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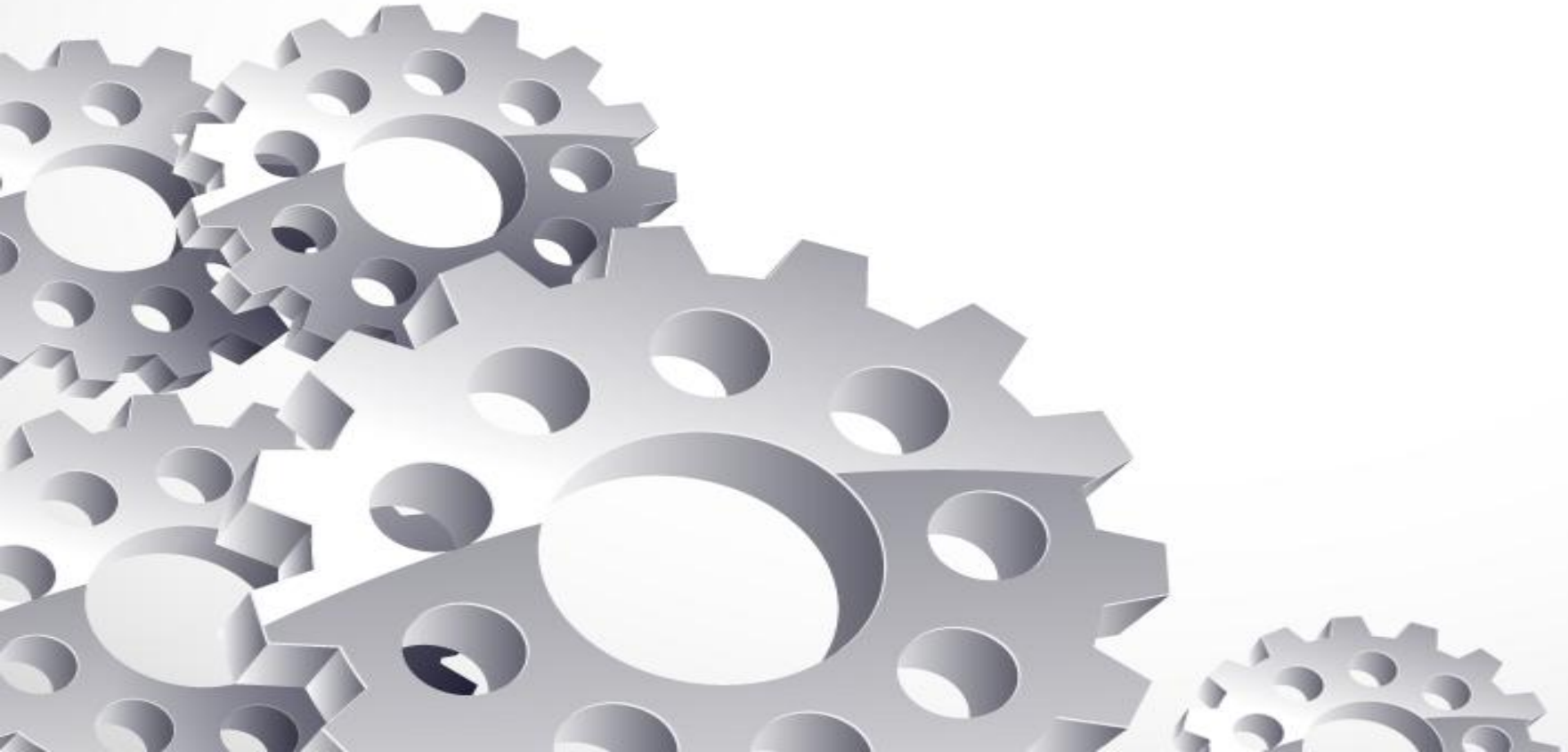
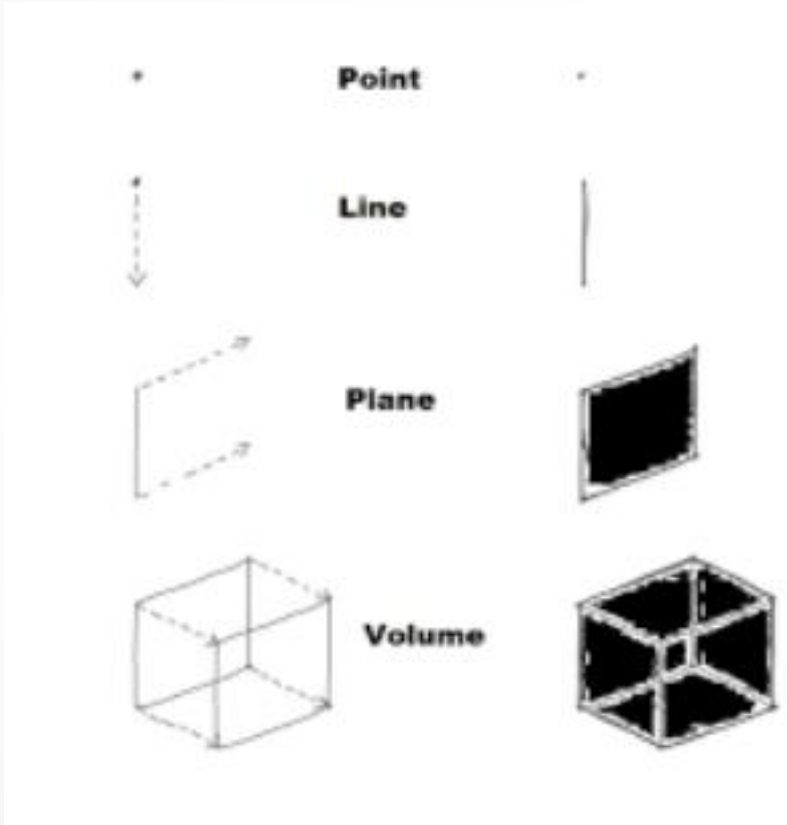


