

PORTFOLIO

This portfolio presents the students' design explorations and skill development through the Basic Design Studio. It captures their early understanding of human scale, spatial relationships, and the experiential qualities of architecture.

The works illustrate their growth from simple anthropometric studies to creative spatial interpretations using sketches, diagrams, manual drafting, and physical models. Each sheet reflects their ability to observe, analyse, and translate everyday activities into meaningful spatial concepts. The portfolio highlights the foundations of their design thinking blending creativity, critical awareness, and hands-on experimentation forming a strong base for advanced architectural learning in later semesters.

📍 Ooty Woodcock Road, Kandal Ooty Tamil Nadu
 -643001
 -11°24'34"N 76°41'31"E

SITE STUDY

GEOGRAPHY

Region - Nilgiri Hills, Western Ghats
 Co-ordinates - APPROX - 11°24'N 76°40'E
 Altitude - Around 2,240 m above sea level

TOPOGRAPHY

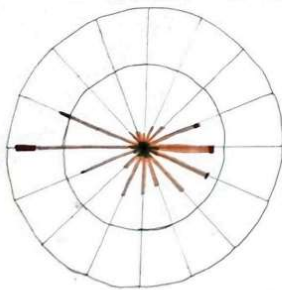
Has a moderate slope - Descending south/southeast
 Contour Lines runs roughly east-west
 Good Drainage but to erosion (Terracing or retaining walls)

SOIL

Mainly Lateritic soil and loamy soil
 Colour - Reddish-Brown Due to High iron content.
 Texture - Loamy to clayey - good for vegetation, Moderate Drainage
 Soil Depth - Medium to deep in most places, but shallow on Rocky Patches.
 Strength - Deep foundations or plinth Beams Recommended in slope
 -SUITABLE For Light to Moderate Load Bearing Foundation.

HYDROLOGY

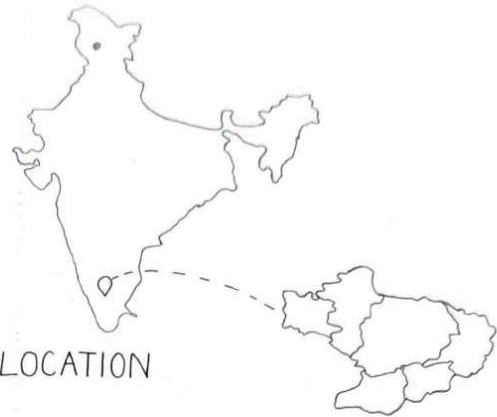
Rainfall - High 1,200 to 1,400 mm/year
 Monsoon - Southwest [June - Sept]
 Northeast [Oct - Dec]



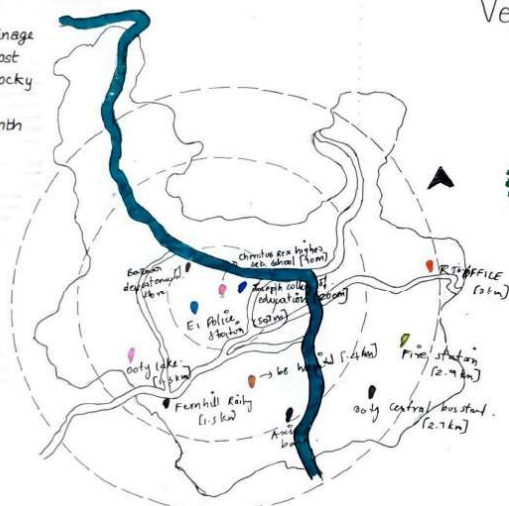
WINDROSE DIAGRAM

< 2 km/h
 10 of 20 km/h
 5 - 10 km/h
 2 - 5 km/h

- ### INFERENCE
- Climate responsive design:
 - Ooty cool high-altitude climate necessitates designs that retain heat and resist moisture.
 - Traditional Architecture.
 - Use of Local Materials:
 - Historically used locally sourced stone, wood and clay, promoting sustainability and cost-efficiency.
 - Roof Typology:
 - Sloped roofs dominate the region due to heavy rainfall.



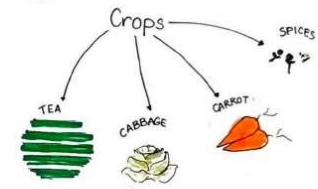
LOCATION



ROADWAY NETWORK

Main access
 Other roads.

