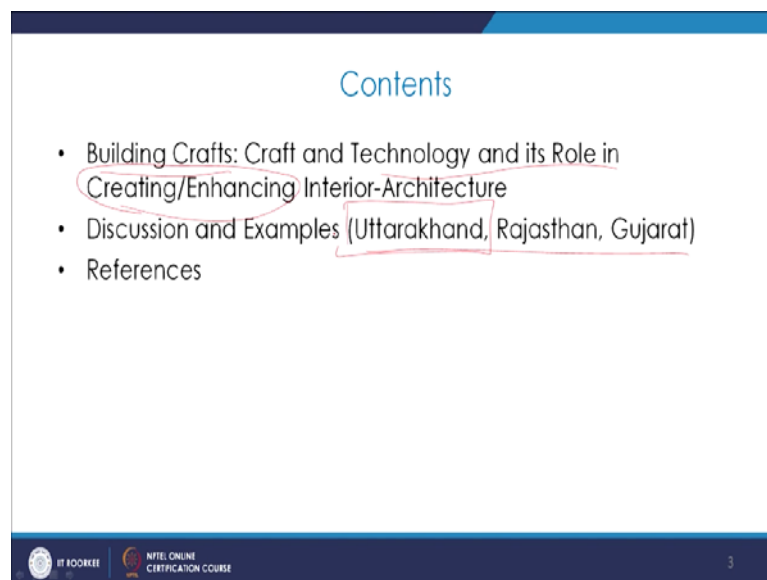


Role of Craft & Technology in Interior-Architecture
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Lecture - 14
Building Crafts: Craft and Technology and its Role in Creating/Enhancing Interior-Architecture

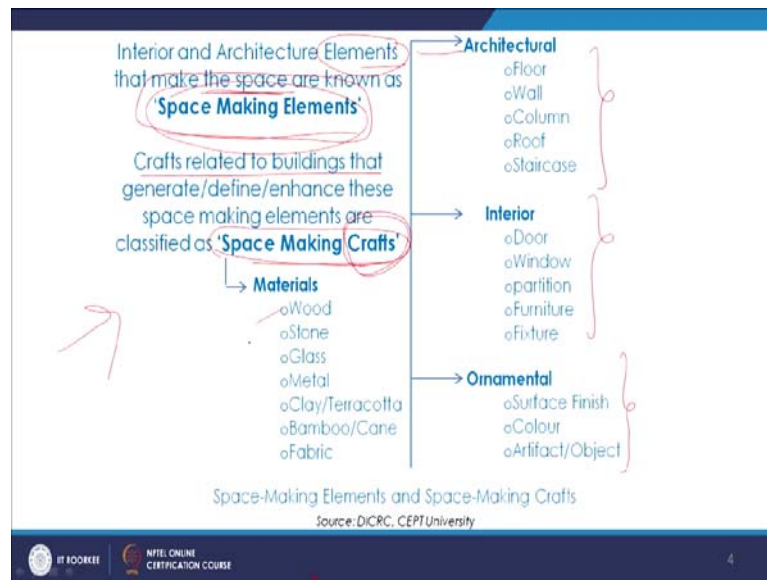
Namastey! Hello, everyone. Welcome, to the NPTEL course - Role of Craft and Technology in Interior Architecture. Today we are going to discuss module fourteenth which is an extension to the module – 13 and it focuses on building crafts and the role of craft and technology in creating and enhancing interior architecture.

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So, we are going to talk about building crafts, craft and technology and its role in creating and enhancing interior architecture and we will discuss some examples from Uttarakhand, Rajasthan and Gujarat and we already saw elaborate examples from Uttarakhand in the previous module, but we will have some more in this one and then we will see the references towards the end. So, just to briefly some up, when we were talking about building crafts and we were trying to understand what are the space making elements and space making crafts,

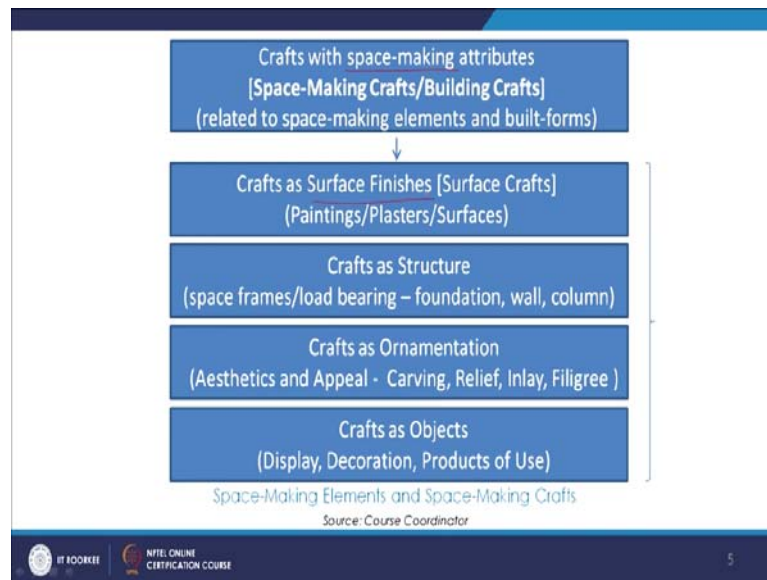
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so, we just came up with this consolidated diagram and which explains us all the details. So, we tried to understand what are the space making elements and then what are these space making crafts. So, we understood that the elements which create space we just categorize them as the space making elements. I am very briefly telling this, because we already discussed it few times, and the crafts related to the building and space making, that we put as space making crafts.

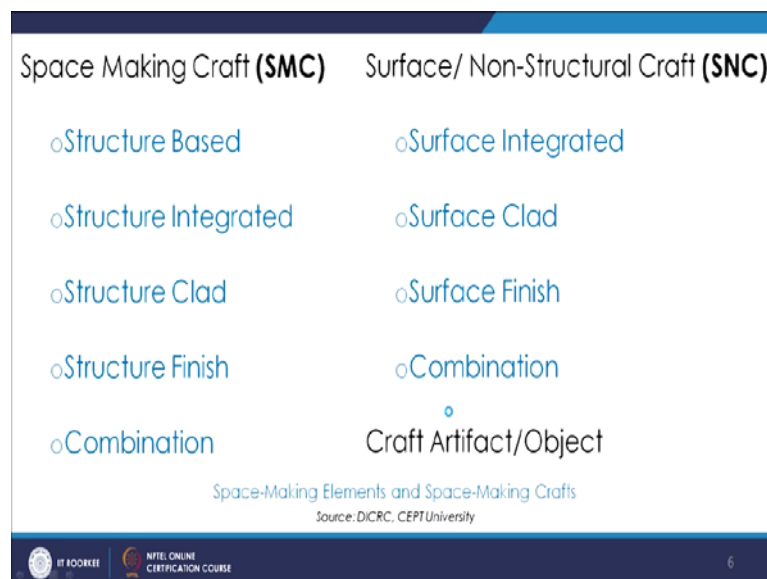
Now, these elements that we were talking about could be architectural, they could be interior elements or they could be ornamental. We discussed that as well and we could also define the crafts, the building crafts through materials – wood craft, stone craft, glass craft and so on.

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So, we had this discussion. We also try to understand the varied attributes of craft. So, we tried to understand craft as space making, as surface finishes, as structure, craft as ornamentation and craft as objects or the craft for utilitarian purposes. So, we saw that.

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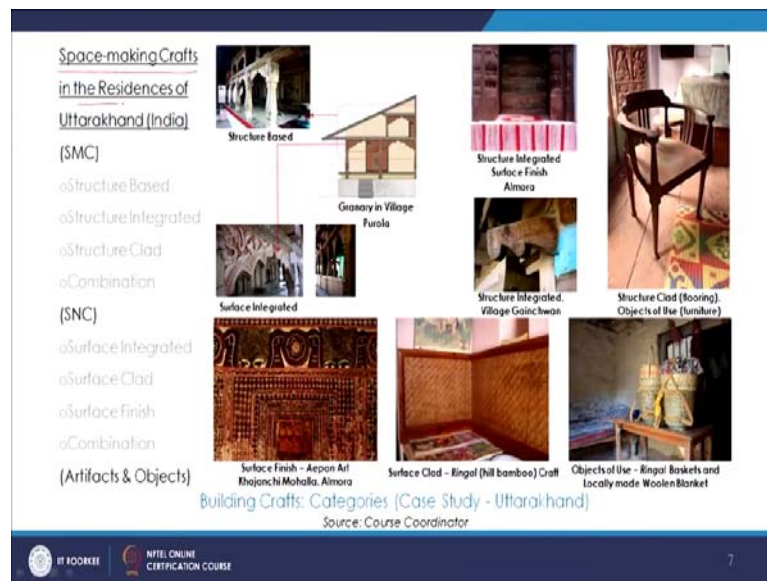
And, then we could also understand certain categories or classification of crafts and relying heavily on the framework that is suggested by DICRC, so, we could understand craft as space-making craft - the SMC; and the surface or non structural craft - the SNC; and, then we also put craft as an artifact or an object. Within the space-making craft, here

we could see this structure based, structure integrated, structure clad, structure finish and a combination of all of these - permutation and combination. And, the surface or non structural, one again we further sub categorized that as surface integrated, surface clad, surface finish and again combination of either or all of these.

So, taking this discussion forward, we saw a lot of visual inventories from Uttarakhand in the last module where we were trying to understand you know and apply these classifications of craft on the case studies. So, we could see several examples and we could identify what are the structural crafts, what are the non structural crafts and where are the crafts seen as objects of daily use. And we just, you know, as per the framework suggested already which is in reference we try to analyze the case studies which were taken up in Uttarakhand.

Now, here we see this consolidated plate which tries to put you know all together in one frame the different kinds of crafts that we had identified and classified last time.

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So, here space making crafts in the residences of Uttarakhand and I am talking about the wooden residences here and we could see all of these identified categories and then we have just put them here in the case studies that have been you know analyzed. So here we see this granary in village Purola, and here we see this structure based craft, and here the carving that we see over here, here the example of surface integrated craft, we could see. Going further ahead, here in the door jambs again, this is the wood carving, the

timber door and we can see this structure integrated, as well as here we see the *aepan* art. So, we see the surface finish also.

Then further ahead, here in the corbelling, we see the structure integrated - this is from village Gainchwan in Uttarakhand. Again here, we see the structure clad craft, here in the case of the flooring. And, we also see the objects of use and we talked about this furniture. Here further, you know, in the frame, there is again wood carving and this is on the door. So, we see another classification of craft here. Here we see the surface finish *aepan* art and this is on wall and this is again in Almora Uttarakhand. Further ahead, we see example of surface cladding here, so surface clad craft - this is the cladding of Ringal that we see over here on the wall. And, then we see again objects of use so, we see here these Ringal baskets which are used for the daily purposes and we also see a locally made woolen blanket over here.

