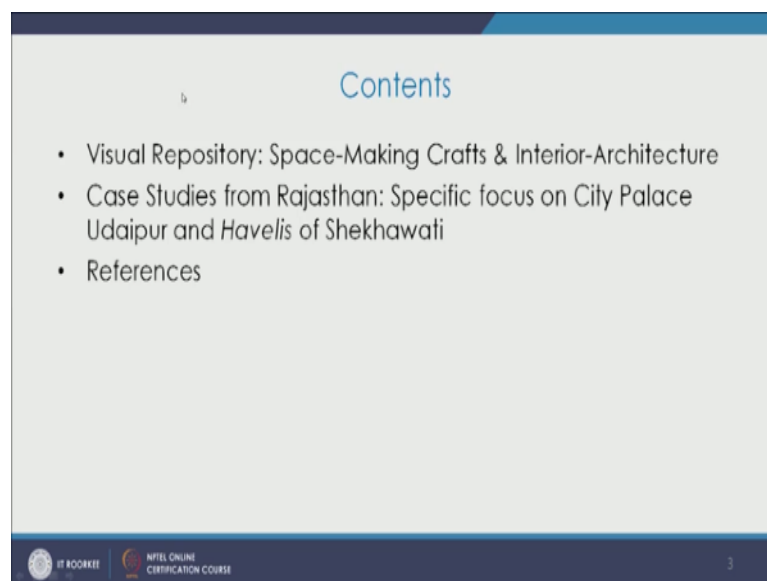


**Role of Craft and Technology in Interior-Architecture**  
**Prof. Ar. Smriti Saraswat**  
**Department of Architecture & Planning**  
**Indian Institute of Technology, Roorkee**

**Lecture - 18**  
**Case Studies from Rajasthan**

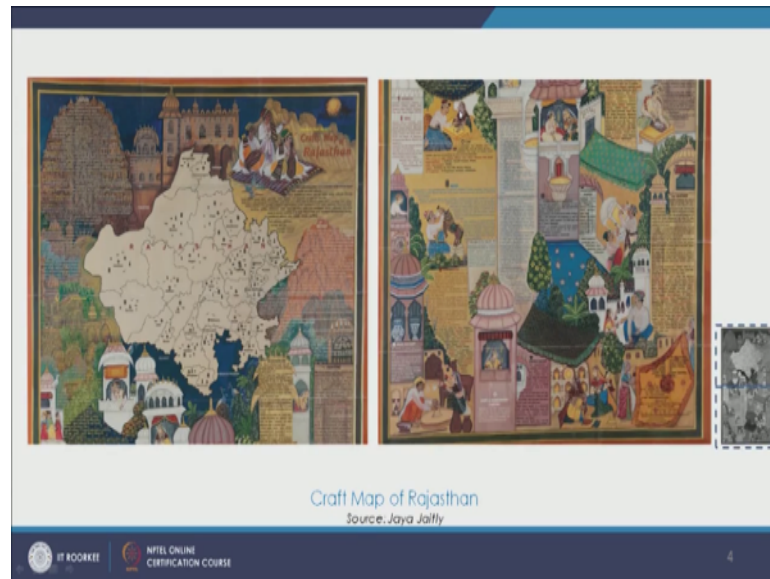
Namaste! Hello everyone. Welcome back to the NPTEL course Role of Craft and Technology in Interior Architecture. We are already in the fourth week and today we will discuss module 18th. So, module 18 focuses on the case studies from Rajasthan and we all know that Rajasthan is a very rich state of India in terms of its interior architecture styles and varied art and craft forms it is known for its several creative and cultural industries. So, it is very obvious that we are going to have some case studies from Rajasthan, when we are talking about craft and technology and interior architecture.

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So, the overall contents for today, we are going to go through a visual repository of space making crafts and interior architecture of Rajasthan and we will see different case studies and we will have specific focus on city palace Udaipur and Havelis of Shekhawati, before this we will have small overview also, and then we have references towards the end.

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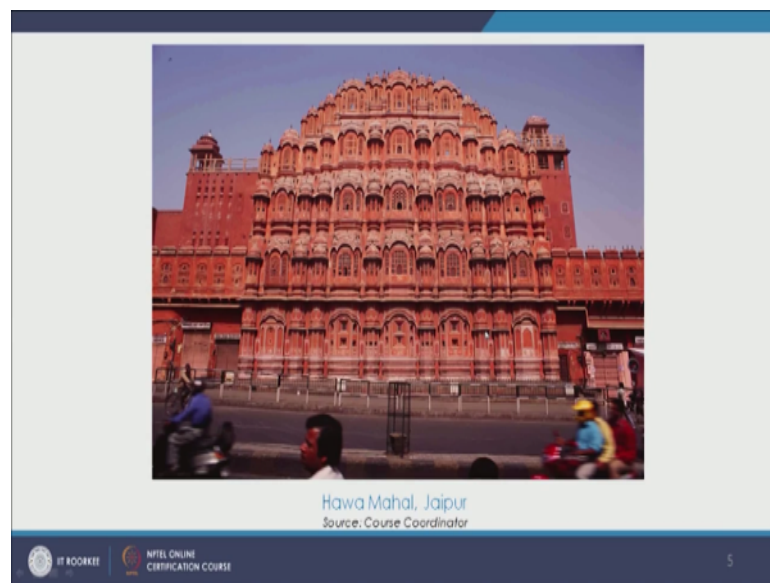


I would like to begin by discussing this very interesting and graphical craft map of Rajasthan, these crafts maps of India are developed by Jaya Jaitly Ji and each state has a different craft map and they celebrate and discuss varied art and craft forms of that particular state. So, when we talk about Rajasthan Rajasthan is so rich in these craft forms and we see over here you know the different interior architecture styles, we see the Jaipur Hawa Mahal over here we see different elements face (Refer Time: 02:01) elements, we see dome and *Chattri* and we see over here the mention of paintings so different paintings from Rajasthan, then stone work and there are different kinds of metal works that we see in Rajasthan that also we can see over here in this map, then we see this puppets and toys in Rajasthan is very famous for it is puppets and toys in puppet shows so we see the mention of those over here and we see the handmade paper we see different kinds of textiles Rajasthan is known for it is tie & dye *Bandhani* work *Shibori* textiles and, different kinds of textiles.

And there are different kinds of stories of the kings and the queens and the Mahals, the Palaces is all that we see you know. So, it is a very elaborate map and we see different kinds of crafts of Rajasthan the very famous blue pottery over here we can see. So, all of these and then here we see the terracotta and that Molela terracotta craft over here we see.

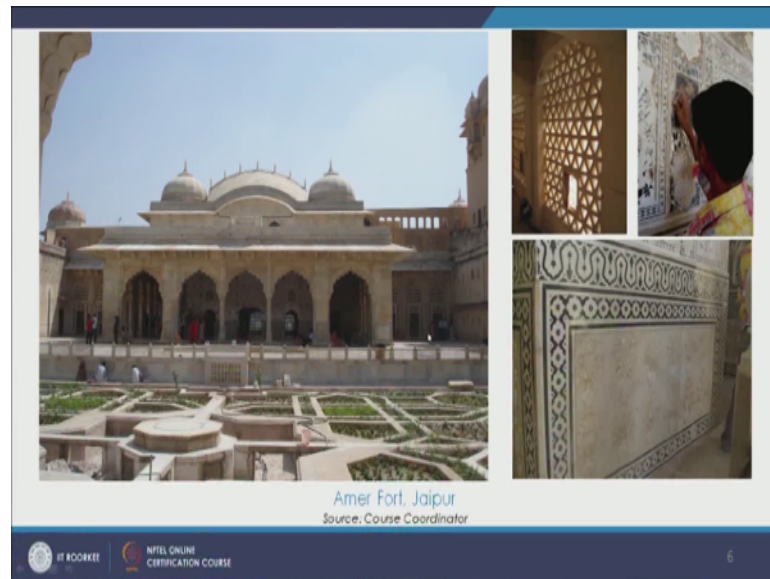
So, this is the potter's wheel and terracotta and then we see different terracotta objects of use as well as the craft forms which are votive and religious so we see different craft forms over here and these maps for developed to disseminate, promote, celebrate all these different craft forms of varied states of India. So, we will also see now in overview of you interesting interior architecture styles and the craft forms of Rajasthan and then we will go to specific case studies.