PRIMARY ELEMENTS OF ARCHITECTURAL DESIGN



- POINT
- LINE
- PLANE
- VOLUME

PRIMARY ELEMENTS OF ARCHITECTURAL DESIGN

★ *Point:*

- Point has no dimension or magnitude but has its importance and denotes its position in space.
- Background is very important for the existence and appearance of point.
- The size of point may change w.r.t. its background. For ex. the size of point must be larger on black board with white chalk than the point on paper with pen.

- In interior decoration one element may be treated as point of attraction or a focal point. This may be created by form, material, colour, texture etc.,

★ *Line:*

- Line is the combination of a number of points adjacent to each other.
- It has length but no breadth or thickness and is the basic design element.
- It can be straight, inclined, curve, horizontal, vertical, thick, thin, broken, diagonal, etc.,
- The combination of lines produce form and shape
- The lines give effective impact – the vertical lines can apparently increase the height of room and horizontal lines can apparently increase the length of the room.

★ *Line:*

- The different expression of line can be achieved by the various elements and furniture of interior decoration.
- Horizontal lines by furniture pieces, dining table etc., and vertical lines with the help of doors, windows, walls curtain etc.,
- Low furnitures in comparison with tall furniture gives spacious feeling to room.
- The lines can improve or spoil the pleasing effect of interior
- Too many straight lines give feeling of rigidity and monotony.