So, this is a sort of a visual inventory and exercises like these could really help understand you know different kinds of crafts what are their attributes and how could one classify them, understand them, how do they contribute in creating or enhancing interior architecture, also you know the visual inventory it is more like an info graphic and it helps understand things in a better way not just going by you know pages of text, plus it is also a repository and is this is going to create a sort of a research base and as and when one understands the regional variations, further details, all the data could just keep on adding to the repository that is created.

So, I request all of you to take this forward and you know contribute in this repository and whatever data that you generate or further work upon it could be shared and it could be you know really built upon in the form of a data collection. Now, taking this discussion forward we will see some examples from the craft of Rajasthan and I am just specifically talking about one project in Udaipur and it is very significant when we talk about building crafts, generating livelihood for the craft persons and letting them work on their own utilizing their wisdom and skills and not necessarily providing them with working drawings or just telling them what to do on site.

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So, this is heritage Hotel Udaï Vilas in Udaipur and again one of my favorite architects, it has been design and created by Abhikram architects and they involve lot of craftspersons. So, it recognizes ingenious craftspersons and values their skills, knowledge and material sensibilities that have contributed in creation of piquant and quality spaces. So, there is not just an idea of proportion and scale and aesthetics, but you know also material sensibilities, the knowledge about how to make or how to create that experience within the space. So, you know right from the entrance to all the different spaces that you know one would navigate through in this project, there is so much to learn about building crafts, craft and technology and how they are inter related with interior architecture.

So, this contemporary architectural marvel, it proudly flaunts Mewari architectural elements, traditional lime plaster that requires up to eighteen months of preparation and is known to last centuries without any maintenance. It has domes with floral paintings on gold leaves, applied decoration like mirror inlay and mosaics, deco style furniture and other period pieces, vivid accent colors in the interior spaces that resonate with the textiles of Rajasthan - all impeccably crafted by several craftspersons who worked hand in hand with interior architects and designers.

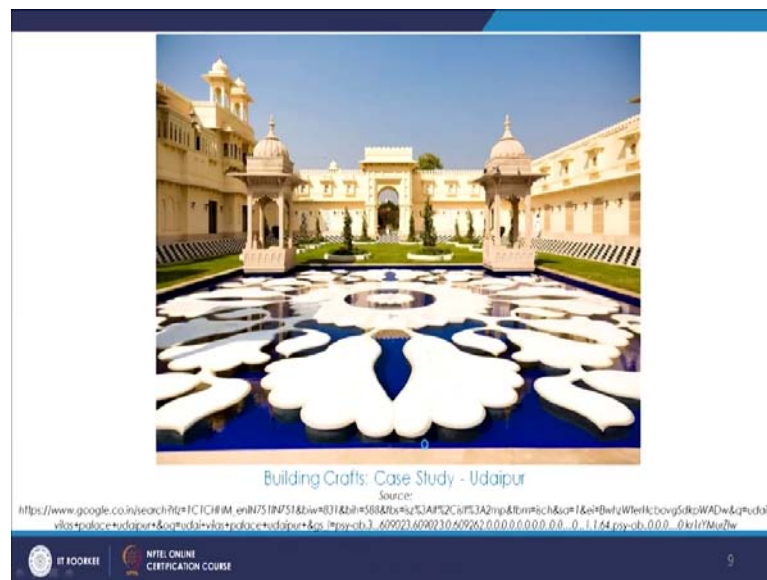
So, this is a sort of an ecosystem that I keep talking about, where there are different stakeholders from the construction industry and craftspersons also forming an important

part of this value chain and contributing through their skills of making and knowledge of materials.

So, we see so many examples here, see traditional lime plaster is used over there. There is a mention of space-making elements, which have a distinct identity. We talk about this painstaking process, where the lime plaster takes so many months for preparation, but of course, it is known for its maintenance and quality and longevity. Then, we are also talking about some surface finishes - the floral paintings and we are talking about surfaces, so there is a golden surface. We were talking about another craft, which is the mirror inlay. We were talking about mosaics. There is deco style furniture over there, so again furniture elements, and then we were talking about color theory as well.

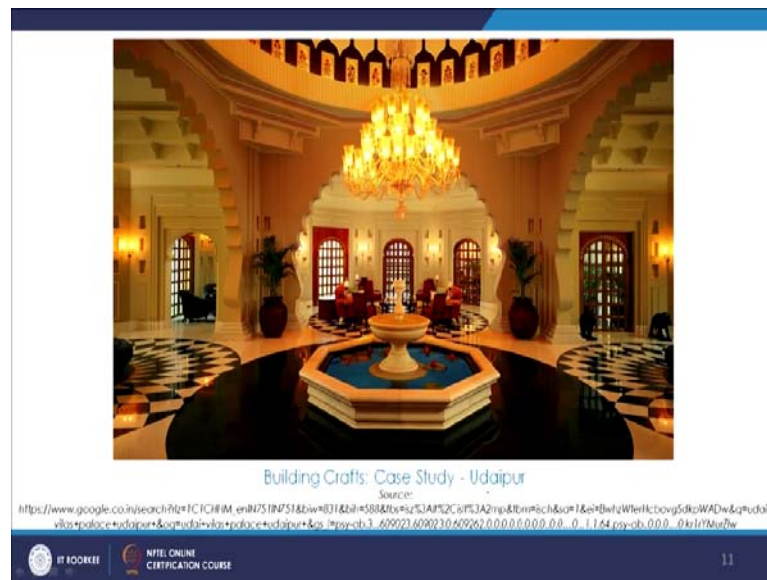
So, there are vivid accent colors in the interior spaces and they resonate with the textiles of Rajasthan. So, again there is a connect between the way of life, the fabric one wears, the nice color it embraces, and how it also enhances the space-making and they are all impeccably crafted by several craftsmen, who also work hand-in-hand with designers, and it is not just, you know, working single handedly. So, it is an ecosystem again.

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So, these are some pictures and throughout this lecture we will be just browsing through lot of visual inventories and we will be just seeing and observing. So, here again, we see this elaborate stone craft, we see different elements, we see *jharokhas*, we see these *chattris* over here, we see the arches and we see the structural crafts over here, we also

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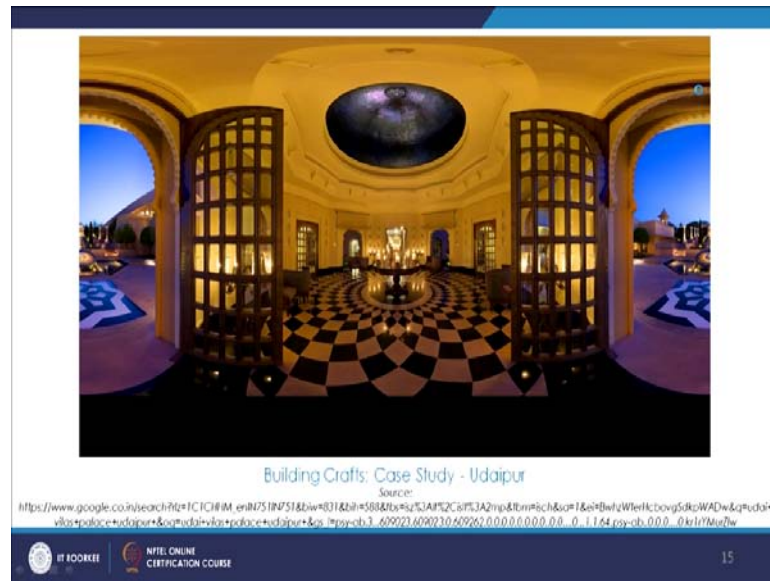
Again, a view from the interiors - the kind of elements, the inlay work on the floors and here, we will see in another picture the elaborated one, we see some painting on the gold leaves, so, the kind of surface finishes that have been created. Also, again the entire scheme the vivid accent colours, the use of colours and how it has you know, this warmth and the kind of lighting that also accentuates them.

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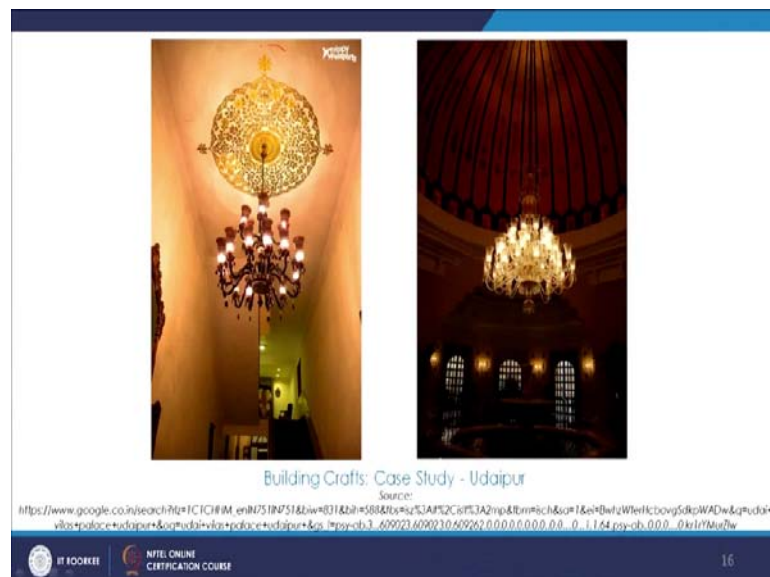
This is what I was talking about. So, we have these gold leaves and maybe it is not clear in this picture, but there are some details over here. Let us see we have another picture.

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Another view again which talks about this you know volume that is created in the space and how when one approaches what is the kind of cone of vision and what all could be seen you know if the subject is somewhere here and the entire plethora of details that it opens a user to, which catches his or her attention, and creates that indulgence in the space.

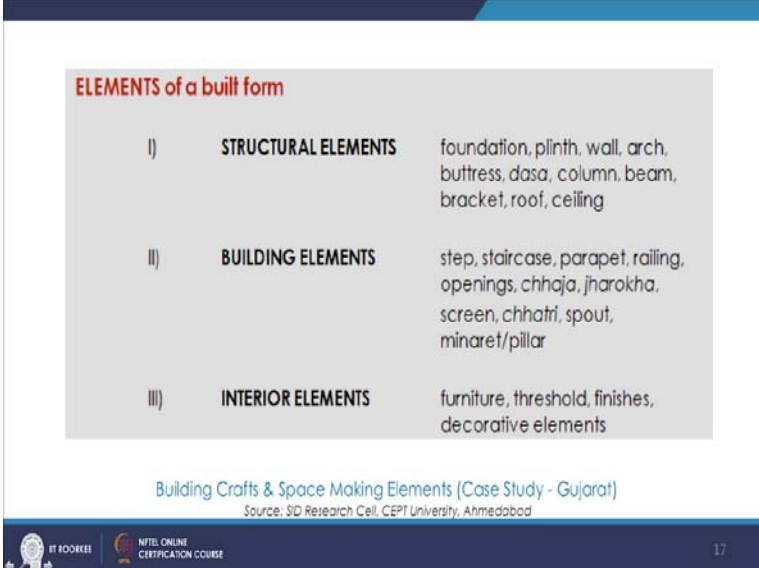
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Again, here this lovely detail we see and this is the same dome with the gold leaf and this is right now very dimly lit and the chandelier is quite prominent in this picture. So, all

kinds of elements that could contribute to space making and create a sort of an experience for the user, they really need to be you know, understood by a designer and they has to be an eye for detail and this small details they really create a big impact like what we see in this project.