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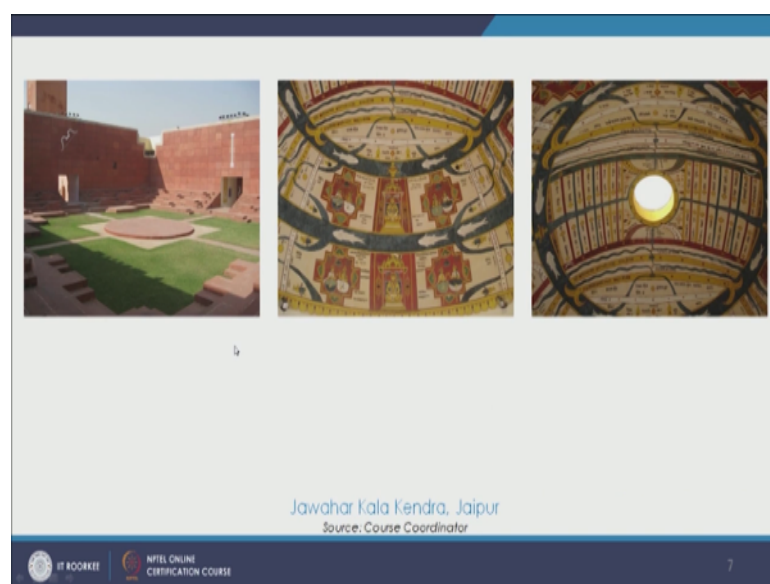
So, this is the very famous Hawa Mahal all of us know about it many tourists come to visit this place. It is known for its interior architecture style, it is known for its passive design features. And, it is known for its climate responsive design and its quite aesthetic also. So, it is a very famous building and its in Jaipur and Rajasthan is known for its interior architecture. So, I have put this in the very first slides you know to celebrate the timelessness of interior architecture styles of Rajasthan.

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And the craft forms the art forms which are also space making and they add to the interior architectural styles. We see the very famous Amer Fort over here which is in Jaipur for we see the space making elements, the arches, the mirror work that we can see over here the Charbagh, the gardens which are in the front we see all these stone carving stone inlay *Jali* work and this mirror work, which is done in the lime plaster. So, we see all these rich interior architecture art craft forms here.

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This is again very famous Jawahar Kala Kendra in Jaipur and its a multi art centre it was designed by Charles Correa, the very famous Indian architect and it has several art forms and the inspiration for the plan of Jawahar Kala Kendra came from the original plan of the Jaipur city.

So, if you are interested then you want to go into the details, then you can see that it has nine squares with the central square which is kept open and then we see lot of art forms over here which reflect the cosmos, the universe, the way of life and different art forms which express our day to day life. So, it is a very beautiful and highly celebrated building and Rajasthan is known for it and its architecture is very inspiring.

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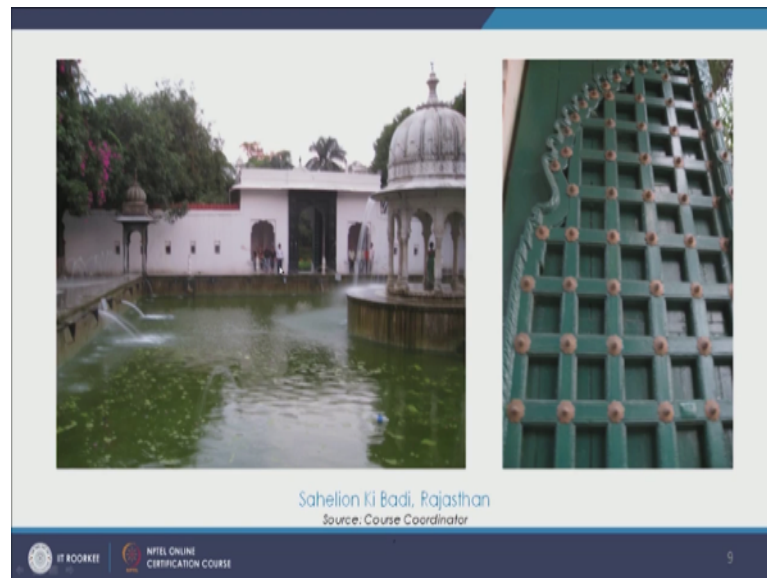


Then we see over here some pictures from Molela, Rajasthan and Molela is known for it is terracotta craft. So, we see you know the objects of use to the votive terracotta craft, where you know we see the sculptures and we see the religious sculptures and motifs, here we see gods and goddesses and we see over here a workshop of Mohanji whose workshop is this where it was documented.

So, it is a very famous craft and it is practiced in several ages and it still continues this village is there and the families of the craft person still work on this craft. And, we see lot of the applications of these terracotta techniques now in modern construction,

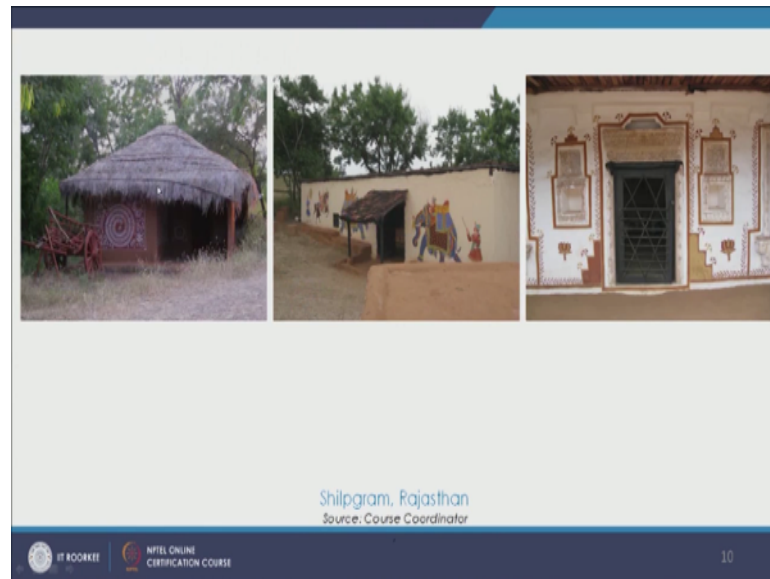
contemporary construction precisely. And we saw in one of the modulus and overview of transformation of terracotta through ages. And we will also discuss it once more in detail, when we discuss the module transformation through ages of different materials and craft forms.

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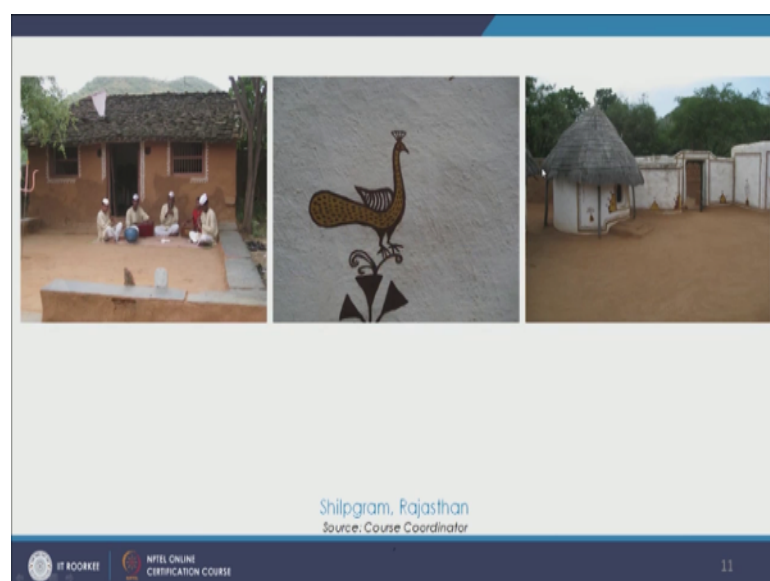
So, this is Molela, this is *Sahelion Ki Badi* in Rajasthan and we see this beautiful central space which has this water body in the centre and which instantly creates an experience and reaches the environment and the immediate surroundings of the user. We also see the timber and metal craft over here in doors and other space making elements. So, because these are just overviews I have put limited pictures and, we will discuss in detail to specific case studies.