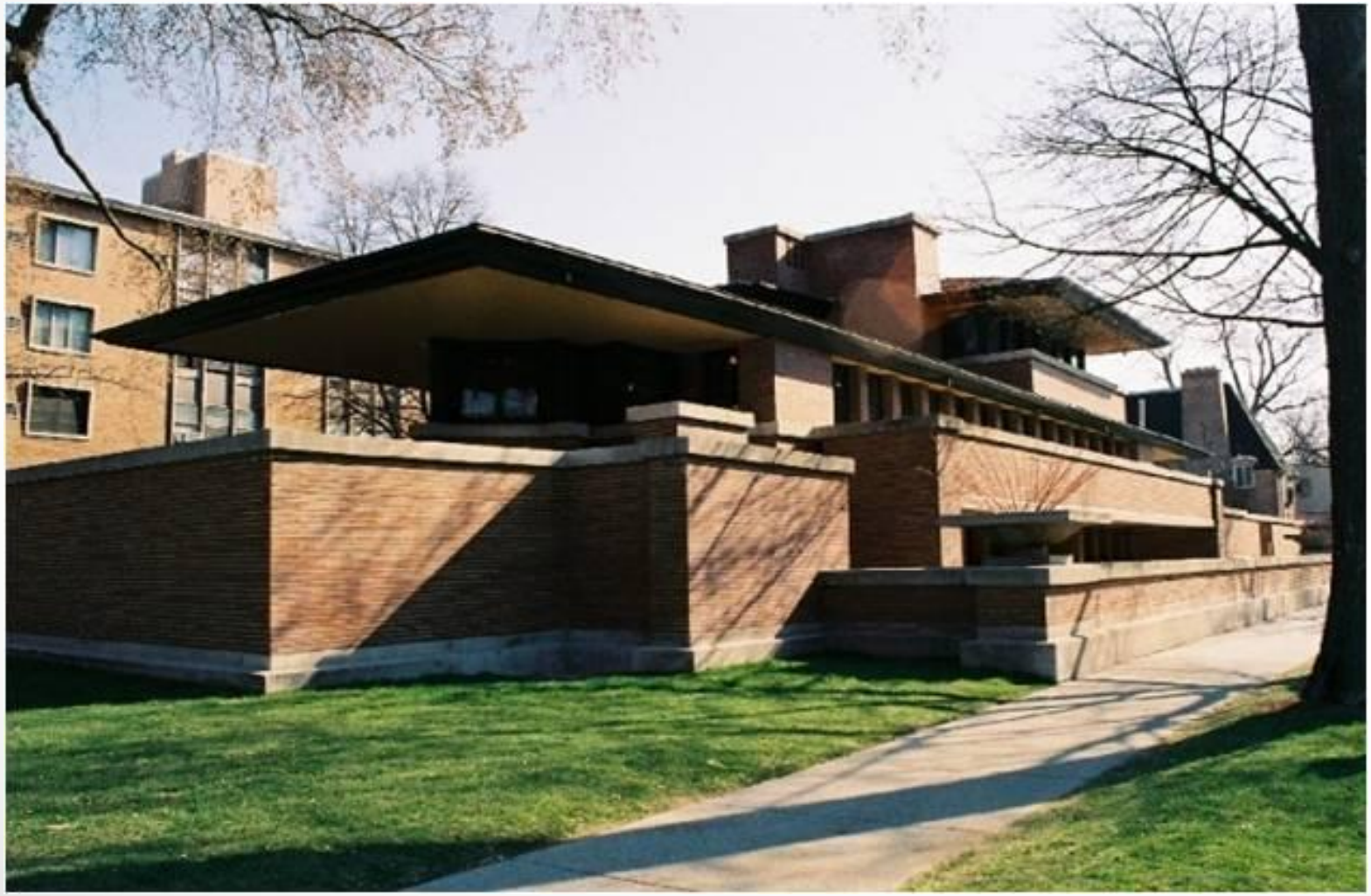
PLANE

- Planes in architecture define three-dimensional volumes of mass and space.
- The properties of each plane—size, shape, color, texture —as well as their spatial relationship to one another ultimately determine the visual attributes of the form they define and the qualities of the space they enclose.