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ELEMENTS of a built form		
I)	STRUCTURAL ELEMENTS	foundation, plinth, wall, arch, buttress, <i>dasa</i> , column, beam, bracket, roof, ceiling
II)	BUILDING ELEMENTS	step, staircase, parapet, railing, openings, <i>chhaja</i> , <i>jharokha</i> , screen, <i>chhatri</i> , spout, minaret/pillar
III)	INTERIOR ELEMENTS	furniture, threshold, finishes, decorative elements

Building Crafts & Space Making Elements (Case Study - Gujarat)
Source: SID Research Cell, CEPT University, Ahmedabad

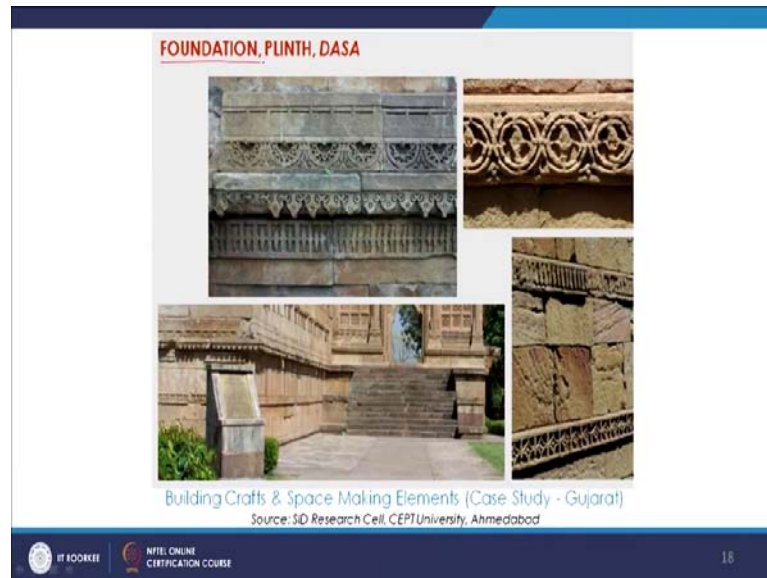
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Now, I would like to also briefly discuss one research which was done at the SID research cell, CEPT University. I was the part of the research team there and now it is converted into the book called - Stone Buildings of Gujarat, I have put that in the references. And, here maybe some pictures and plates are slightly blurred because they have been taken you know a scanned. But of course, one could refer to that book. It is very informative, and it is a very easily comprehensible book, because there are lot of visuals and very nicely explained drawings in that.

So, what this book or the research talks about is defining and describing elements of a built form, which have been further categorized as these three: so, structural elements, building elements and interior elements. For structural elements, discussion on - foundation, plinth, wall, arch, buttress, *dasa*, column, beam, bracket, roof, ceiling - whatever are structural parts. Building elements: step, staircase, parapet, railing, *chhaja*, *jharokha*, screen, *chhatri*, spout, minaret or a pillar and interior elements specifically the furniture, the threshold, the finishes that we have been talking about and of course, the decorative elements.

So, I will be just now browsing through and showing some visual information, visual inventories that describe all of these.

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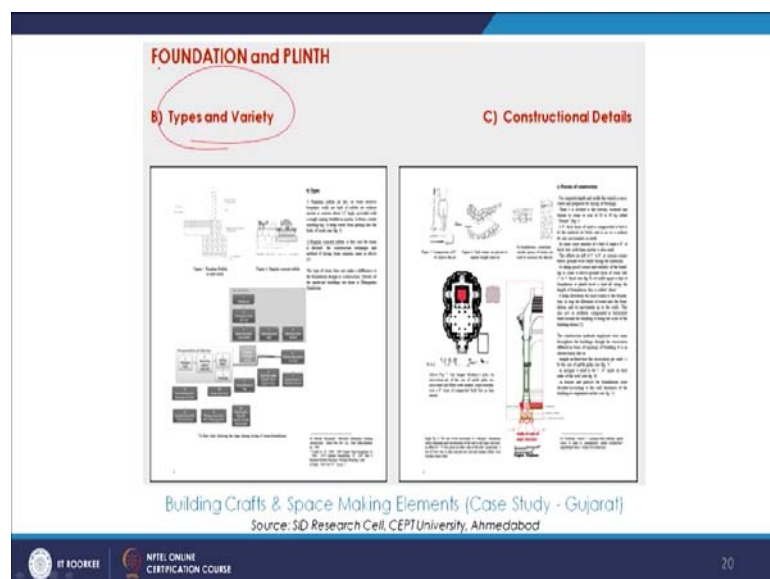
So, here what we can see is the foundation plinth and dasa. So, here like if we go to the previous slide, we saw the mention here and we are talking about the structural elements. So, here we see the details, we see the details and starting from the foundation level you know, to the plinth, and then coming further for *dasa*, they are very important structural elements of a building, for making a building. And, they are sort of also elements, which could highlight the building crafts, the kind of detail that goes on them, if there is carving on them. So, like here, this band is like highlighted and it stands out besides the structure of course, which it is solving.

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We see some more plates about foundation and plinth and this book you know it gives an elaborate explanation. There is an introduction to the element that has been chosen and then there are different pictures and examples like this is from Dholka, the few examples which we are going to see in the subsequent modules and there are drawings, which explain you know, the elements and the making of it, how it is done, the section over here. So, all these details are there. It is very difficult to cover in one module, but of course, we are just visually trying to understand the elements and there is this book that can be referred too.

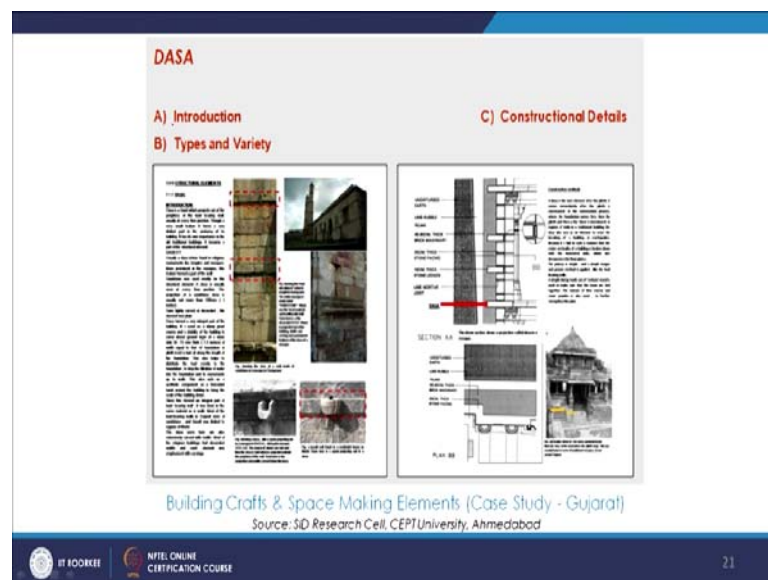
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So, also going ahead there is a discussion on types and varieties. So, if we are talking about the foundation and plinth there are different types within that and then there are also construction details. So, there is an elaborate discussion on these elements and one could understand easily this classification, also how building craft is integrated within each of these elements, and in totality how the attribute of space making is assigned to these building crafts by the virtue of creating the space and how the making is involved in them.

So, here we see different kinds of types, different drawings over here, and construction details. So, how foundation and plinth is constructed - these kinds of details that we see over here.

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Then *dasa*, again going by all these discussions that we just saw there is an elaborate explanation what it is, where all it is used, the examples and there is also some integration of water spouts over here. So, some examples with that and of course, the entire construction details, what are the construction details, what goes in the making, what is the step by step procedure? These examples are specifically in stone. And, I find them very relevant talking about the building crafts, trying to understand the different kinds of space making elements. Also the kinds of different space making crafts - the structure integrated, structural, non structural, surface finish.

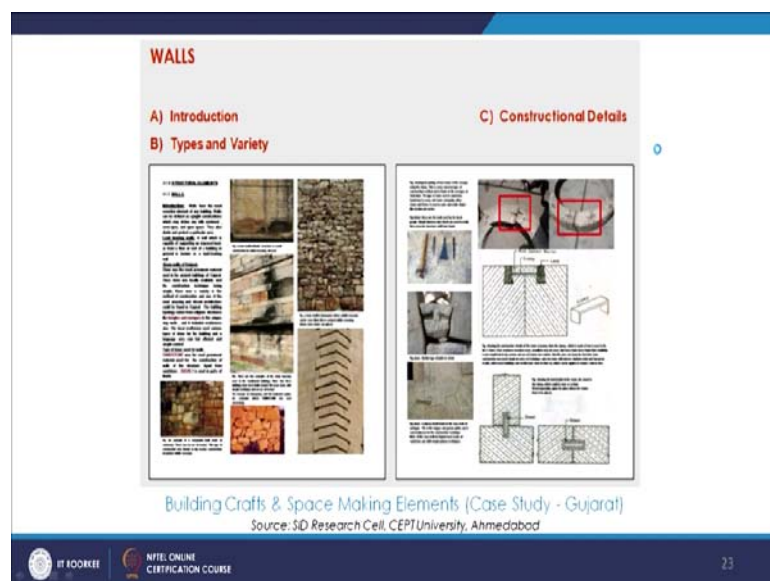
So, that is why I have just put them over here. And I am sure just even just by looking at these inventories it is going to give some idea about what the course is about and of course, we have more discussions in the further modules and we saw it in the previous ones as well.

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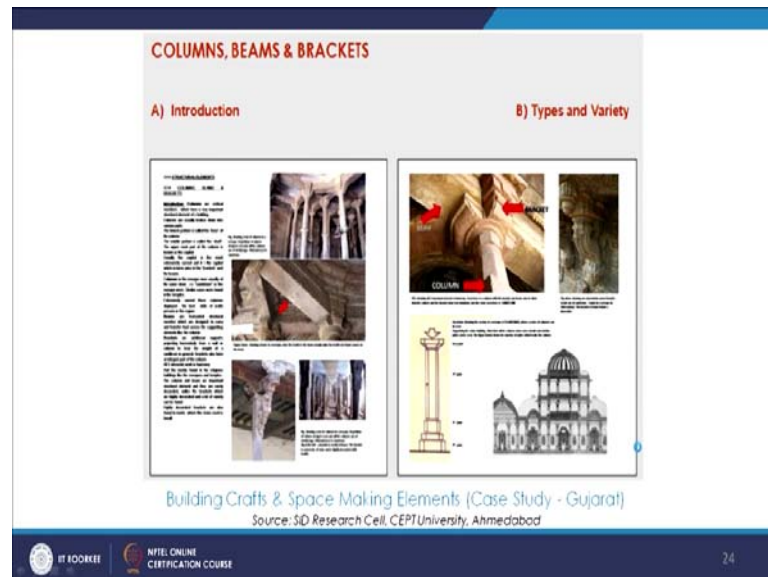
So, continuing further; walls, columns, beams and brackets, again different kinds of examples, different kinds of pictures and case studies.