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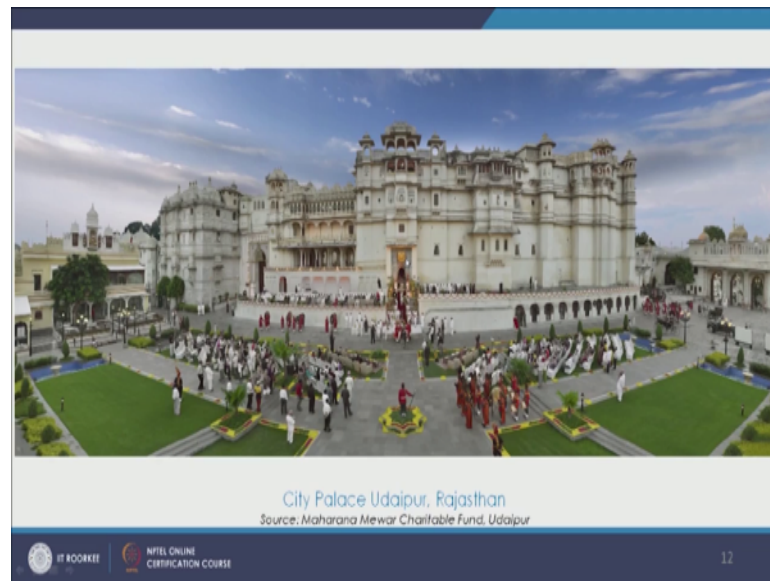
These are some pictures from the *Shilpgram* which is again a sort of craft village which has come up to celebrate these art and craft forms and we also see the indigenous dwelling units and interior architecture styles which have been demonstrated and exhibited over here. So, we see the surface craft, the paintings over here, here also we see certain paintings here. We see you know the kind of surface finishes that are seen in the indigenous dwelling units of Rajasthan.

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Again a motif this is *Mandana*, we see again some dwelling unit and the way Rajasthani traditional house looks like, this is some music performance that was happening. So, all these are created and cultural industries building crafts and interior architecture styles and Rajasthan is very rich in them it is very known for them.

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Now, coming to the main case study which is city palace Udaipur, it is a very famous palace and its quite old and the legacy continues it is there today also its like a city in itself. And it has different shops, museums, schools for kid's library and different activities are demonstrated live it has a light and sound show.

So, it is a very rich experience to be here in this palace to learn about the interior architecture of that time, how it is time less what are the different space making elements which are seen in this palace and which are on a huge humongous scale. So, like these are the people standing here and then we can see the scale it is monumental different art and craft forms we see over here. So, we are going to discuss all that.

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These are some interesting images that we see over here, these are the Topsfield book it is a very famous book city palace museum Udaipur paintings of Mewar court life. So, these are paintings from Topsfield books and, we see over here city palace Udaipur and interior architecture is highlighted, the court life is highlighted, we see the art and craft forms highlighted in these paintings we see the stain glass work over here over here, we say this is the emblem of the dynasty. And we see these different kinds of space making elements here also we see all these distinct art and craft form.

So, we see mirror work and glass work over here *Meenakari* work, mosaic work, this all over here we see the artwork. And when we go inside the palace all the spaces exist and, they have been documented and through these paintings they have been disseminated throughout the world and city palace Udaipur is quite famous for its architectural style and varied art and craft forms specially the mirror work in glass work.

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So, we see all that in these paintings, these are few more which talk about the palace, interior architecture and what all activities the queens indulging, some you know conversations happening and over here the meeting and the gardens and the pigeons.

So, we see the life of the palace, we see different stories and, we get to know about that era. So, these are very interesting paintings. So, I thought of putting few slides, so, if we talk about the several art and craft forms that we can see inside the city palace Udaipur the few of them

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Several art and craft forms can be seen in the palace. Few are mentioned as under:

- 1) Glass Work
- 2) Mirror Work
- 3) Meenakari or Inlay Work
- 4) Ivory Work
- 5) Carvings
- 6) Paintings, especially Pichwai Paintings
- 7) Ceramic and Tile Work

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which are listed and which are of prime importance are glass work, mirror work, *Meenakari* or the inlay work in the local parlance it is called *Meenakari*, there is also a bit of ivory work over here, we see lot of carvings, both stone and timber, then there are lot of paintings specially the Pichwai paintings. So, Pichwai paintings are very famous and their origin is the Rajasthan and they have been shared and talked about and disseminated for their subject, for their content, for their expressions there is also ceramic and tile work that we see in this palace.

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Manifestation of the traditions & culture

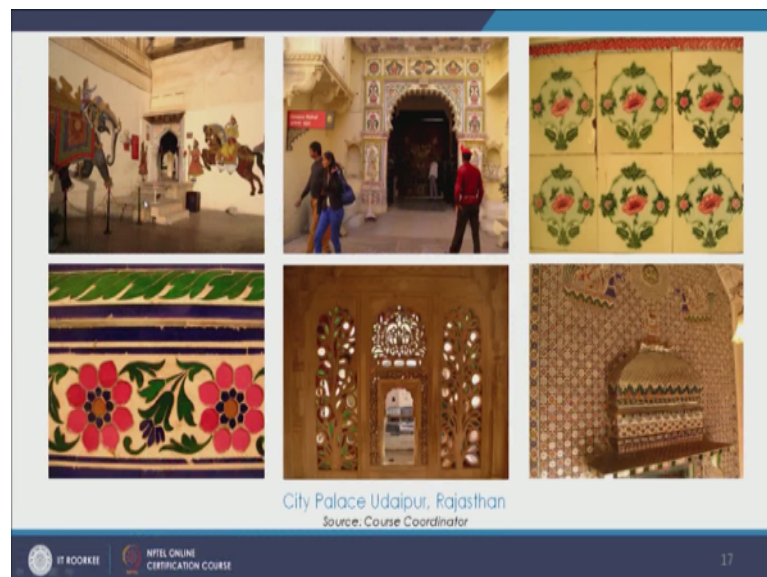
City Palace Udaipur, Rajasthan  
Source: Course Coordinator

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So, these are some pictures to give an overview of different spaces, difference space making elements in different art and craft forms. So, we see over here mirror work, glass work over here this is again mirror work, we see a mix of several craft forms over here, there is mosaic, there is inlay, there is mirror, there is glass and this is the *More Chowk*, the central courtyard and then we see the peacocks over here which are considered very auspicious in this palace in Udaipur in the Mewar dynasty.

So, we see all those great art and craft works over here and we see also certain motifs which are very auspicious and which are very symbolic of the way of life of people over here. Again here we see lot of mirror in glass work here we see lot of work, this is also quite intricate detail. So, we see all that and along with these space meeting elements and, the craft forms that enhance them this is also a very evidence manifestation of tradition and culture that comes out through stories and motifs and the kind of the kind of forms and designs and the like the gods over here, we see their believe system we see the peacock like I just discussed. So, we all these symbolise and give the traces of the tradition and culture being followed by the people there.