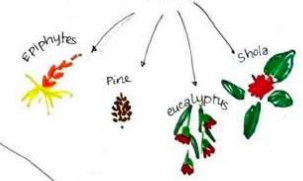
Vegetation



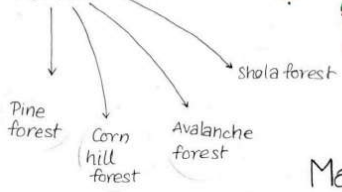
Fauna



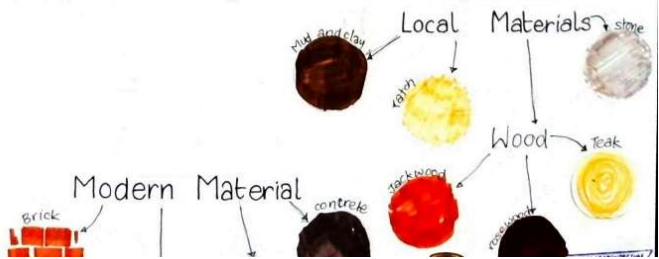
Flora



Forest



Materials





- ### LEGENDS
- Site
 - Noise
 - Wind
 - View point
 - Vegetation
 - Vehicular circulation
 - Secondary circulation
 - Drainage
 - Vehicular entry
 - Pedestrian entry

- ### VIEW POINTS
- 1-Opening between the trees which lets us see beyond the topography.
 - 2-Open space, and has a big tree for a Contrast
 - 3-It shows the tea plantation at further view, which makes it a plus point
 - 4-This side has a horse training space
 - 5-This side has Residential property
 - 6-It has busy road and some residential property

INFERENCE

Noise: As there might be many noise disturbance from road, residence and school. So to stop/reduce the noise it would be better to provide buffer screen.

Wind: As it is a cool climate area, if wind opening overpower or kept in a wrong wall, it might make the space uncomfortable for the user.

Sun Path: As it is a cool climate area. The space needs as much as sunlight as possible. So, the more windows more sunlight would enter the space.

SWOT

Strength	-Great Climate, Views, Educational Institute Near by
Weakness	Heavy Rainfall,
Oppurtunities	-Rainwater harvesting
Threats-	Traffic noise from road. Soil Erosion.

USER

The villa is designed for a chosen family of an Artist Mother, who is an independent young lady who adopted two children, one 15 year old teen daughter who is very adventurous and loves mechanics and a 9 year old son who is little shy and he loves eating and baking. Mother loves nature and gardening. In the family another member is their family Nanny, who also isn't blood related to anyone in the family but became a family in their of the life.

Seeking a peaceful retreat from urban life she and her family thought of shifting to a new place. The owner wants her kids to have their best time, experiencing the new climate and environment while still enjoying their hobbies and interests.



VILLA CAELESTIS

CONCEPT

"EPIPHYTES"
"A SYMBOL OF SUPPORT WITHOUT DEPENDENCE"

Villa Caelestis is inspired by epiphytes - plants that grows lightly on trees, drawing life from air, rain and light. Like them, the villa gently perches on Dooty's slopes, embracing nature without burdening it. The design celebrates lightness, elevation and harmony with the misty forest canopy and also as moss bubbles.

VILLA CAELESTIS

Villa Caelestis is a Latin Phrase which means "Heavenly Villa" or "Celestial House"

- Villa - House
- Caelestis - Heavenly/Celestial

Reflects the concept of a home that is elevated, light and in harmony with the skies - Just like epiphytes that live among the treetop, drawing life from the air.

DESIGN DEVELOPMENT

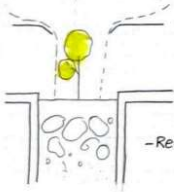
"A SYMBOL OF SUPPORT WITHOUT DEPENDENCE"

INCORPORATING

Self-Sustaining features:

- Rainwater harvesting:

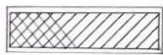
1. First Floor Courtyard: The water which falls above the roof goes inside the hole of first floor courtyard, which penetrates through the soil, gravel to the storage space.



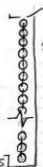
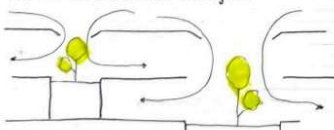
- Recharge pits: Ground floor Courtyard's water goes direct to the underground water which will restore the water table underground.

- Air circulation

- Jali Above Window: It is to catch wind without actually opening the window, As it sustains itself for cooling the space.



- First floor/Ground floor Courtyard.



2. Chain: The water which normally falls and misses and not goes to the courtyard, goes to the chain to the gutter and goes to the storage space.

Dome

- Structural Strength.
- Distributes weight evenly
- Acoustic Qualities.
- Sound is amplified and echoed.