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And, we see here different types and varieties - here, the corner detail; there are construction details what kind of joinery you know, what is the placement like and how they are constructed.

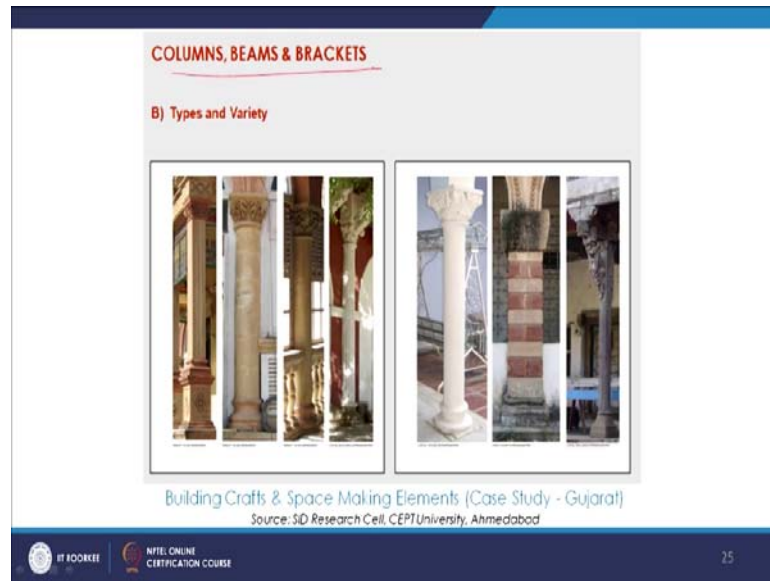
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Talking about the columns, beams and brackets; again the variety, this trabeated construction and how the column and beam is joined, what is the detail - here this elaborate bracket that we see again, so this bracket over here, the column over here and the beam over here.

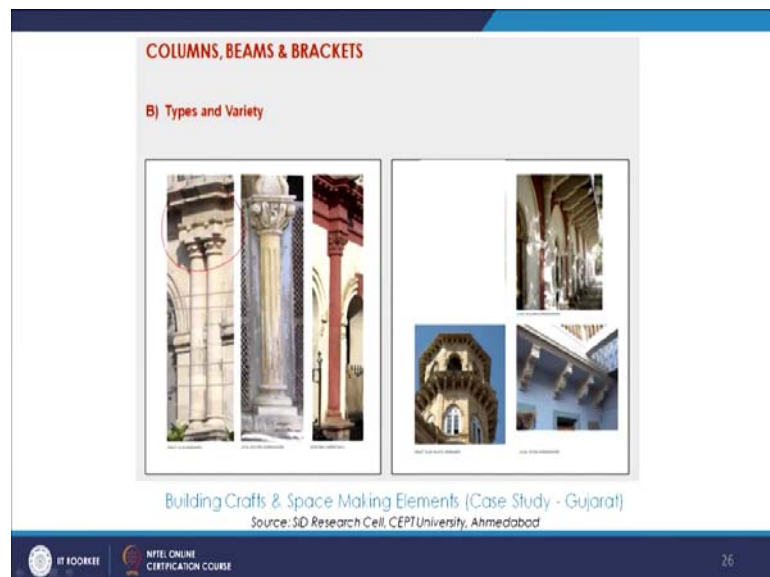
So, construction details, it has lot of ornamentation as well. So, again we are seeing it is a building craft, which is solving the structural purpose as well as it is very ornamental. So, adds to the aesthetic of it. So, lot of drawings and explanation - how the structure comes together? So, there are very interesting and informative plates that we are seeing here.

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Again, continuing with columns, beams and brackets; we see the different kinds - that is itself a repository, different kinds of columns, their capitals are different, shafts are different, the form is different. Here, if we see the form vis-a-vis this one, we see so many different kinds of columns over here. Here - so again, a sort of a visual repository. More!

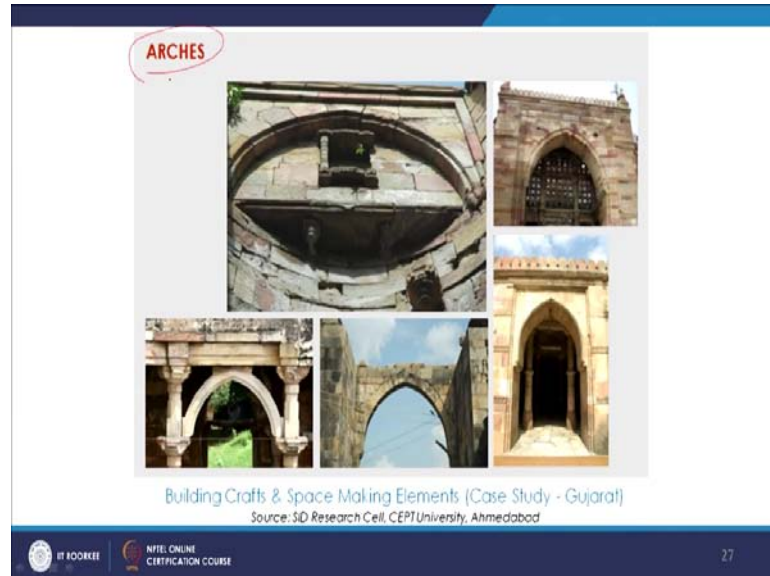
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So, here we see this twin column. Here, this column shaft is very simple, but the capital is quite ornate. So, we see all these kinds of examples. We see the brackets over here. So,

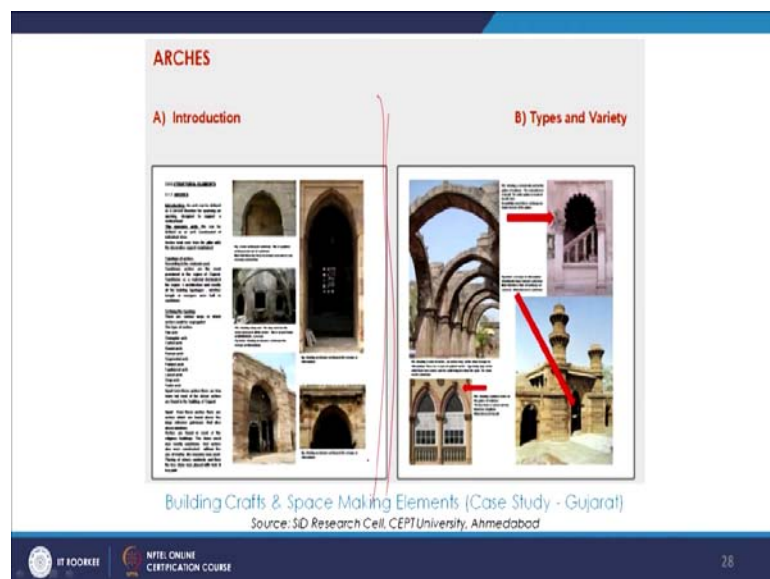
all of these, we have just tried to put as parts of this research - as different elements, space making elements and what kind of stone craft goes with them, you know.

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And, now arches - we have seen arches in so many buildings, specifically the historical monuments and we see different kinds of arches and openings over here - this one, this one.

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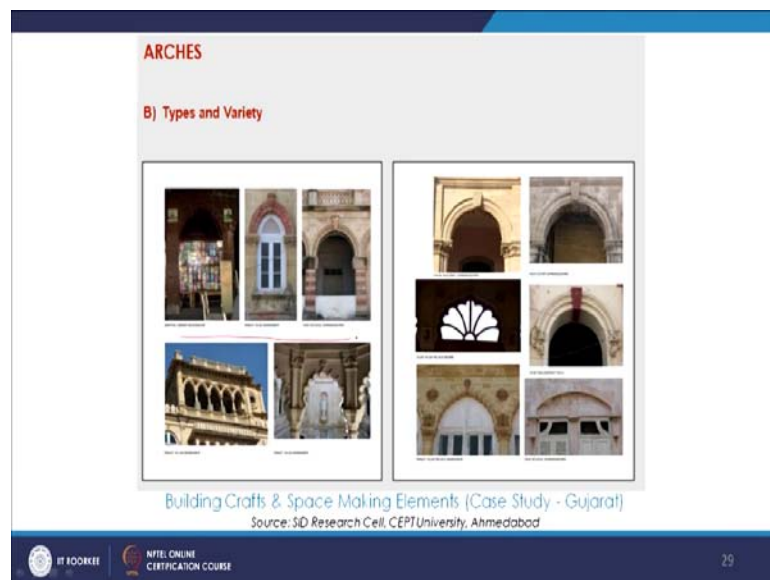


So, describing the arches - the elaborate introduction, different types, different types of arches - this one is different, this is different, of course this one is different, here what we

see. So, there are different kinds of arches, their methods of making are different - in how many parts is one arch made? Are they two parts, three parts? How many centers does it have, you know, two centers, one center, more? And, what kinds of volume are they creating? What is the kind of proportion system that is being followed? And, how stone craft, as a medium, has been able to, you know, carry forward that construction and the meanings behind it.

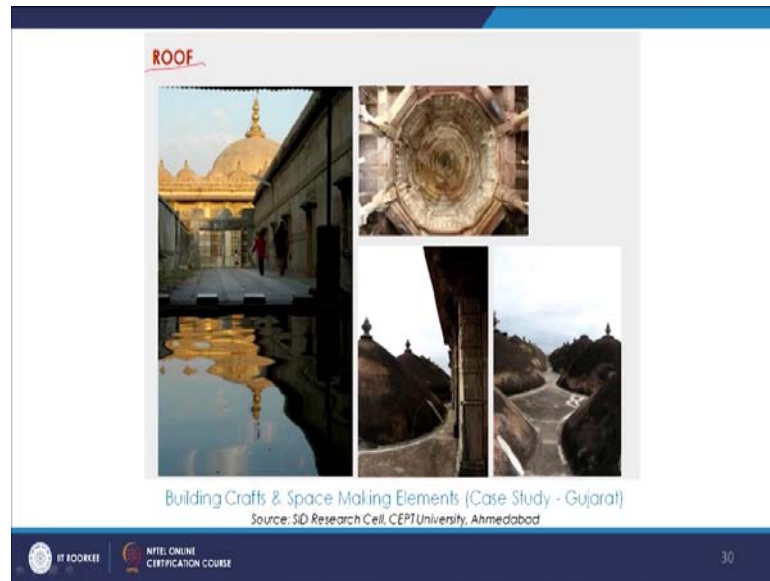
So, that is all the intention of this course, and this lecture, to you know, trying to understand space-making through the medium of building, through the medium of this building material and the craft associated with it.