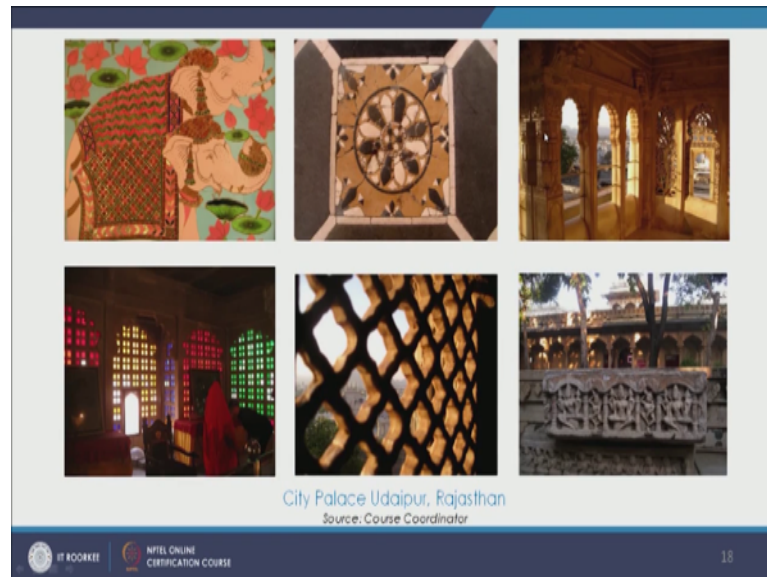
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These are some other details. So, here also we see the glass inlay, the coloured glass, we see the paintings over here, then here we see this quite detail decorative surface art which is you know flanking this huge arch over here, we see the stone *Jalis* is with glass work

over here, here we see the mirror and glass inlay work over here and these are you know the tiles that clad the surface and they are quite decorative and their floral motifs and they have nice subtle colours. So, we see all those details in the palace.

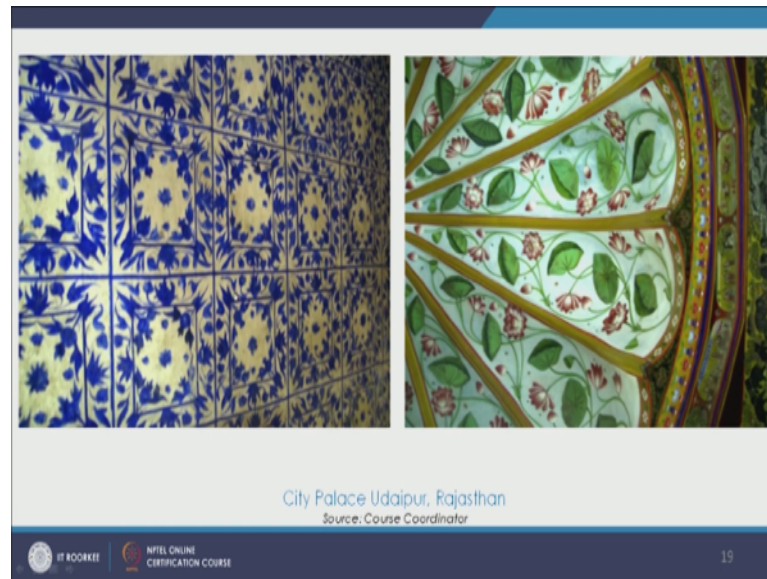
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Again some rich glass work here, some glass work it has some mirror work also here, we see this inlay work, this is a stone *Jali* this we see over here. And the architecture of Rajasthan is very famous it is known for it is Havelis for *Jalis* for forts and palaces. And we see the *Jali* almost in all the typologies of the buildings and it is it has been proved that it has a passive design feature, it also looks quite aesthetic and it also allows for the play of light and shadow. Here again we see some stone *Jalis* with some glass work over here, this is stone carving over here that we see.

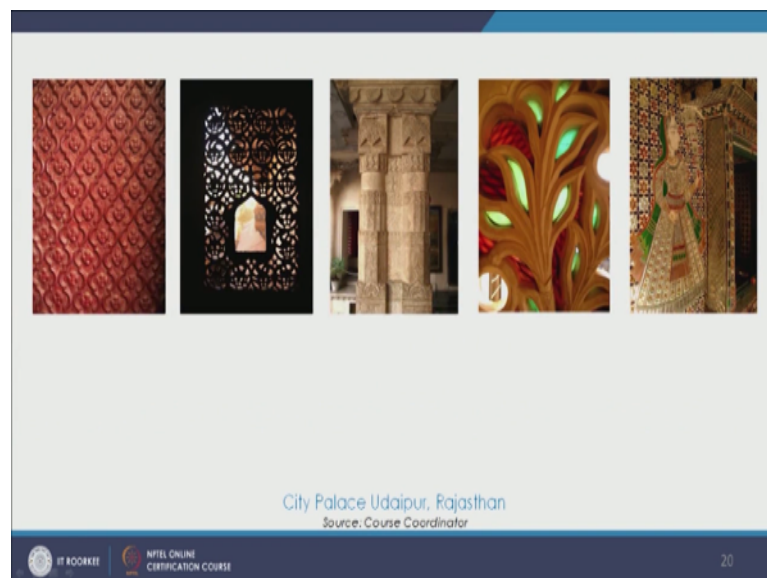
So, these all different space making elements they are adorned with different craft forms and which are hand practiced and which are quite tedious to do and it reflects on the skills of the master craft persons.

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This is the inlay of blue glass and this we see over here the painting on the ceiling of one of the rooms or chambers in the palace.

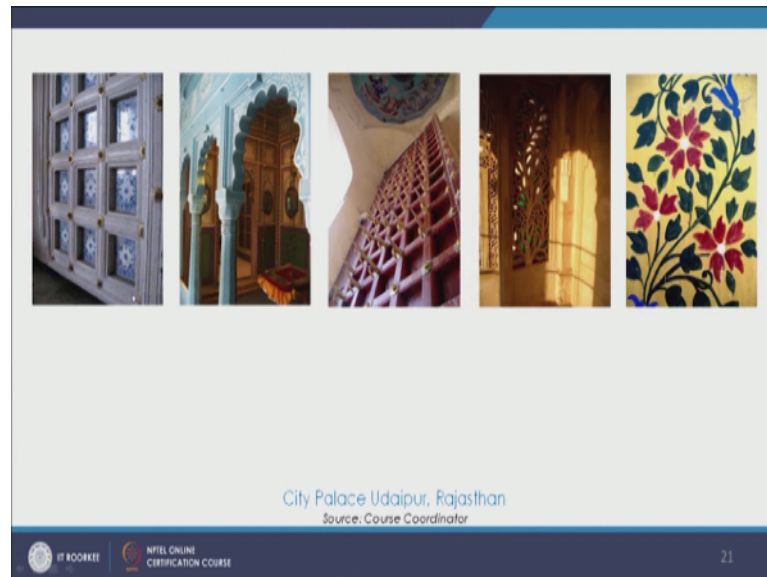
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Again some more details here we see the wood carving again a stone *Jali* over here, stone carving, we see the twin capitals over here twin columns, we see lot of carvings on the stone over here. This is again stone *Jali* with the coloured glass, we see those details and here again the *Meenakari* work, the mosaic and the inlay work we see all those

details throughout the palace. And, its quite intricate, quite detailed out and the entire palace it is so huge but everywhere in every nook or corner there is some or the other interesting detail that we come across.

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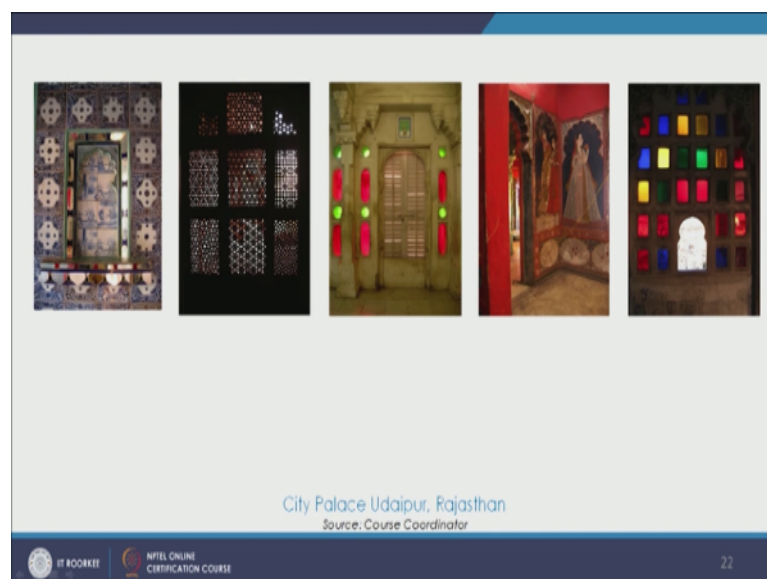
Some more details here we see again some glass inlays, some timber and metal work. Here we see some surface painting, surface finishes, here on the ceiling again we see some painting it is like the about the Raasleela and we see Lord Krishna over here, we see timber and metal work, again stone *Jali* over here and some paintings which are you know surface narrative paintings finishes.