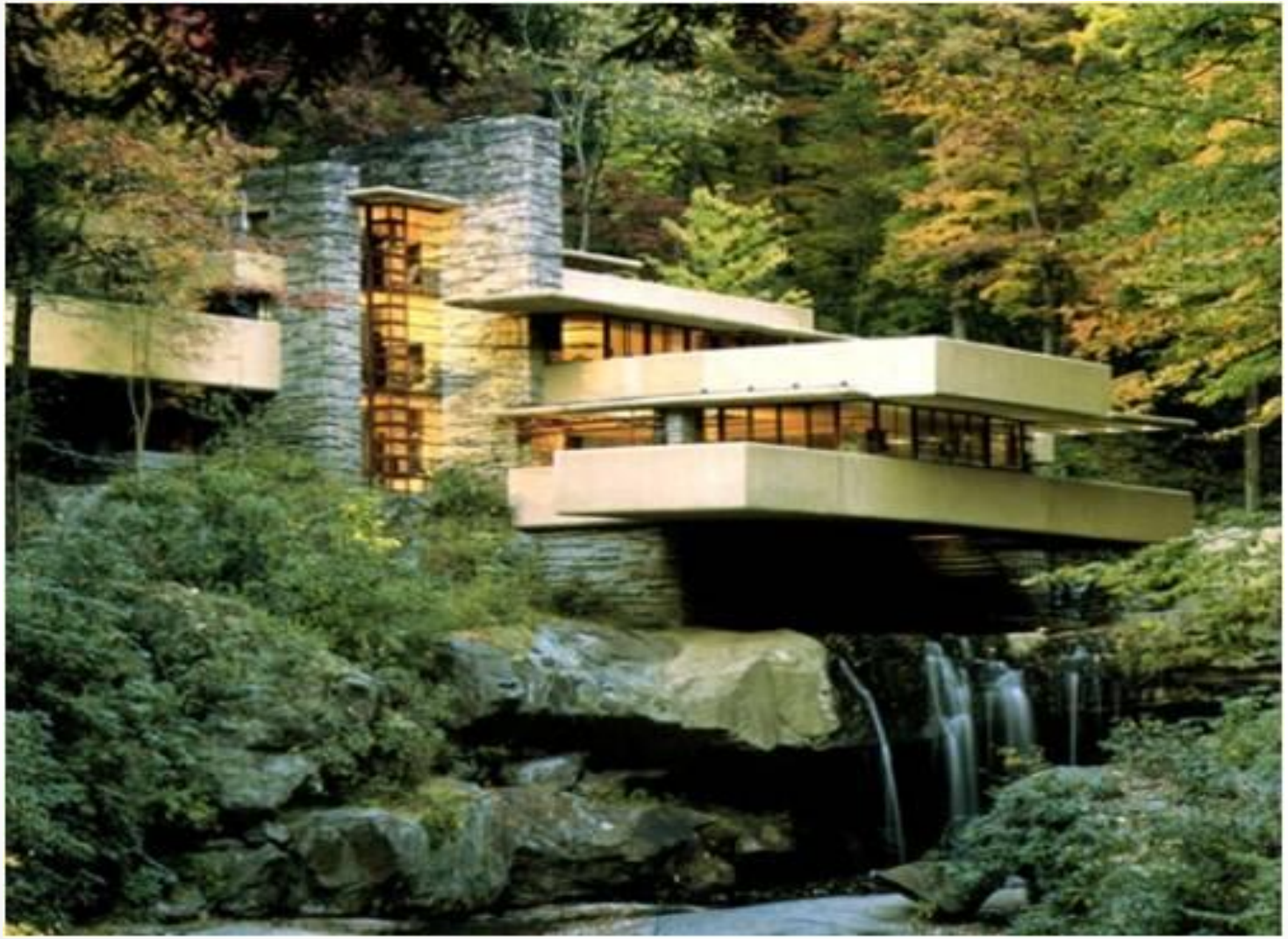
- Conceptually, a plane has length and width, but no depth. Shape is the primary identifying characteristic of a plane.
- It is determined by the contour of the line forming the edges of a plane. Because our perception of shape can be distorted by perspective foreshortening, we see the true shape of a plane only when view it frontally.
- The supplementary properties of a plane—its surface color, pattern, and texture—affect its visual weight and stability. In the composition of a visual construction, a plane serves to define the limits or boundaries of a volume.

- The low sloping roof planes and broad overhangs are characteristic of the Prairie School of Architecture.
- A roof plane can extend outward to form overhangs that shield door and window openings from sun or rain, or continue downward further still to relate itself more closely to the ground plane. In warm climates, it can be elevated to allow cooling breezes to flow across and through the interior spaces of building.

PLANE



PLANE



VOLUME

- A plane extended in a direction other than its intrinsic direction becomes a volume. Conceptually, a volume has three dimensions: length, width and depth. All volumes can be analyzed and understood to consist of: – points or vertices where several planes come together – lines or edges where two planes meet – planes or surfaces which define the limits or boundaries of a volume. Form is the primary identifying characteristic of a volume.

- It established by the shapes and interrelationships of the planes that describe the boundaries of the volume.