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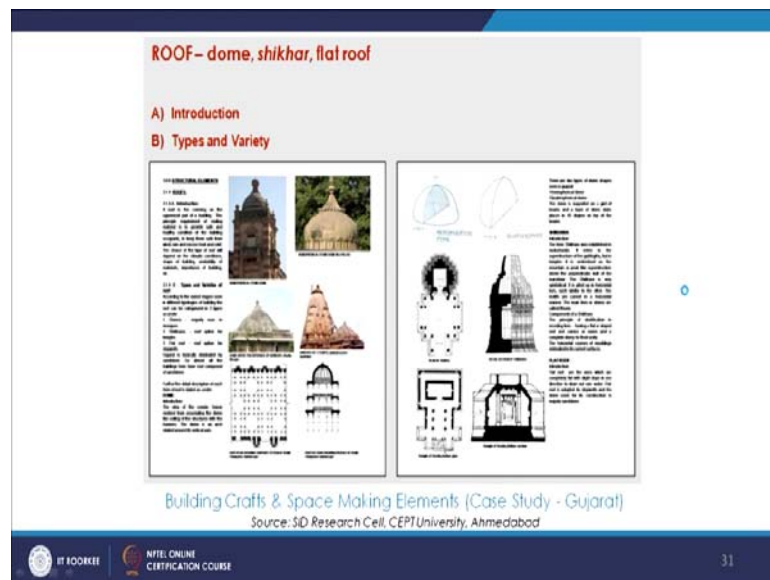
Again, since we are talking about the types and variety. So many types over here, you see so many details of the keystone. All the arches are different, their centers are different, their forms are different, the volume embraced by them are different, the aesthetic you know that comes after the making is different, the different kinds of beautiful arches we see here.

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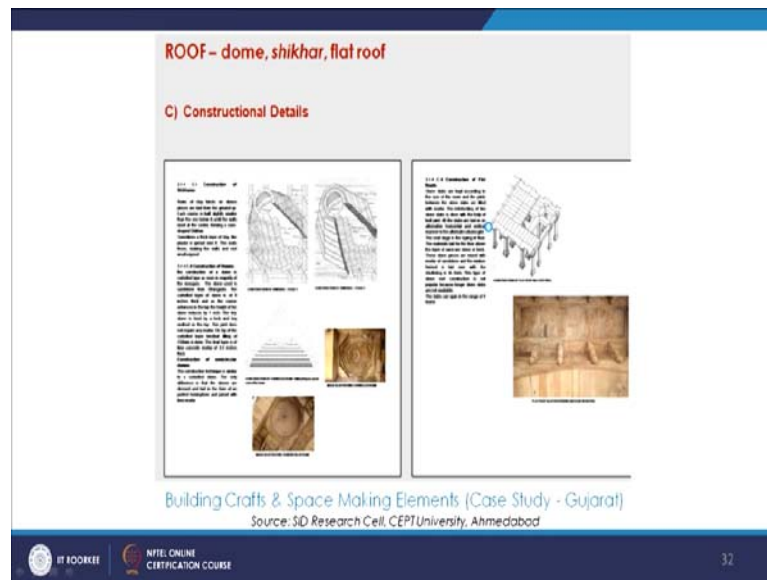
Then the varied roof forms again. These have been documented as part of this research. So, there is a dome, there is a *shikhar*, there is a flat roof, there could be more kinds of roof forms that could be documented.

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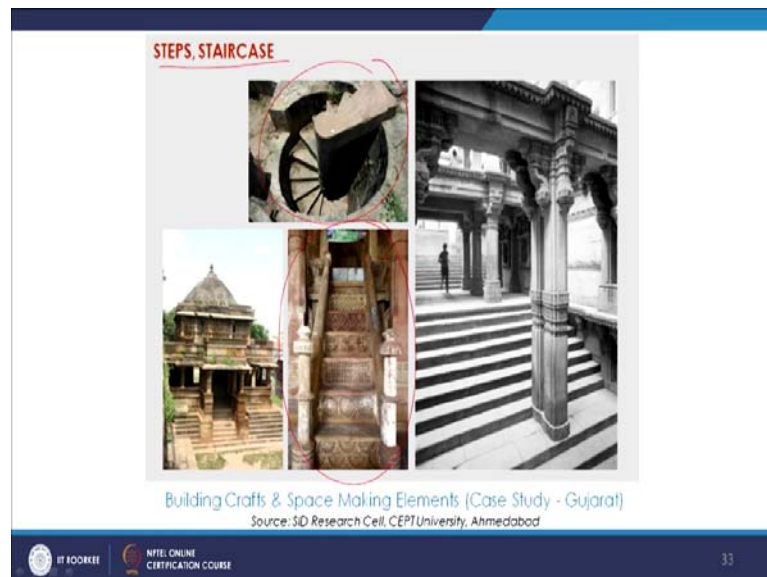
So, here we see these different kinds, we see this *shikhara*, we see the dome over here. And again, you know, different kinds of drawings that help us understand these space-making elements.

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Then the construction details - how are they made? And, you know, when we look from inside, standing within the built space, and the kind of details that we see on the ceiling here, they are also very interesting and very elaborately done. This is done in stone and mostly by hands in case of the traditional, historical monuments.

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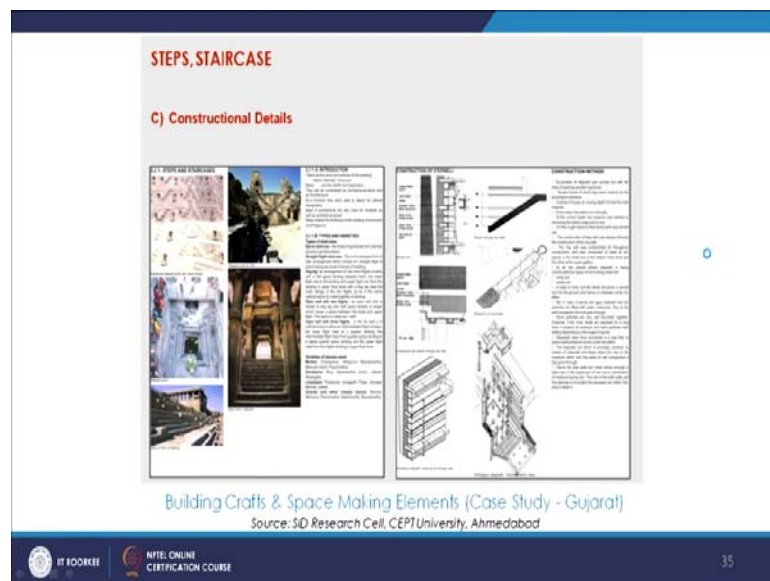
Then, steps and staircases are another example and other elements. And, we see them over here - this is in the mosque, the step well over here, the staircase. So, all of them assigning a different purpose to the space, different types.

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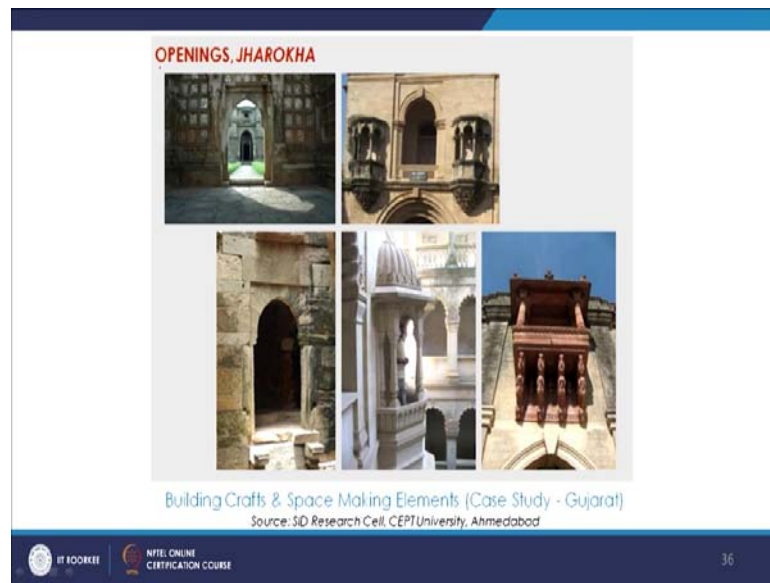
What are the different varieties that one comes across?

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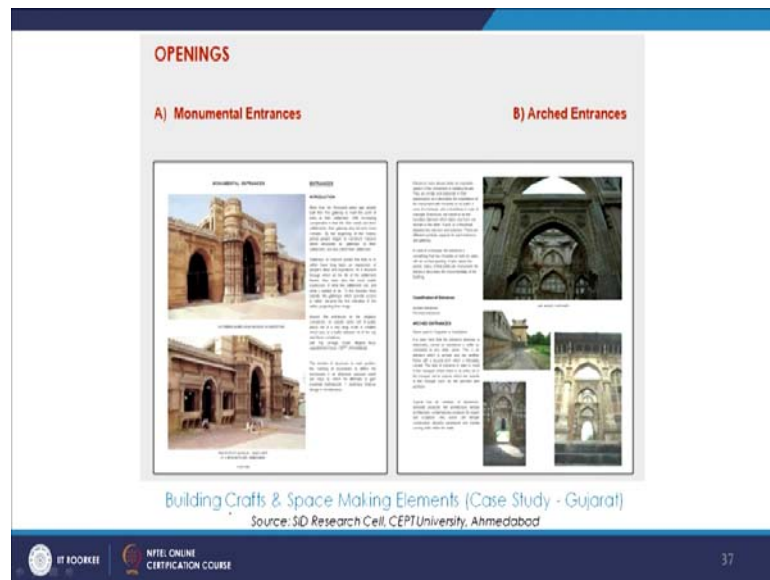
Again, different elements; trying to understand them in different contexts, for different functions, for different kinds of projects. Construction details, you know, how they have been made. So, it is a very informative and elaborate book and I highly recommend everybody to go through it.

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Openings and *jharokhas* are another elements and we see here, different kinds of you know examples, openings.

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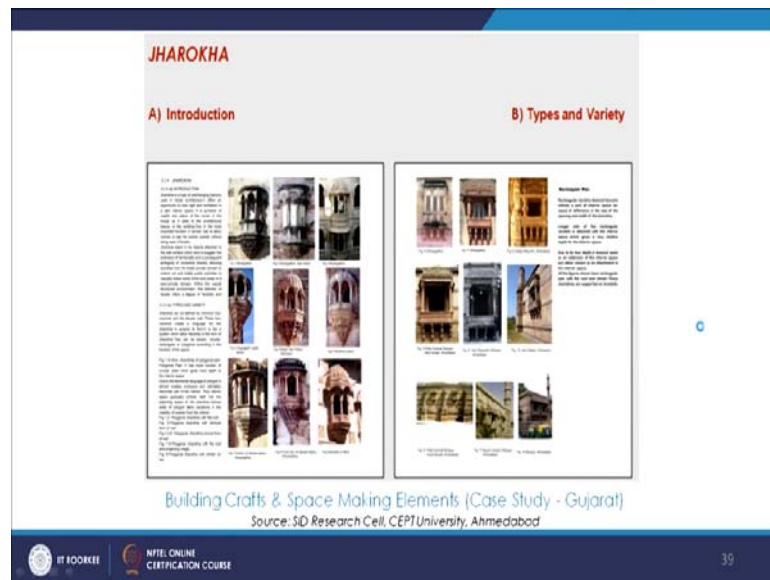
So, and within that, there has been a classification in terms of monumental entrances that we see here. There are arched entrances like this one. There are domestic entrances because of course, the typology is different, the scale is different.