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These are some Chinese style then again the blue glass inlay work.

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Different kinds of geometric motifs that we see in the *Jali* work over here. This is again the coloured glass work, some paintings, some original narrative surface finishes, here again we see the glass the coloured glass from here the entire city is visible. So, all these details over here we see.

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The *Sheesh Mahal*, or the *Palace of Mirrors*, was the work, partly of Shah Jahan and partly of Aurangzeb. Built under the superintendence of Asif Khan in Shah Jahan's reign, it was completed in 1632. The main decorative features are the mosaic works in convex mirror glasses (the so called Aleppo glass). Work in Udaipur is probably carried out by the artisans from Gujarat or Sindh (Hyderabad region of Pakistan).

Parallels: Gujarat, Agra, Delhi, Tanjore (Tamil Nadu), Indore (Madhya Pradesh), Mathura (Uttar Pradesh)

Sheesh Mahal, Udaipur  
Source: Course Coordinator

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So, if we come to the *Sheesh Mahal*, you know the palace of the mirrors. It is a city palace has several sub palaces or chambers or rooms, but the palace of mirrors of the Sheesh Mahal is very famous like, it has been visited and talked about and written about several times and, it is quite a vision it looks quite aesthetic it was completed in 1632.

The main decorative features are the mosaic works in convex mirror glasses and they were called as Aleppo glass. So, we see already some kind of influence of glass work you know on the city palace Udaipur but before the glass came in it was majorly the mirror work that it was famous for and mirror work of Rajasthan in local parlance is called as *Thikri Kaam* Rajasthan.

So, there are several stories associated to why it got the name *Thikri Kaam*, but just restrict into what it is mostly called it is called *Thikri Kaam*. So, work in Udaipur is probably carried out by artisans from Gujarat or Sindh. So, these kinds of influences are also seen. So, migration of craft persons and, then you know the skills of craft persons of one state being employed in other state and sort of cross connection, exchange and transfer of ideas all that could be seen. And, there are several parallels to *Sheesh Mahal*, Udaipur, we can see such examples in Gujarat, Agra, Delhi, Tanjore, Indore, Mathura.

So, there are several parallels that existed and there was this kind of celebration of art that was happening across India and you know all these skills were patronised and these kinds of palaces and forts and artworks were coming up. Just to give an overview of what different kinds of mirrors were used.

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**Mirror Types**

Mirrors used in Rajasthan are brought from Gujarat itself. These are:

- Commercial Mirrors (1.5 - 2 mm thick) with tin plating and lead oxide coating on the back face. They have a silver tinge and look too artificial. Most recent examples (50 years) are the examples of this type.
- Mirrors for which Specific Glass Shapes (Spheroidal) are Cast, Polished well and then Coated with silver plus a coating of tin, or lead, or both is applied. Silver starts appearing blackish due to the oxidation, but it produces better luster. These examples are used in Udaipur, Mughal Architecture and many other mid-age buildings (50 - 120 years old).
- Older Works of Mirror Decorations have Lead Mirrors. They are often very thin mirrors (similar to khap mirrors in Kutch and Saurashtra embroidery).

City Palace Udaipur, Rajasthan  
Source: Course Coordinator

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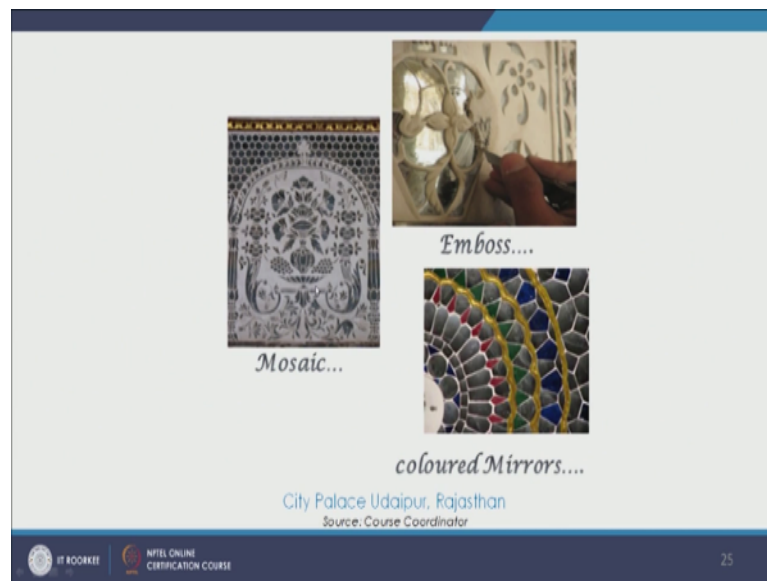
So, mirrors used in Rajasthan, they are majorly brought from Gujarat this is the current scenario and at that time also there was an exchange. So, they are commercial mirrors this is one category. So, they are 1.5 to 2 millimetre thick. So, I am just giving the technical details, they have a tin plating and lead oxide coating on the black face.

They have a silver tinge and look too artificial, most recent example say 50 years that we see in interior architecture are probably the examples of these commercial type mirrors, another one is mirrors for which specific glass shapes, majorly spheroidal are cast, polished well, and then coated. And this coating is done with silver plus, there is a coating of tin or lead or both which is applied on it, silver starts appearing blackish due to oxidation, but it also produces a good luster.

So, sometimes that choice one has to make, these examples are used in Udaipur, Mughal architecture and many other mid age buildings say 50 to 120 years old. So, these kinds of mirrors could be seen in city palace Udaipur. And then there are older works of mirror

decorations, which have lead mirrors, they are often very thin mirrors in local parlance in the Kutch and Saurashtra embroidery there are *Khap* mirrors that can be seen, they are called *Khap* mirrors. So, they are similar to those they are very thin. So, we see these three major categories or types of mirrors in these different buildings and we also saw which particular ones are seen in city palace Udaipur.

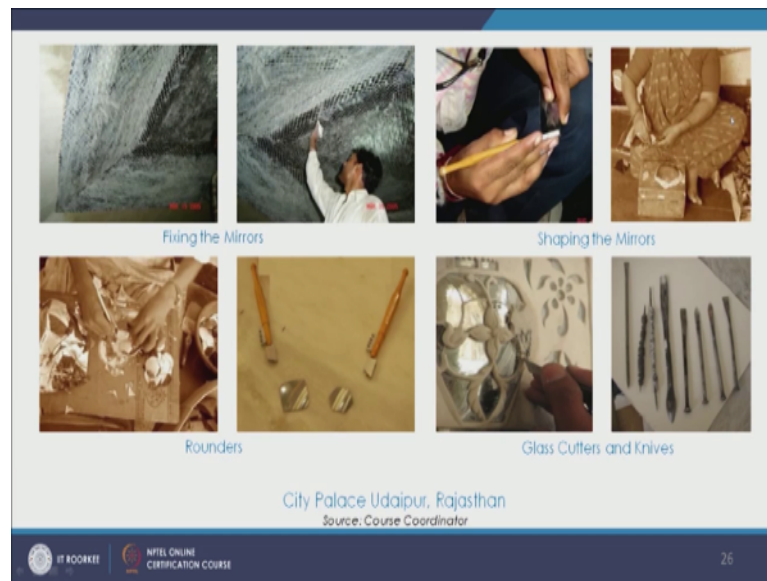
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Then if we talk about the mirror work and glass work there are several techniques that are employed. So, we can see this mosaic work, which is more or less flat and it has very intricate details, this is emboss as we can see from this picture. So, it is embossed, these are coloured mirrors.