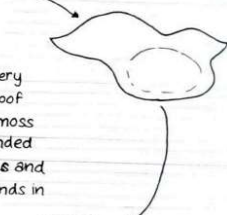
Cylinder

- Visual softness.
- feels gentler and more efficient
- Wind Resistance
- Aerodynamic form helps in wind-prone area.
- Natural Light Distribution
- Light bounces evenly across curved walls

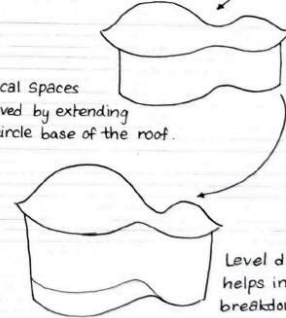


Dome Roof which extended as the purpose of sunshade, feels very organic.

EPIPHYTES which is very common is Moss. The roof design is inspired by moss bubbles, with soft, rounded forms that gently rises and falls like natural mounds in a forest



Cylindrical spaces were achieved by extending the basic circle base of the roof.



Level difference helps in to breakdown the space without actually using walls



PLAN

LEGENDS

- 1 Headroom
- 2 Terrace
- 3 First floor Courtyard
- 4 First floor Courtyard
- 5 Ground floor Courtyard

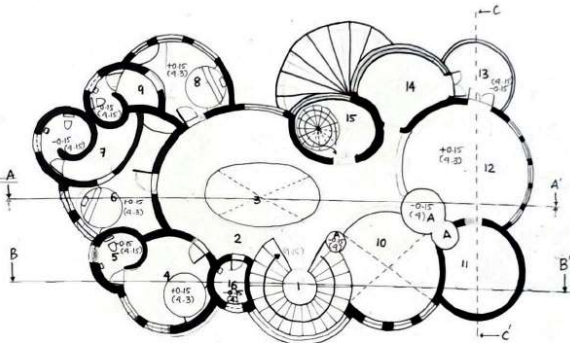
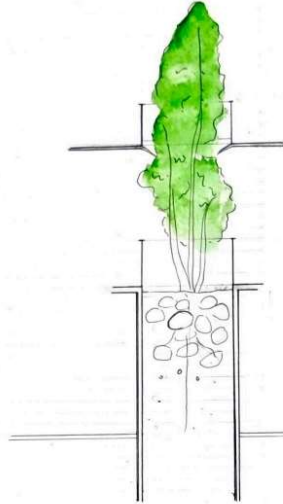
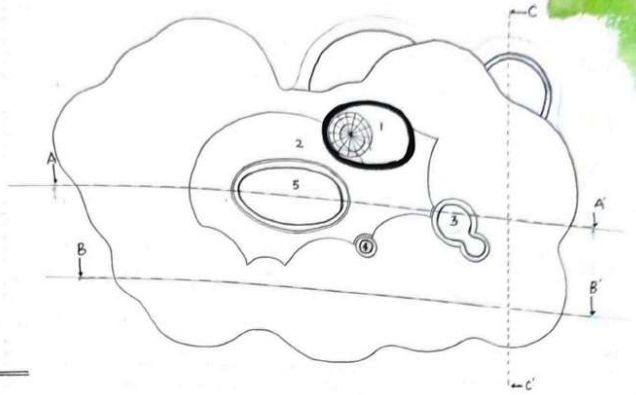
LEGENDS

- 1 Staircase
- 2 Hallway
- 3 Ground floor courtyard
- 4 Guest Bedroom
- 5 Guest Bathroom
- 6 Teen's Bedroom
- 7 Teen's Walk-in cum Bathroom
- 8 Kid's Bedroom
- 9 Kid's Walk-in cum Bathroom
- 10 Double ceiling (Informal Living space)
- 11 Theatre
- 12 Open Library
- 13 Balcony
- 14 Studio
- 15 Gallery
- A First floor Courtyard
- 16 Common Bathroom

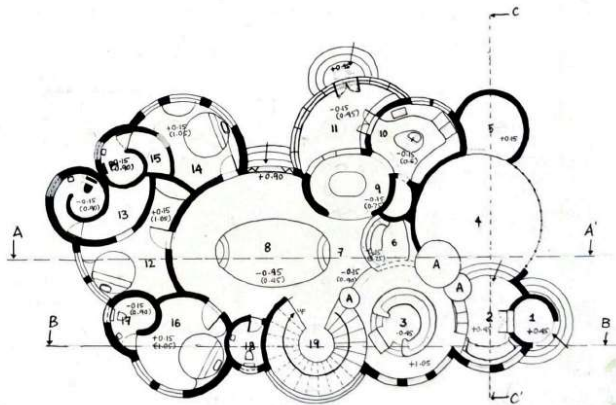
LEGENDS

- 1 Veranda
- 2 Formal Living space
- 3 Informal Living space
- 4 Parking
- 5 Garage
- 6 Gaming area
- 7 Hallway
- 8 Ground floor Courtyard
- 9 Dining
- 10 Kitchen
- 11 Green Room
- 12 Master Bedroom
- 13 Master Walk-in cum Bathroom
- 14 Nanny's Bedroom
- 15 Nanny's Walk-in cum Bathroom
- 16 Guest Bedroom
- 17 Guest Bathroom