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So, the domestic entrances over here. And then, there are different types and varieties that have been documented.

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So, all the building elements - space making elements. *Jharoka*, again we see so many different kinds of *jharokhas*. I mean this is such a rich repository, visually itself it gives so much information and we see the different types over here, which have been documented, so many varieties. And, they also reflect upon the different kinds of influences that you know, might exist at that time, craft persons coming from different

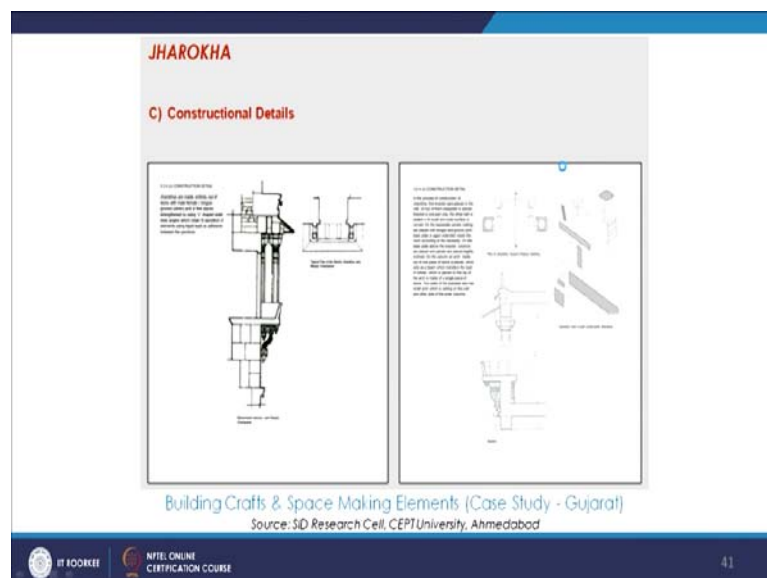
places and then adding to their knowledge. So, distinct style which is from that region, other than that what are the deviations or different kinds of new styles that have been added upon, so that kind of information is also generated through repositories like that.

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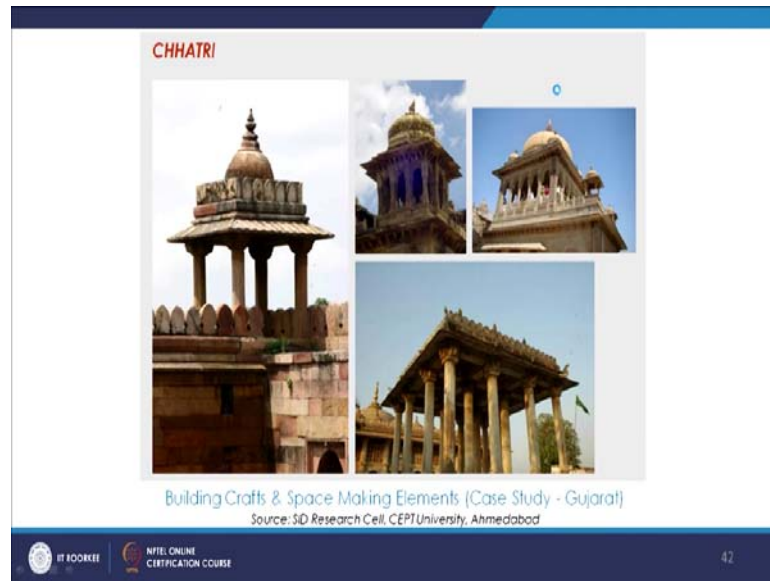
So, again continuing the previous one, some more types and varieties:

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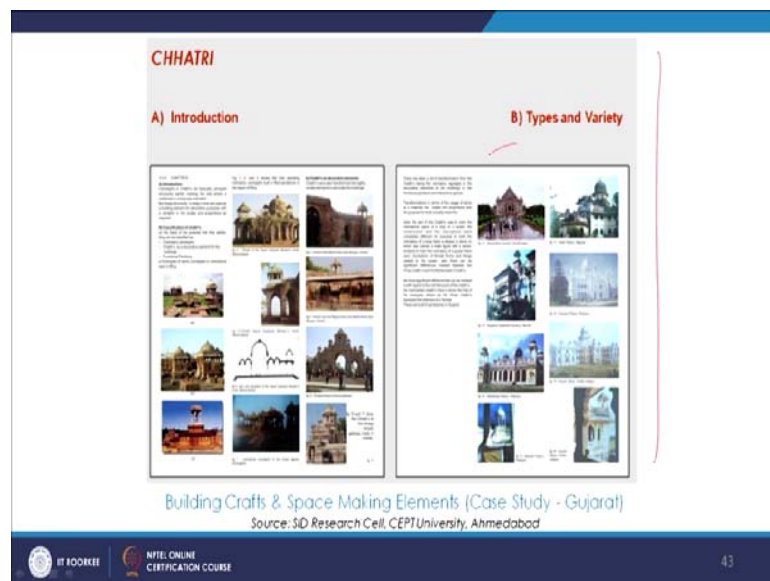
Of course the construction details, which have been very elaborately given over here.

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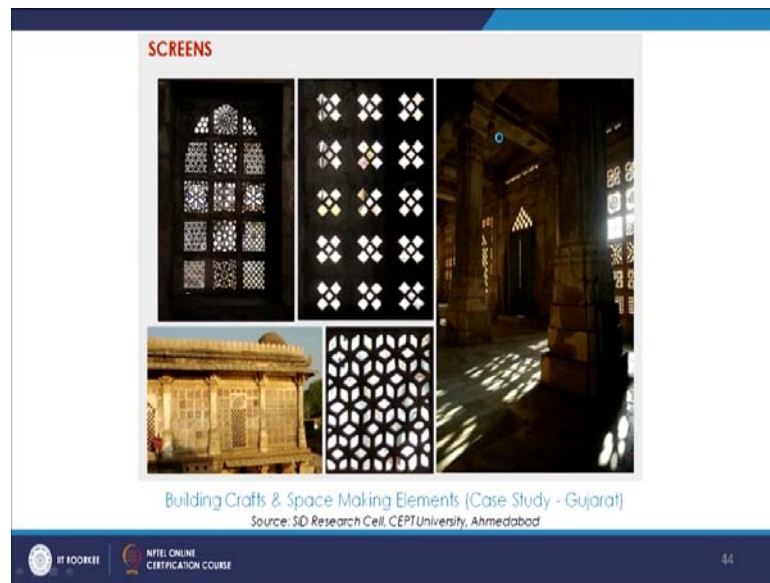


We see some *chhatris*. Again the details - different types over here, we see.

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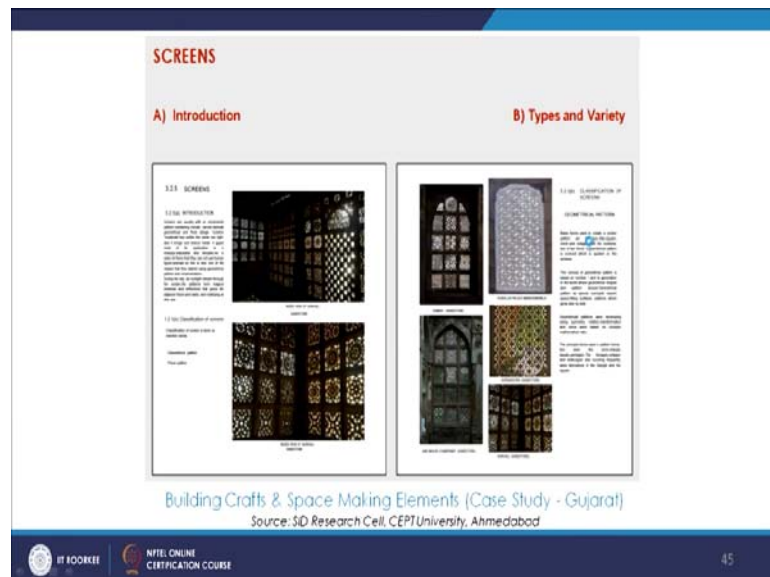


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Talking about the screens, I was always been very fascinated by the *jaalis* and here we see all these different kinds of *jaalis*, this play of light and shadow and the different kinds of motifs and different kinds of modules that we see over here. So, these are all stone *jaalis*.

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And again, different types and varieties that we see over here, some more types and varieties.

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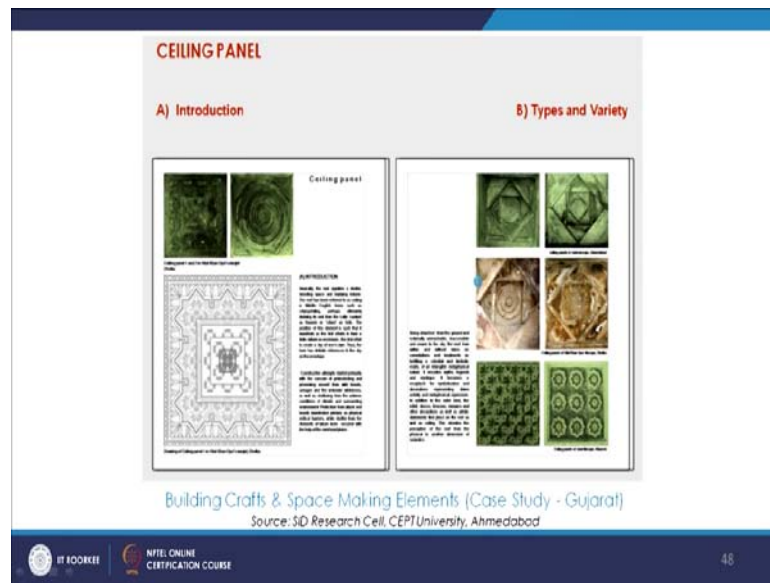
Some have some geometrical motifs, some have floral motifs. This is a very famous *Sidi Saiyyed jali*; we will see this example when we talk about more case studies from Gujarat, and it is very beautiful and very renowned design.