- Plan and Section Space defined by wall, floor, and ceiling or roof planes.
- Elevation Space displaced by the mass of a building. In architecture, a volume can be seen to be either a portion of space contained and defined by wall, floor, and ceiling or roof planes, or a quantity of space displaced by the mass of building. It is important to perceive this duality, especially when reading orthographic plans, elevations and sections.

VOLUME

Vernacular architecture

- Vernacular architecture can be defined as a type of local or regional construction, using traditional materials and resources from the area where the building is located

- Houses, barns, sheds, and even temples are all examples of the diverse types of buildings that might be considered to be examples of vernacular architecture.
- The local climate, topography, and way of life have all been incorporated into its design.

- Indigenous architecture is now the subject of a distinct field of study. Architects and historians value the way vernacular architecture reflects the values, culture, and achievements of certain groups.

Characteristics of Vernacular Architecture

- Local artisans and builders create vernacular architecture rather than professional architects.
- These craftsmen utilize local resources. These resources are naturally adaptable to the environment.
- Vernacular buildings do not have a pure architectural style but are a mix of styles.

- Builders create vernacular structures in response to a specific need and purpose.
- Vernacular architecture may have a certain cultural significance and serves as a symbol of identity and history.
- Vernacular architecture will have less impact on the surrounding environment as builders use local materials that they don’t need to source from a great distance.

Modern Impact of Vernacular Architecture

- Inspired by vernacular architecture, modern architects sought materials more appropriate to the natural environment. This technique gave the added benefit of making the structure more sustainable.
- Vernacular architecture also influenced modern architects in terms of design. They wanted to create buildings that would reflect localities. These ideas gave rise to the practices of regionalism and contextualism, which are more common today.

Factors That Influence Vernacular Architecture

- Climate :For example, if the weather is hot, buildings will feature openings to allow in breezes and keep the interior cool. Buildings in cold environments limit the openings to the outside to keep the warm air from escapin
- Material Availability :Certain geographic regions contain different materials that local craftsmen use for building. Areas with abundant supplies of clay will build adobe-style huts and houses

- Technology:The level of technological development in a region impacts the type and size of the architecture.
- Religion – The practices and type of religion in areas impact the type and location of buildings. In India, craftsmen constructed temples near the water because people had to wash before entering.
- Culture – The culture of each country develops in unique ways, which influence the type of buildings they create. In Japan, sliding lattice doors were essential in home design because of the climate.

- Access to the Outside World – The amount of access a group has to the outside world impacts their particular building techniques. When geography protects groups from the outside world, they use local architectural practices.
- Terrain – The type of environmental terrain impacts building designs. Mountain terrain will produce a different kind of indigenous architecture than desert terrain.

- Mobility – Groups of people who move create structures they can move with them, like the tipis of the native people of North America or the yurts of the Kazakhs in Central Asia.

Vernacular Architecture by Region Type

- Rural Regions
- Urban Regions
- Coastal Regions
- Desert Regions
- Mountain Regions

Great Wall of China:The structure reflects the local building techniques developed in China and represents an important cultural symbol.

- Ancestral Puebloan Dwellings:The Pueblo people built towns and villages across the Southwest United States. They made these structures from adobe mud, sandstone, and other local materials.

- Havelis:A haveli is a manor house, mansion, or townhome in India. These homes were popular under the Mughal Empire.

what is indigenous materials?

- Indigenous materials are materials that are naturally and locally found in a specific place such as timbers, canes,grass , palms, and rattan.

Materials

- Bamboo.
- Laterite.
- Timber.
- Stone.
- Rammed Earth or Atakpamé Walls.
- Wattle and Daub.
- Timber-framed construction.
- Pile dwellings.

Vernacular Architecture

- The traditional architecture is typically a rectangular structure where four blocks are joined together with a central courtyard open to the sky. The four halls on the sides are named Vadakkini (northern block), Padinjattini (western block), Kizhakkini (eastern block) and Thekkini (southern block).

