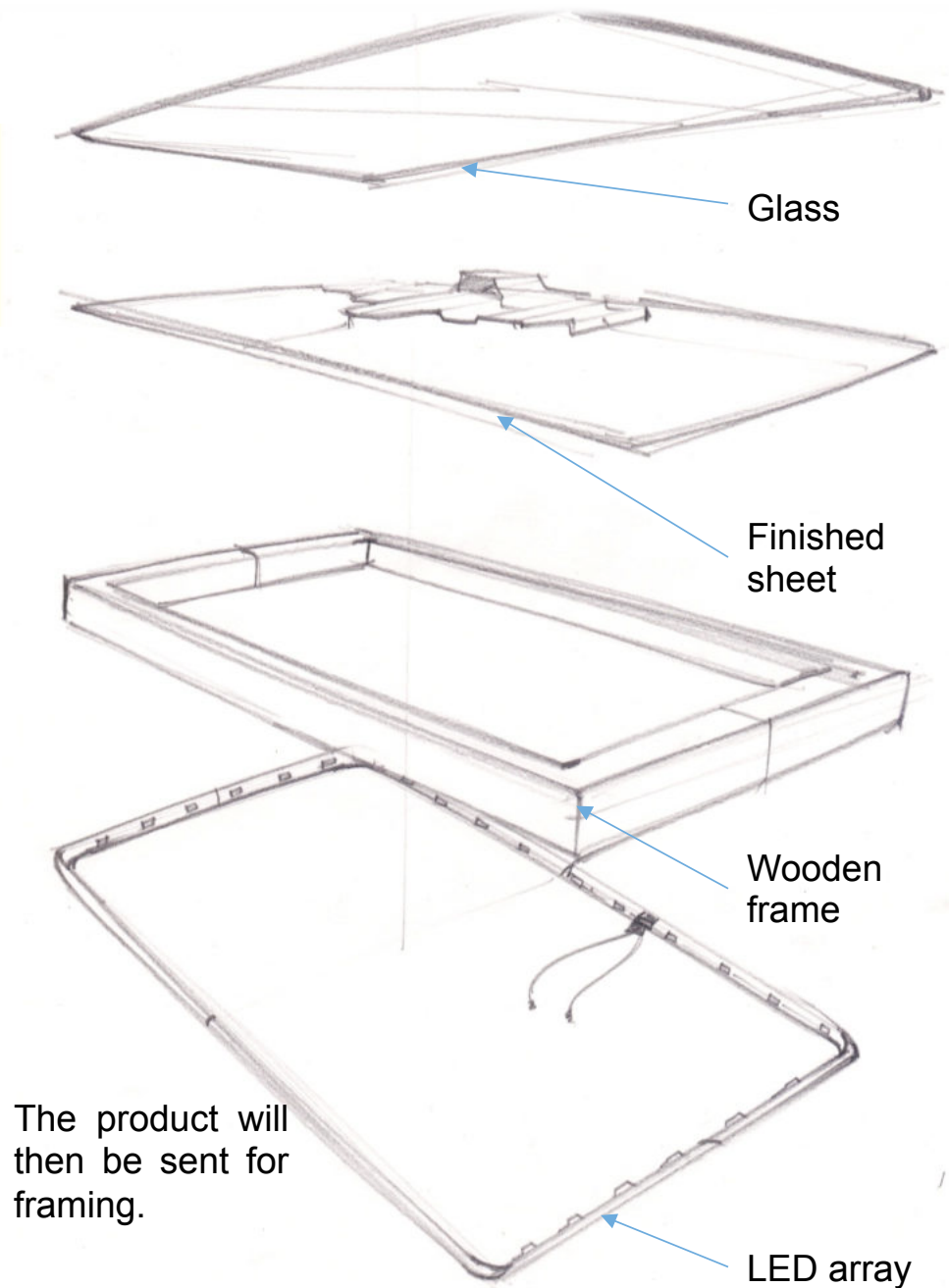
Directions

A souvenir of a major landmark of Mumbai.