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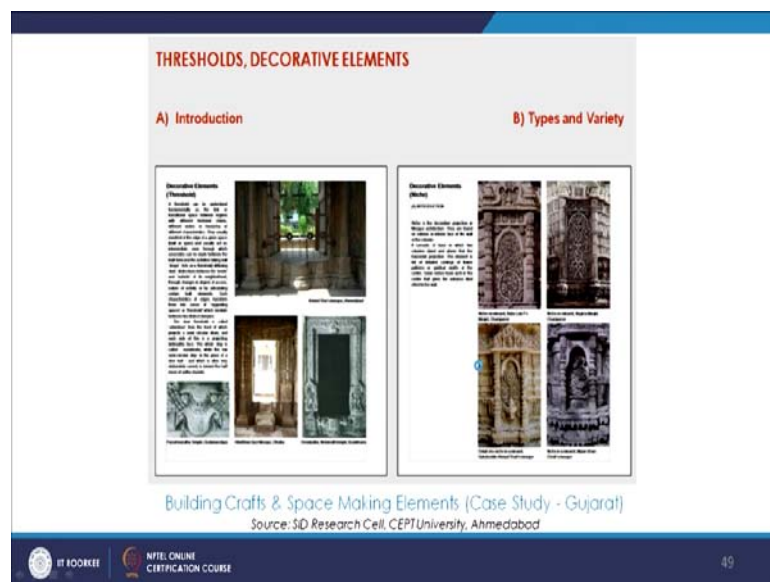
Ceiling panels, decorative elements and finishes - this elaborate ceiling, ornamentation, here again the details that we see.

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So, again the drawings are explained you know, how many parts to it, what is the fractal geometry followed, what are the different types and varieties, this kind of documentation.

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Then, also talking about thresholds and more decorative elements; here - they have lot of significance and meanings. The different motifs here, they have different stories. And, they also reflect on the ethos of the society - why this particular threshold, what is the

story behind it and of course, there is such elaborate craft that we see here in the making of it.

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Then also finishes, you know what kind of stone, which kind of finish - this we are going to see in one of the modules. And, there are some contemporary examples also, because we were seeing only the historical ones, the traditional buildings.

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So, there are few residences that have been documented as part of this research and now this is a contemporary residence and we see arches over here. So, the context is different,

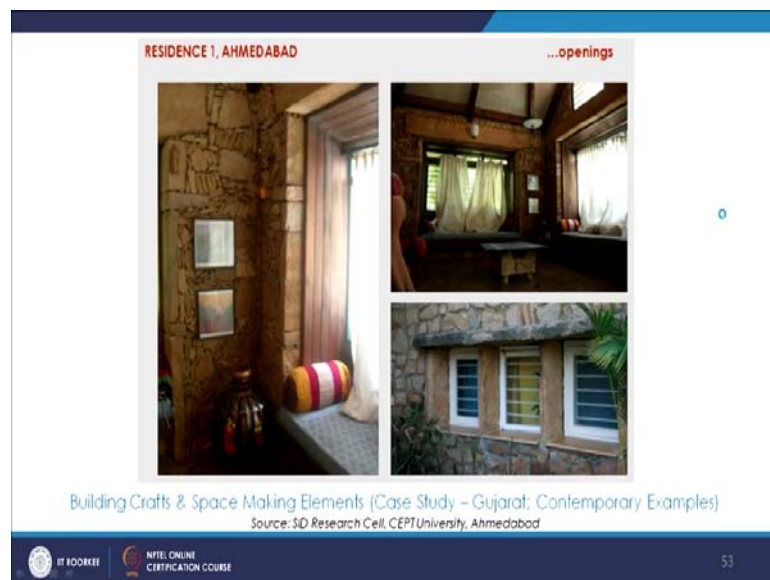
the expression is different, but still the stone crafts, the element and the making, they have lot of wisdom and skills involved in it.

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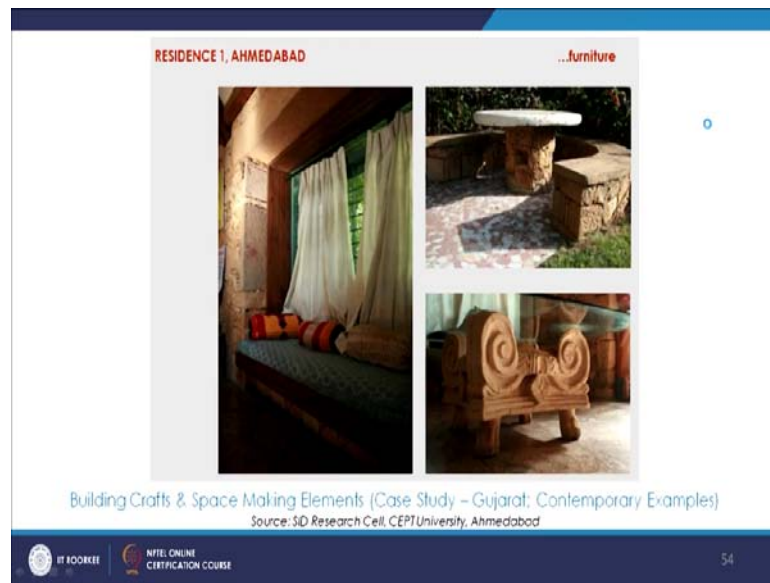
Then we are talking about the columns here.

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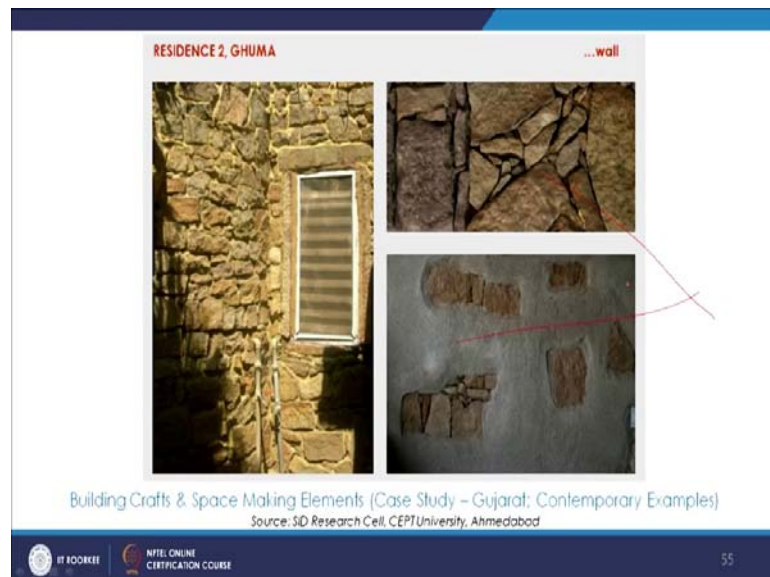
Openings.

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The furniture we see over here, which is so much a part of the landscape and the entire vocabulary that we see here in the architecture, it has some cohesiveness, just by the virtue of the kinds of elements that have been chosen and the way they have been treated and designed.

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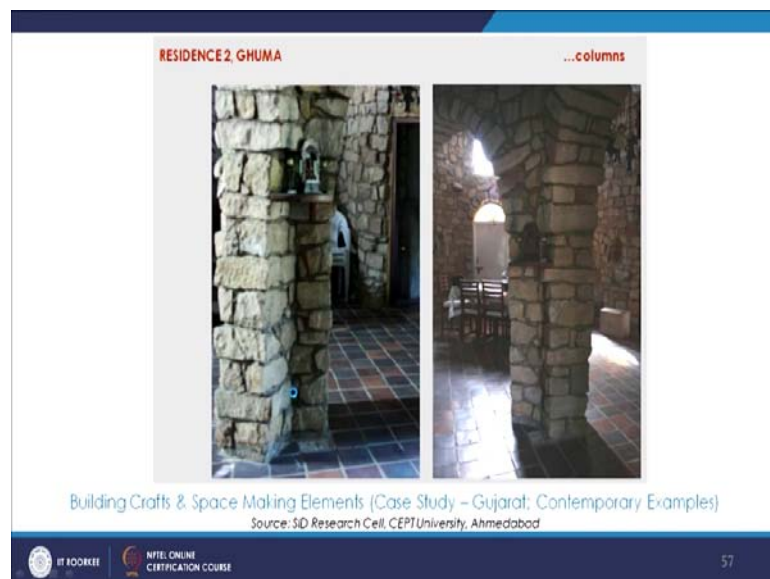
Walls.

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Arches.

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And, again different kinds of columns.

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Some more openings that we see here.

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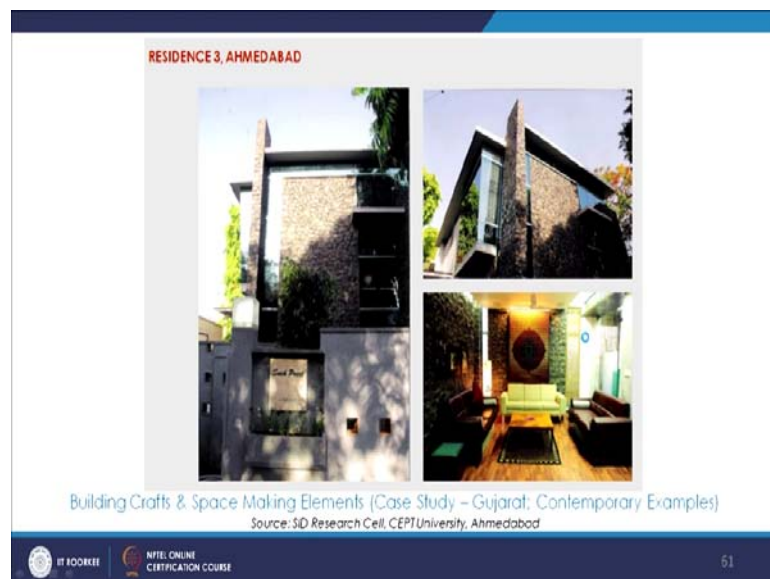
Some more.

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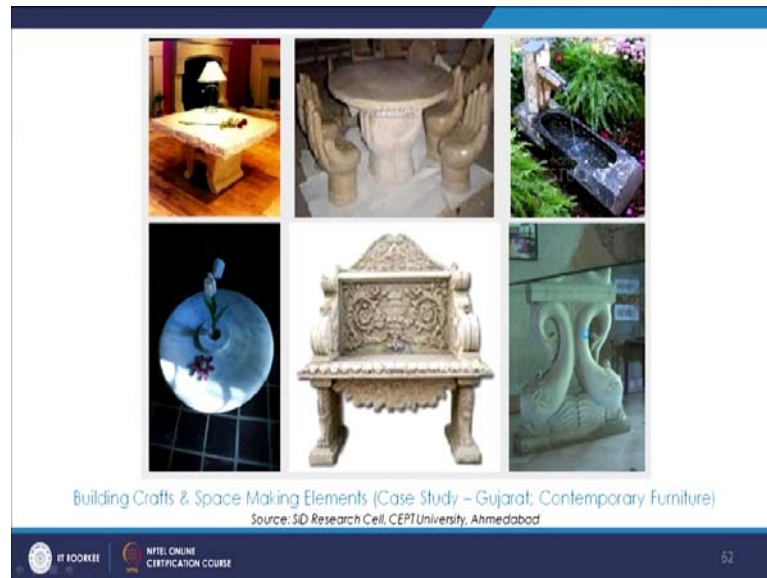
Here we see the steps, different kinds of steps this one and this one.

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Some more pictures again from a contemporary residence.