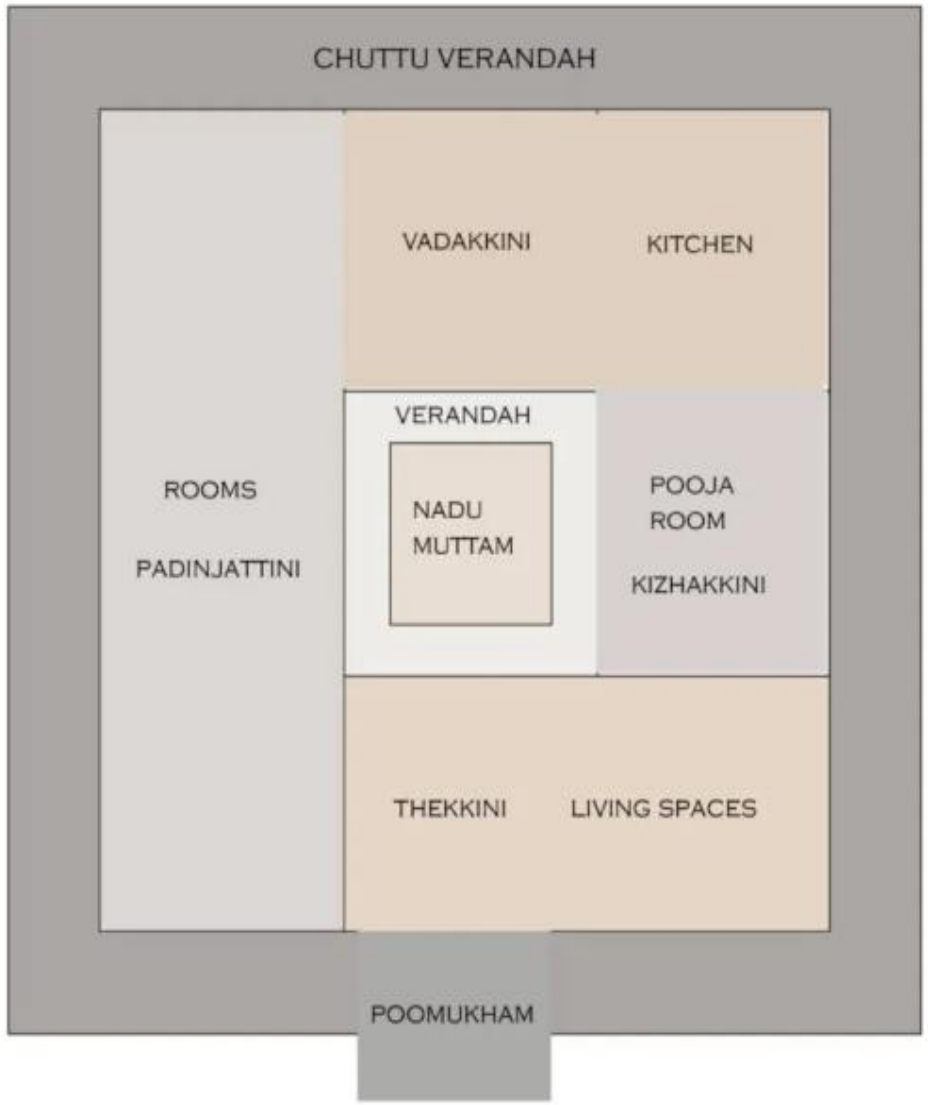
Traditional homes

Kerala traditional building materials

- Stone, timber, clay, and palm leaves, which are used for roofing. Granite forms foundations and walls are laid up with a porous red stone called laterite. Teak, rosewood and jackfruit are widely used for framing and millwork, often intricately carved by skilled artisans.

Different types of Kerala Architecture

- Nālukettu is the home of generations of joint family kinfolk where many generations of family lived.
- The traditional architecture of Kerala is a rectangular structure where four blocks are joined with a central, open to the sky courtyard.



- Ettukettu, which is eight halls with two central yards) or Pathinarukettu, which is sixteen halls with four central yards, is the further elaborate forms of the same architecture.

- Every structure faces the sun, and in some well-conditioned designed nalukettu, there’s excellent ventilation as well. Temperatures, indeed in the heat of summer, are markedly lower within the nalukettu

PRINCIPLES OF COMPOSITION

Balance:

- Balance is the equality on either side of a point or a line.
- An unbalanced interior space can be uncomfortable.
- Visual balance is achieved by distributing the visual weight of objects within a space to achieve a feeling of equilibrium.
- Balance can also be achieved in two ways: symmetrically and asymmetrically.