- Small elements such as clouds and trees for landscaping
- A student with higher skill level can do the complex bending.
- A lower skill level student can paste the cut outs.
- One batch that has a moderate skill level can have a logo of Shraddha put on the artwork with a stencil.
- Another batch can print a write-up about the art using a designed stamp.
- A student with sufficiently developed mind can make aesthetic decisions in terms of placing the various visual elements in the frame, and thus creating a unique composition each time (if possible). This can be possible with necessary training and real time guidance by the supervisors as is currently done for many of the products.

The Process

- A kit which would have cut outs from paper.
- The students will have to stick the elements on the base sheet aligned to the markings.
- The complex patterns and fine elements are precision cut on a 220-250GSM paper using a CNC laser cutting machine.
- Further extending possibilities of product design intervention, jigs for bending, stencils for painting and stamps for printing are incorporated.
- The finished piece will be framed.
- The frame with the LED lining will be done outside Shraddha.
- The page will be backlit using an LED array running along the frame.
- The LED source will be powered from the AC mains and there would be a driver which will do appropriate power management necessary for the LEDs to function.



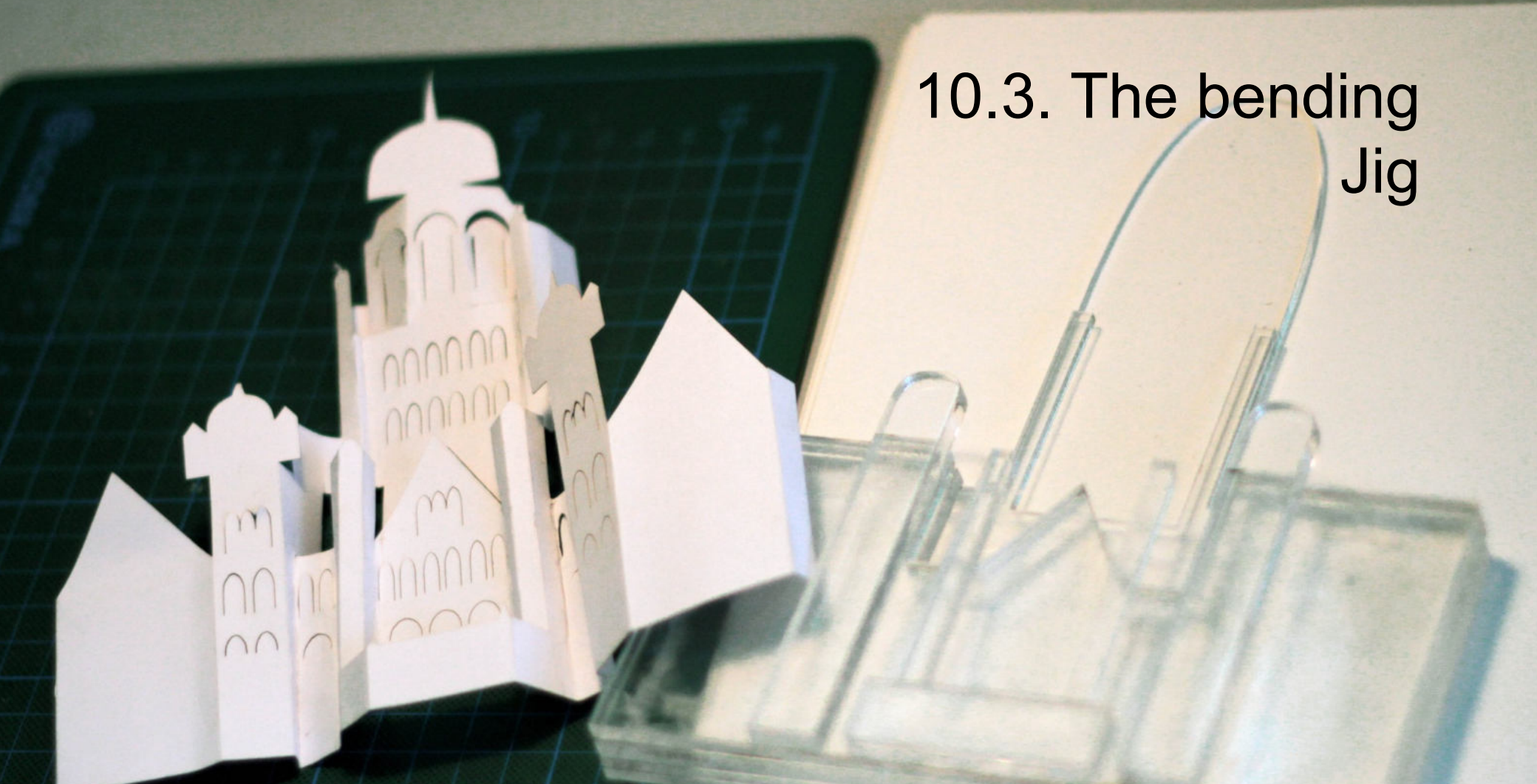
The Bombay Municipal Corporation Building