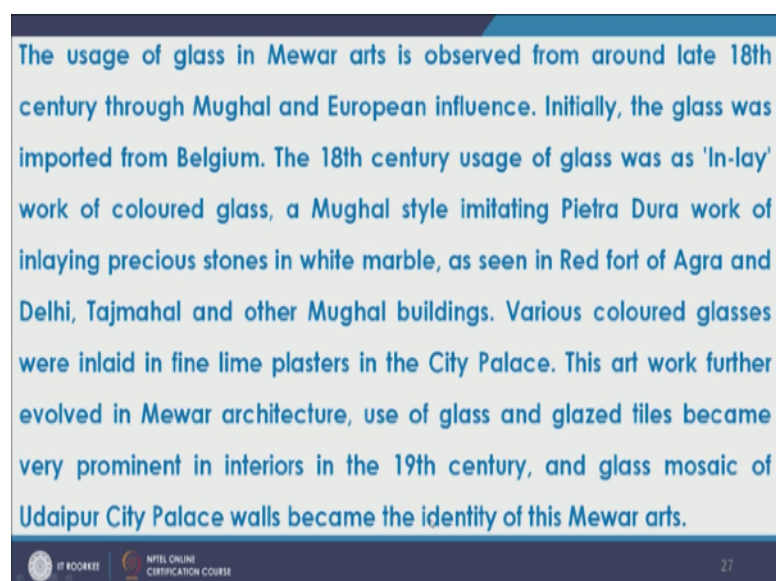
So, we see different techniques which are employed which requires different skills and, which gives different appearance to the surface and the entire visual appeal changes accordingly.

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Then some details again related to the mirror work. So, the fixing of mirrors happens like this, we can see in the pictures, mirrors have to be first shaped and then for shaping the mirrors we have tools like rounder's, we can see over here the work being done in a workshop. So, these are the convex surfaces and these shapes have been cut from the larger section or sheets with the help of these rounders. And then we also have glass cutters and knives in all these tools are used to do this mirror work.

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This is important so I would like to focus a little bit and, it also talks about history and influences and exchange of ideas. The usage of glass. So, up till now we were specifically talking about mirrors and then also the usage of glass started happening and there was lot of influence from Europe. So, the usage of glass in Mewar arts is observed from around late 18th century, through Mughal and European influence. Initially the glass was imported from Belgium. The 18th century usage of glass was as inlay work of coloured glass a Mughal style imitating Pietra Dura work of inlaying precious stones in white marble.

Now, this kind of inlay work is an imitation of Mughal style which is called as Pietra Dura work and we can see this inlay of precious stones in white marble and, we can instantly when we talk about white marble in precious stones Taj Mahal, the word Taj Mahal comes to our mind. So, this kind of inlaying work has been seen in red fort of Agra and Delhi of course Taj Mahal and many other Mughal buildings.

Various coloured glasses were inlaid in fine lime plasters in the city palace. So, lime plaster again, it was a very traditional, indigenous material and it was extensively used in these traditional interior architecture, built forms that we have been discussing throughout the course and lime plaster has its own advantages and it has great material properties and there are several books discussing that. This artwork further evolved in Mewar architecture, use of glass and glazed tiles became very prominent in interiors in the 19th century and glass mosaic of Udaipur city palace walls became the identity of their Mewar arts.

So, this is how from Europe specially from Belgium and through the Mughal patronage this kind of you know art and craft form it flourished and there is lot of usage of mosaic and glass inlay and that's how it also got disseminated to other different parts of the country.

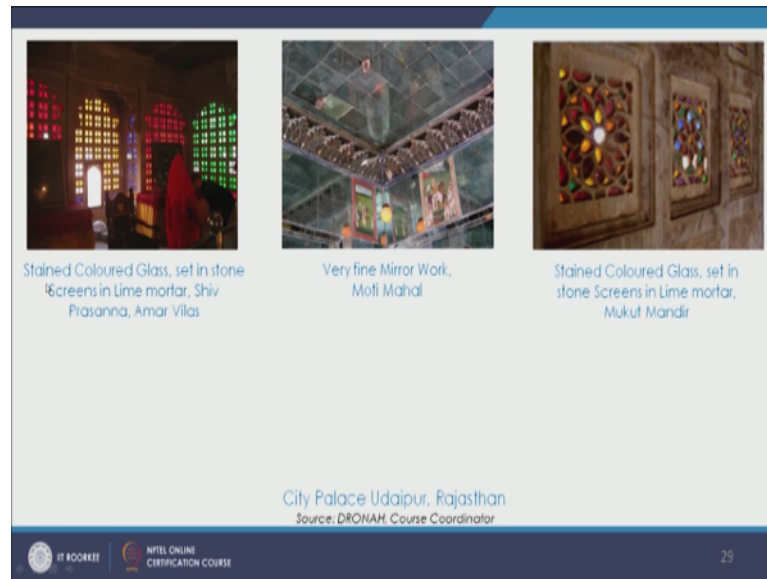
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Now, discussing a little bit in detail what are the different kinds of techniques and space making crafts or the building crafts that we see in this palace here we see this blue glass inlay work it is the ceiling of Peetam Niwas over here, this is again a very intricate detailed work, this is fine glass inlay work with tiles, this is seen in Kishan Vilas Saat Tanka. Now, this condition assessment and mapping work is majorly done by Dronah and I was working with them during my internship and after working with Dronah I also wrote one monogram focusing on city palace Udaipur.

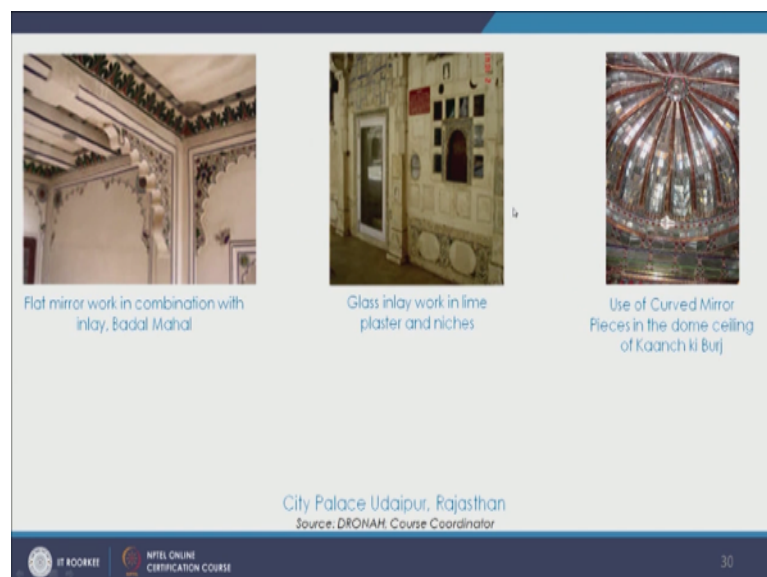
So, all these data is from both the sources here, we see use of Chinese tiles and the stained glass over here, this is *Badi Chitrashali*, now this is in a bad condition and there are efforts being made to restore preserve and you know try to conserve these building crafts and Styles.

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Here we see the stained coloured glass which is set in stone screens, these are stone screens and we see the stained coloured glass. And it is set in stone screens in lime mortar and this is Amar Vilas one picture from there, here this is Moti Mahal and we see very fine mirror work like we were discussing the different kinds of mirrors also thick and thin this is slightly fine and compared to the other places that we saw. This is stained coloured glass again set in stone screens in lime mortar and this is Mukut Mandir another place within the palace.

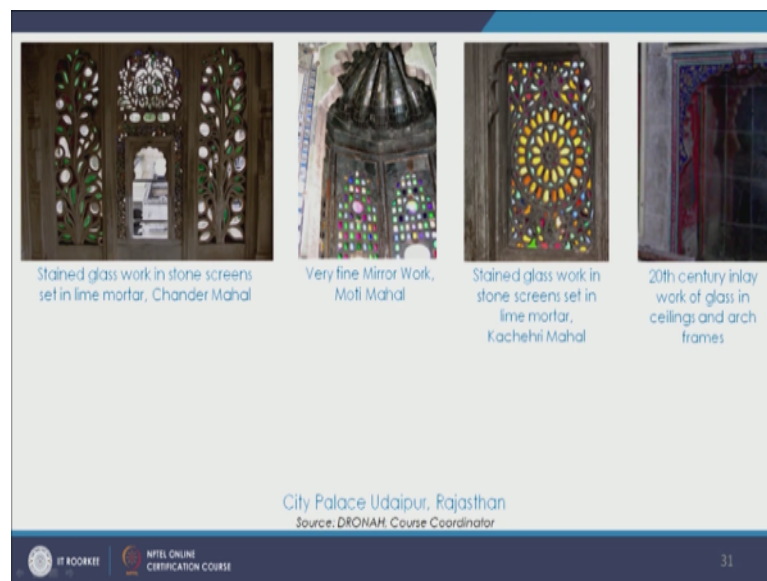
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Over here if we see here and here, we see this flat mirror work in combination with inlay this is in Badal Mahal again here we see glass inlay work in lime plaster and niches.