Balance:

• The size, color, texture, shape of an element can change its visual weight. For example, larger, darker, brighter, highly textured, complexly shaped objects typically feel heavier and require balance through the placement equally “heavy”.

- ***Symmetrical Balance / Formal Balance***

  - Symmetrical balance is achieved when items are actually repeated or mirrored along a central axis.
  - Symmetry is common in interior design and can provide a feeling of stability, calmness and dignity; but at the same time, it can also be seen as static, dull and unimaginative.

★ *Balance:*

- ***Asymmetrical Balance / Informal balance***
  - Asymmetrical balance relates very strongly to the visual weight of objects rather than repeating the same item within a space to achieve balance.
  - In this case we are using different elements with a similar visual weight to achieve balance on the opposing axis.

- Asymmetrical interiors tend to feel more dynamic and less rigid because in these spaces a variety of objects types are working together to create balance.
- This form of balance can be more difficult to achieve and it often requires an “eye for design”.

★*Rhythm:*

- It is the repetition of certain elements at a fixed interval
- This element is more powerful and human senses respond more easily to rhythm.
- In interior design, if similar pieces of furnitures are arranged after a certain interval, then it gives a rhythm and pleasing appearence.

Emphasis and Focus:

- Emphasis is the principle by which eye is carried first to the most important thing in an arrangement and from that point to every other detail in order of its importance.
- The most important spot or object in a room is known as focus or focal point(Emphasis).
- A sculpture, an artpiece, a particular piece of furniture, a mural painting etc., can serve as a focal point.

FOCUS POINT

Size – Scale and Proportion

- Size is the physical magnitude of something.
- Both scale and proportion relate to size
- Scale compares size of one thing to another.
- In design, scale is usually used to refer to the size of an object or space in relation to the human body.

examples :for instance, chairs have been scaled to fit our bodies, the widths of hallways allow for people to comfortably pass one another.

- Proportion refers to a general relationship in size between two objects.
- Interior designers refer to when they describe how two objects relate to each other in a room.
- Example, as a rule, designers recommend that coffee tables be two-thirds as long as the sofa they are set against.

Harmony and Unity:

- When two or more than two elements of similar nature are in a composition then it is said to be producing harmony.
- Harmony is the gradual change among elements
- It gives us soothing effect and mental comfort.
- In the case of interior decoration the colour and texture of walls, curtains, etc have an important role in creating harmony.
- If light is also in harmony with colours it makes the interior more charming and beautiful.

- Unity is when the elements in a space combine to make a balanced, harmonious complete whole. The result is a pleasing feeling, that everything is right with the space.
- Harmony and unity are two words that designers often use to describe the feeling of a space. They can provide a sense of calmness and can also add to the comfort level of a room

- Unity refers to the repetition of particular elements throughout your design — whether they're colors, shapes or materials — to pull the look together.

★*Contrast:*

- When two very different things are put side by side, then the importance of the two becomes clear to the human mind eg. white and black, day and night etc.,
- Thus when elements of opposite nature are put together in composition then they are said to be in contrast.
- If contrast is used to create a focal point then it increases the charm and pleasantness of the total enviornment.

- On the other hand, if not used properly, it may produce unpleasing effect and discomfort.
- Generally furnitures are kept in contrasy with the floor.

Movements

- The movement from an interior design perspective is 'how people 'flow' through a space'. Flow of movement, therefore is closely related to functionality and how people use a space.
- How people use and perceive a space can be different for everyone.
- Horizontal circulation
- Vertical circulation

SPACES

- Interior space
- Exterior space

Interior space means any substantially enclosed space having a roof and having a wall or walls which might reduce the free flow of outdoor air. Ventilation openings, fans, blowers, windows, doors, etc., shall not be construed as allowing free flow of outdoor air.

- In a wider sense, external space typically refers to the environment that exists outside buildings or other enclosures. This is as opposed to the internal environment, which comprises the environment inside buildings and other enclosures.

Interior space

Exterior space