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And, now this is furniture - some more contemporary furniture, stone furniture, so furniture elements. So, these are some marvelous examples you know, of building crafts and timeless architecture. We are going to discuss the summary of all these last, you know, four modules that we covered and let us have a look at the references.

(Refer Slide Time: 31:20)

- Patel, H (et. al.). **“Stone Buildings of Gujarat”**, SID Research Cell, CEPT University, 2010
- Patel, Kireet; Shah, Reena and Agarwal, Reenal. **“Space Making Craft Vol. 1 Arayish: Wall Paintings of Shekhawati”**, School of Interior Design Research Cell, 2006
- Thakkar, Jay and Morrison Skye. **“Space Making Craft Vol. 2 Matra: Ways of Measuring Vernacular Built forms of Himachal Pradesh”**, School of Interior Design Research Cell, 2008
- Thakkar, Jay. **“Naqsh: The art of wood carving of traditional houses of Gujarat, focus on Ornamentation”**, School of Interior Design Research Cell, 2004
- Saraswat, S., & Mayuresh, G. **“Koti Banal Architecture of Ultrahand: Indigenous realities and community involvement”**, ICoRD, Springer, 2017 (pp. 165-177)
- Sinha, P., Brizev, S., & Kharel3, G. **“Indigenous Earthquake-Resistant Technologies – An Overview”**, Vancouver, 2004.
- Pandya, Y. **“Concept of Space in Traditional Indian Architecture”**, Mapin Publishing Pvt. Ltd., Ahmedabad, 2005
- Pandya, Y. **“Elements of Space Making”**, Mapin Publishing Pvt. Ltd., Ahmedabad, 2005
- Coles, J and House, N. **“The Fundamentals of Interior-Architecture”**, Ava Publishing, 2007
- Hudson, J. **“Interior-Architecture Now”**, Laurence King Publishers, 2007

So, we see this book, it is highly recommended and of course, there are more references on the building crafts. So, space making, surface finishes, then here we have seen this reference a few times. Some more references.

(Refer Slide Time: 31:39)

- Alfoldy, Sandra (ed.). "**Neocraft: Modernity and the Crafts**", The Press of the Nova Scotia College of Art and Design, NSCAD University, 2007
- Sennett, Richard. "**Craftsman**", Penguin Books Ltd., England, 2008
- Risatti, Howard. "**A Theory of Craft: Function and aesthetic Expression**", The University of North Carolina Press, USA, 2007
- Patel, Kireet; Shah, Reena and Agarwal, Reenal. "**Space Making Craft Vol. 1 Arayish: Wall Paintings of Shekhawati**", School of Interior Design Research Cell, 2006
- Thakkar, Jay and Morrison Skye. "**Space Making Craft Vol. 2 Malra: Ways of Measuring Vernacular Built forms of Himachal Pradesh**", School of Interior Design Research Cell, 2008
- Thakkar, Jay. "**Naqsh: The art of wood carving of traditional houses of Gujarat, focus on Ornamentation**", School of Interior Design Research Cell, 2004
- Abott, H.Porter. "**Cambridge Introduction to Narrative**", Univ. Press, Cambridge, U.K., 2002
- Bruno, Giuliano. "**Atlas of Emotion: journeys in Art, architecture and Film**", London, New York, 2002
- Chhiber, Neelam. "**Stone Craft of India**", vol.1 & vol.2, Crafts Council of India, Chennai, with assistance from Department of Culture and Development Commissioner, Handicrafts, Govt. of India, 2002
- Cobley, Paul. "**Narrative**", Routledge, London, 2001
- Collins, Peter. "**Changing Ideals in Modern Architecture (1750-1950)**", Faber and Faber, London, 1965, pp 117-127
- Jaitly, Jaya. "**The Craft Traditions of India**", Lustre Press Pvt.Ltd, New Delhi, 1990
- Lyndon, Donlyn and Moore, Charles W. "**Chambers for a Memory Palace**", the MIT Press, Cambridge, Massachusetts, London, England, 1994
- Mehrotra, Lakhani and Vajpayee, Raghvendra (ed.) "**Communication Through The Ages – An Indian Perspective**", Aryan Books International, new Delhi in association with Media Centre for Research and Development, Gurgaon, 2009

IT 6003EE | NTEL ONLINE CERTIFICATION COURSE | 57

Some more consolidated references for you.

(Refer Slide Time: 31:45)

- Chhiber, Neelam. "**Stone Craft of India**", vol.1 & vol.2, Crafts Council of India, Chennai, with assistance from Department of Culture and Development Commissioner, Handicrafts, Govt. of India, 2002
- Hudson, J. "**Interior-Architecture Now**", Laurence King Publishers, 2007
- Jaitly, Jaya. "**The Craft Traditions of India**", Lustre Press Pvt.Ltd, New Delhi, 1990
- Jaitly, Jaya. "**Crafts Atlas of India**", Niyogi Books, N.Delhi, 2012
- Khanna, P. "**Material and Technology – An inventory of selected materials and technologies for building construction**", Project report to CDKN, Development Alternatives Group, New Delhi, 2011
- Mehrotra, Lakhani and Vajpayee, Raghvendra (ed.) "**Communication Through The Ages – An Indian Perspective**", Aryan Books International, new Delhi in association with Media Centre for Research and Development, Gurgaon, 2009
- Pandya, Yatin. "**Concepts of Space Making in Traditional Indian Architecture**", Mapin Pub.Pvt.Ltd., Ahmedabad, 2005
- Pandya, Yatin. "**Elements of Space Making**", Mapin Pub.Pvt.Ltd., Ahmedabad, 2007
- Parmar, V.S. "**Wood Carvings of Gujarat**", Pub. Division, Ministry of Information and Broadcasting, Govt. of India, 2001, New Delhi
- Patel, Nimish, Chauhan, Muktarajsinhji and others. "**Stone Buildings of Gujarat**", School of Interior Design in collaboration with Gujarat Mineral Research & Development Society, 2010
- Ranjan, Aditi and Ranjan, M.P. (Ed.) "**Crafts of India: Handmade in India**", Council of Handicraft Development Corporations (COHANDS), New Delhi, Development Commissioner (Handicrafts), New Delhi, National Institute of Design (NID), Ahmedabad, and Mapin Publishing, Ahmedabad, 2005
- Saraf, D.N. "**Indian Crafts – Development and Potential**", Vikas Publishing House Pvt. Ltd., New Delhi, 1982
- Taylor, Diana. "Transculturating Transculturation", *Performing Arts Journal*, Inc. 13 (2), 1991, 90-104.
- Trivedi, R.K. "**Wood Carvings of Gujarat**", Census of India 1961", Volume V, Gujarat, Part VII – A (2)

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We had stone craft we have been talking a lot about it. So, we see that.

(Refer Slide Time: 31:52)

- Boner, A; Sama, SF; Baumer, B. "**Vāstusūtra Upanisad**", Motilal Banarsidas: Publishes, 1996, pp 1-29 https://books.google.co.in/books?id=O2eKh7xstG4C&pg=PA2&pg=PA2&dq=In+India,+unlike+in+Europe,+no+principle+distinction+is+made+between+fine+arts+and+practical+crafts.&source=bl&ots=7qTgUKWQDT&sig=VqjpWgXTSyp52PuY8xUE_XOn0U&hl=en&sa=X&ei=MQRUVNPMInauQTlyYDQDA&ved=0C60Q6AEWA#v=onepage&q=in%20India%2C%20unlike%20in%20Europe%2C%20no%20principle%20distinction%20i%20made%20between%20fine%20arts%20and%20practical%20crafts.&f=false, accessed through Google, Jan 15, 16:00
- Campbell, Jeffrey Y (ed.), "**Lac-Turnery and the Lacquerware Industry**", Chapter 3, Case Study 2, in "Women's Role in Dynamic Forest-Based Small Scale Enterprises. Case Studies on Uppage and Lacquerware from India", FAO (Food and Agricultural Organization of the United Nations) Corporate Document Repository, Forestry Department, Rome 1991, <http://www.fao.org/docrep/x5859e/x5859e04.htm>, 13Dec 12, 17:42, searched through Google
- Compean, M. "**Timber Drying Methods – Passing through History into the Future**" in Moren, Tom and others (ed), "Proceedings of the Eleventh International IUFRO Wood Drying Conference – Recent Advances in the Field of Wood Drying", Skelleftea, Sweden, Jan 18-22, 2010, http://www.itu.se/polopoly_fs/1.58969!straproved%20-%20proceedings.pdf#page=11, searched through Google, 15Dec 12, 15:00
- Risatti, H. "**A Theory of Craft: Function and Aesthetic Expression**", The University of North Carolina Press, 2013
- Author Unknown, "**Regional classification of Floor Art - Northern and Eastern parts of India**", Journal Shodhganga, Chapter 2, Volume 8, retrieved from shodhganga.inflibnet.ac.in/bitstream/10603/4605/8/08_chapter%202.pdf, 10th Aug 15, 17:40 hours, through search engine Google

IT 600002 NTEL ONLINE CERTIFICATION COURSE 59

More.

(Refer Slide Time: 31:55)

- Nair, Rukmini Bhaya. "**Narrative Gravity: Conversation, Cognition, Culture**", Oxford University Press, New York, 2002
- Ochsner, Jeffrey Karl. "**Furniture Studio: Materials, Craft, and Architecture**", University of Washington, 2012
- Ryser, Rudolph. "**Indigenous Peoples and Traditional Knowledge**", Berkshire Encyclopedia of Sustainability 5/10, Ecosystem Management and Sustainability, 2011
- Read, Herbert. "**The Image precedes the idea**", in Egenter, Nold. "**Architectural Anthropology: Research Series**", Vol. 1: The Present Relevance of the Primitive in Architecture, Structura Mundi, Lausanne, South Africa, 1992
- Saraswat, S. "**Radhasoami Samadh, Agra: Stone Crafts as medium of Narration**", CONTEXT – International Journal of the Development and Research Organisation for Nature, Arts and Heritage, Volume VIII, Issue 1, pp 91-96, 2011
- Sareen, K.Santosh and Paranjape. Makarand (Ed.), "**Sabda – Text and Interpretation in Indian Thought**", Mantra Books, New Delhi, 2004
- Tillotson, G.H.R., "**Paradigms of Indian architecture: space and time in representation and design**", Curzon press, 1998, Richmond
- United Nations Environmental Programme (UNEP). What Is Indigenous Knowledge? Nairobi: Kenya. Retrieved from: <http://www.unep.org/ik/Pages.asp?id=About%20IK> on 15 June 2016.
- Varadarajan, Lotika and Chevallier, Denis (ed.) "**Tradition and Transmission – Current Trends in French Ethnology – The relevance for India**", Aryan Books International, New Delhi in association with Cultural Section of the Embassy of France, New Delhi, 2003
- Saraswat, S and Raheja, G. "**Craft, a Narrative Barometer for Interior-Architecture: Specific Focus on Stone Crafts of India**", in A Chakrabarty (ed.), ICORD'15 - Research into Design Across Boundaries, Vol. 1, Springer, pp. 353-62, 2015

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Thank you.