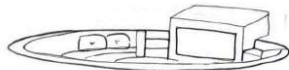
Type	Description	Size
D ₁	Door	1×2.5
D ₂	Bedroom Door	0.9×2.5
D ₃	Bathroom Door	0.75×2.5
D ₄	BI Fold	2×2.5
D ₅	Shutter	4.5×4
W _{1a}	Fixed Window	4×2.2
W _{1b}		3.5×2.2
W _{1c}		7×2.2
W ₂	FCC Window	1×2.2



First Floor Plan

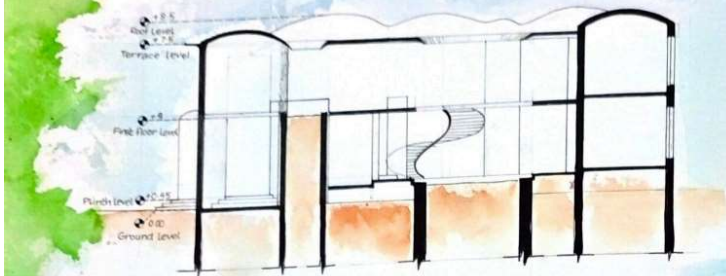


Ground floor Plan

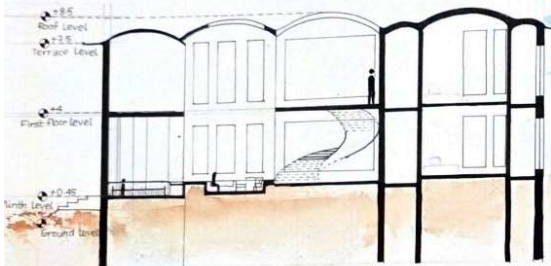


PROFESSOR OF ARCHITECTURE
V. VALDES 1/25

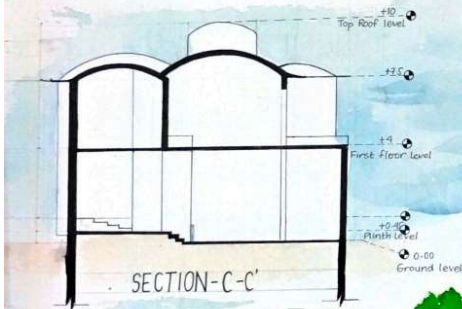
SECTIONS AND ELEVATIONS



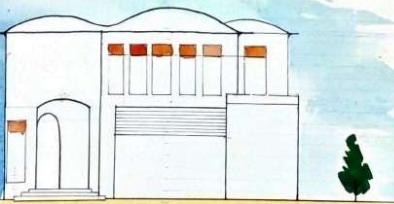
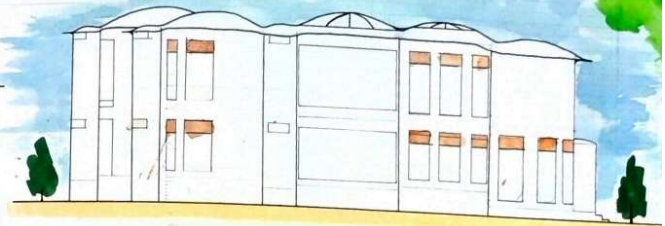
SECTION - A - A'



SECTION-B-B'



SECTION-C-C'

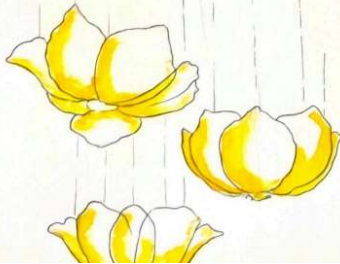
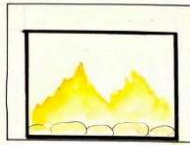
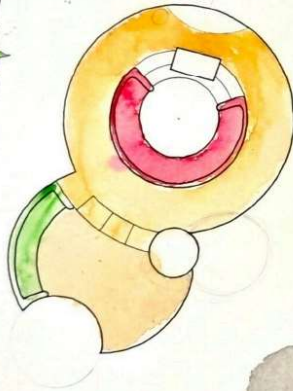




INTERIOR



Blooming Burro's Tail
Bromeliad
Nest fern



This drawing shows a natural-inspired living room design set in Coty, blending modern comfort with organic elements. The space is designed with a round, cylindrical layout and centerpiece. A unique root-shaped chandelier hangs above adding a natural, dramatic touch, while a floating flower chandelier brings softness and elegance. The first floor has a courtyard and its ground floor pillar is beautifully decorated with epiphytes, giving the space a fresh and green feel. Overall, the design creates a calm, earthy atmosphere that connects with the surrounding nature.