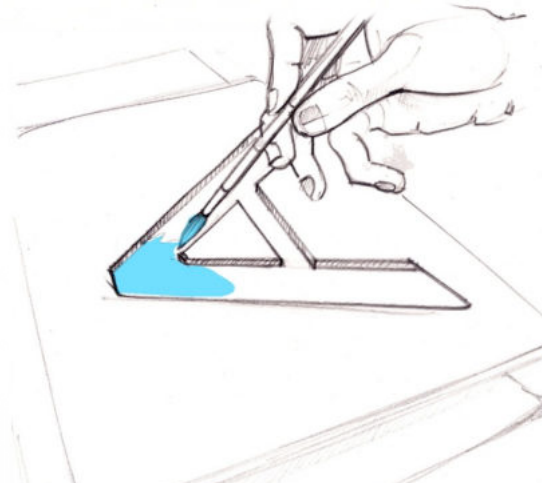
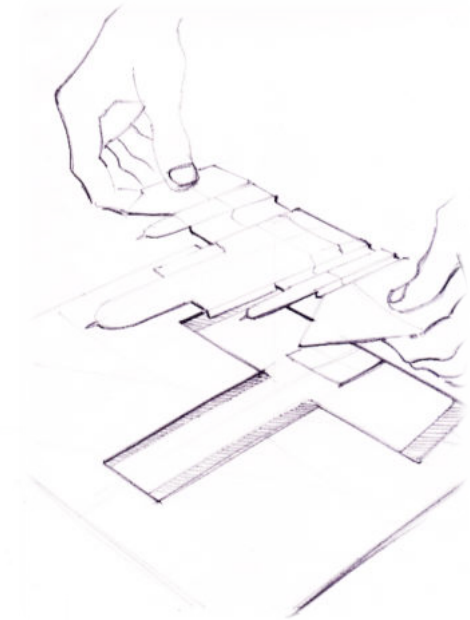
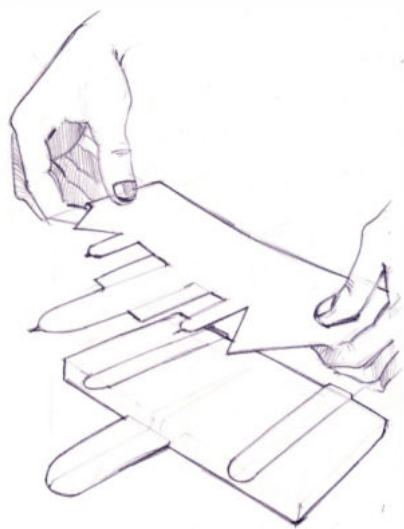
The BMC was created in 1865. It is an epitome of the Gothic architecture done by F. W. The building was completed in 1893. It is known for 77.7m tall tower. [9]



10.3. The bending Jig



The Bending Jig



Activity Chart

The Marine drive



Gateway of India





Evaluation of Ideas

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