So, here in niches and over here we see some glass inlay work, this is the famous Sheesh Mahal and here there is a use of curved mirror pieces. So, this is quite a vision and this lights up the entire interiors, if there just a little source of light over here we will see the demonstration and one illustration.

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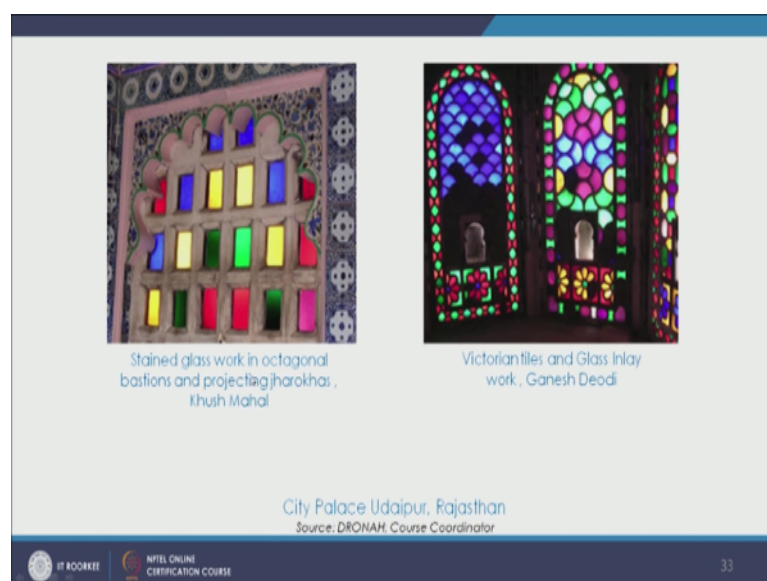
Here again we see stained glass work in stone screens which is set in lime mortar this is in Chander Mahal. This is very fine mirror work in Moti Mahal. And stained glass work set in stone screens in lime mortar this is Kachehri Mahal, here this is not very clear but if we can see over here this blue colour, this is 20th century inlay work of glass in ceilings and arch frames. So, these are arch frames over here it also seen on the ceilings.

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This is again 20th century inlay work of glass, in ceilings and arch frames and there are different colours we see over here green and red. Again here we see these lines of glass inlay and we see you know some mirror work and glass work, these are seen in Vani Vilas, this is a very detailed you know panel where we see a combination of different kinds of space making crafts. Different kinds of glass work, mirror work, stone work its a combinations. So, we see permutations and combinations as well at different places.

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This is again stained glass work, it can be seen in the octagonal bastions and projecting Jharokhas and, this is in Khush Mahal over here, we also see Victorian tiles and glass inlay work over here this is in Ganesh Deodi.

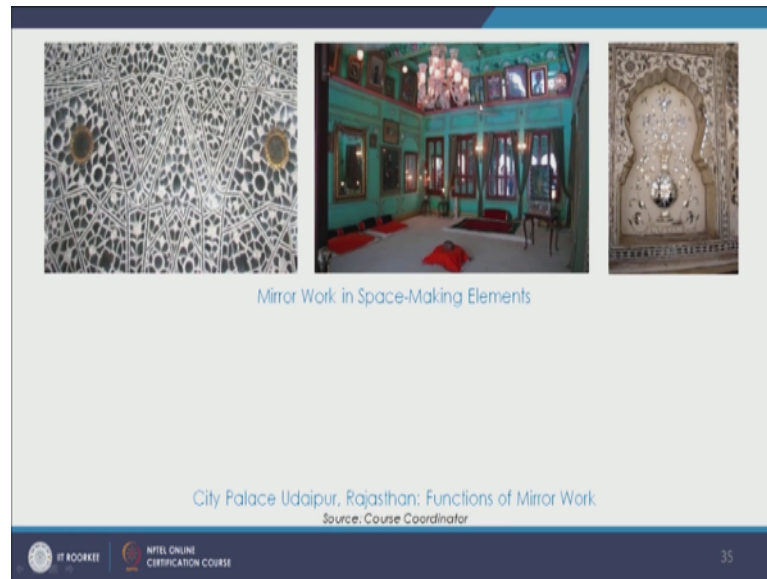
So, we see so many different kinds of techniques and space making crafts and space making elements and we can try to imagine I mean people who have been there it is definitely quite an experience and the people who are just seeing it for the first time you could imagine you know what amount of retailing has gone into the making of this palace and you should actually go there on site in the palace and have a look.

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Now, this is the most exquisite work craft that we see in city palace Udaipur. So, here we see this work of glass, glass inlay, mirror inlay, paintings and this is all seen in the Mor Chowk. So, this is quite detailed out and it is very time consuming it is all done by hands by the craft persons who are skilled.

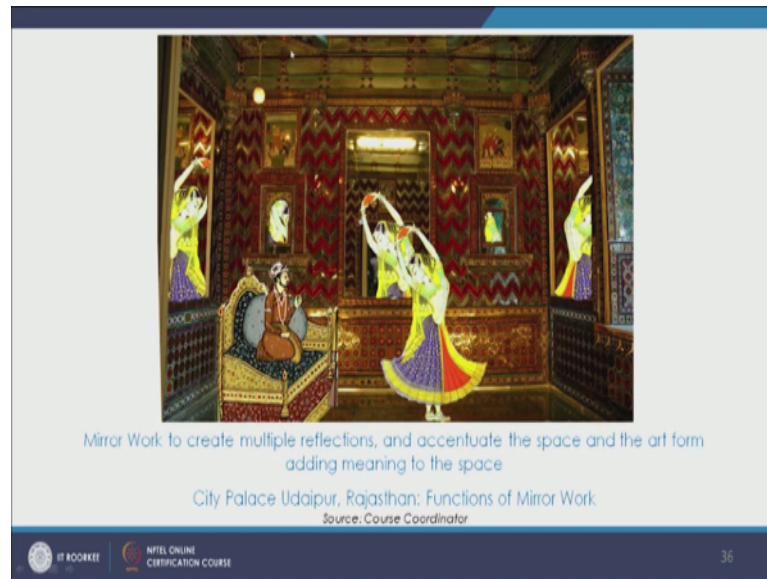
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Then just to understand you know how this mirror work functions and what are the different functions and purposes of mirror work and not just aesthetics, but you know some other functional aspects and technical details.

So, here we see mirror work in all these different pictures it functions as space making element. So, it enhances the particular space making element it highlights it, focuses it like niche gets highlighted if there is a mirror work this space making element becomes quite distinctly you know visible, it comes in focus.

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Over here we see you know the mirror work is done to create multiple reflections and accentuate the space and the art form which adds meaning to the space. So, there are several reflections that could be seen over here and it looks quite aesthetic also.

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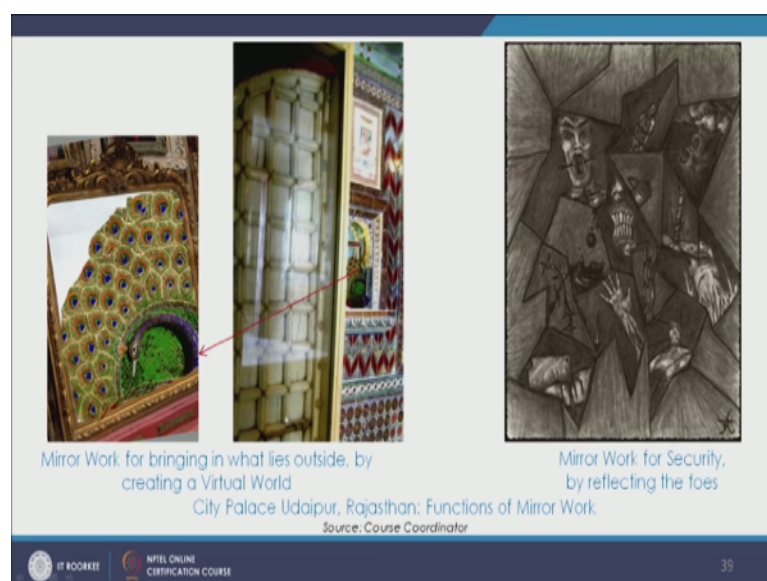
Then mirror work has been use in this palace, as a manifestation of religion, culture and traditions this we discussed earlier also in one of the slides. So, that also mirror work is enhancing and facilitating.

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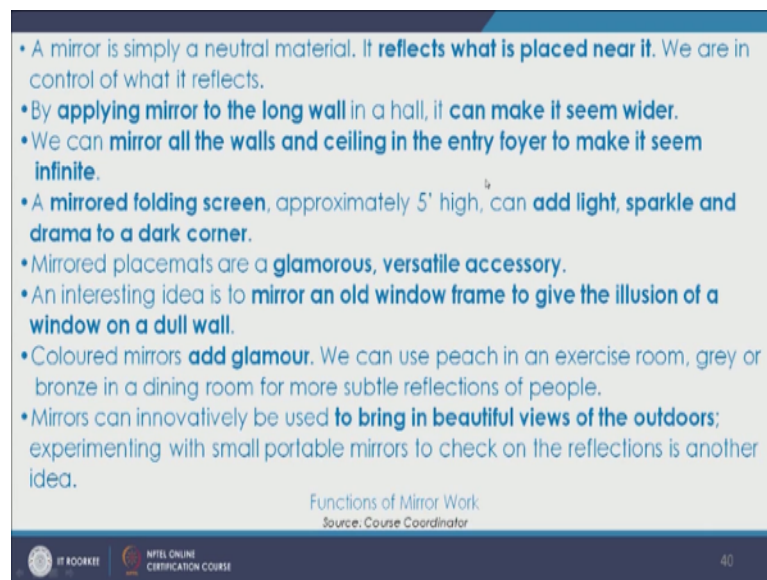
Here mirror work of course for aesthetics it looks quite aesthetical and then it also lights up the interiors like I was discussing if we just have one source of light it will have multiple reflections and, it will lift up the entire interior space. So, that's also why mirror work is used and some cues could be taken for contemporary design as well from this principle of dispersion how the lights scatter and it gets reflected. So, here it is getting reflected in different panels.

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Here this is very interesting, mirror work for bringing in what lies outside by creating a virtual world. So, if there is something over here suppose a peacock and there is a mirror over here, then this gets reflected over here and it creates a virtual world for the user who is inside this space. Also there is very interesting story you know that its mentioned in several articles and blogs that mirror work was also used for security purposes. So, it would reflect the foes or your enemies and you could instantly get you know alert so that is another purpose.

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- A mirror is simply a neutral material. It **reflects what is placed near it**. We are in control of what it reflects.
- By **applying mirror to the long wall** in a hall, it **can make it seem wider**.
- We can **mirror all the walls and ceiling in the entry foyer** to make it seem **infinite**.
- A **mirrored folding screen**, approximately 5' high, can **add light, sparkle and drama to a dark corner**.
- Mirrored placemats are a **glamorous, versatile accessory**.
- An interesting idea is to **mirror an old window frame** to give the **illusion of a window on a dull wall**.
- Coloured mirrors **add glamour**. We can use peach in an exercise room, grey or bronze in a dining room for more subtle reflections of people.
- Mirrors can innovatively be used **to bring in beautiful views of the outdoors**; experimenting with small portable mirrors to check on the reflections is another idea.

Functions of Mirror Work  
Source: Course Coordinator

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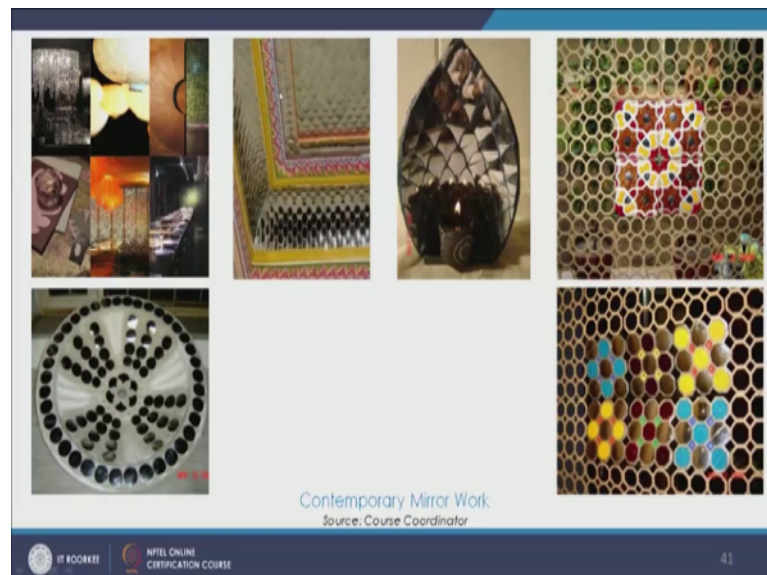
If we talk about certain functions and certain technical details of where all mirror work can be used not just specific to city palace Udaipur then I found some interesting you know points to discuss and I have collated them. So, mirror reflects what if place near it. So, it again a virtual world and we are in the control of what it reflects by applying mirror to the long wall in a hall it can make it seem wider.

So, application of a mirror and, you know how a material when applied in a certain way can create a perception of space so those are the interesting details that go with application of mirror, we can mirror all the walls and ceiling in the entry foyer to make it seem infinite that is again a visual perception, optical illusion or detail. Then a mirror folding screen it can add light sparkle and drama to a dark corner, mirrors when they are placed they are very glamorous they act as versatile accessories.

Now, there is an interesting idea to mirror an old window frame to give the illusion of a window on a dull wall, coloured mirrors add further glamour. And then these mirrors can innovatively be used to bring in beautiful views of the outdoors. So, there are several other functions also these are few interesting ones and which are quite easy and handy and do not require too much of rocket science so these are some interesting once.

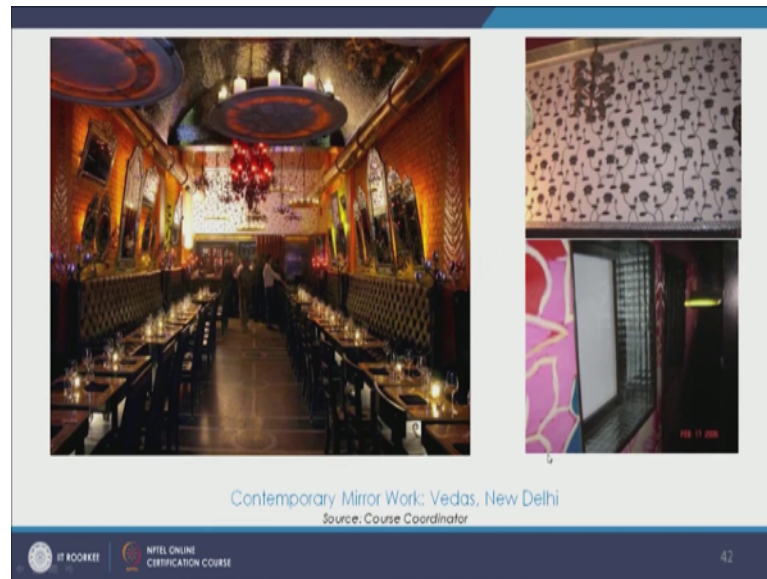
Now, mirror work just adding to you know what we saw in city palace Udaipur, that is very intricate work and it requires master craftsmen and huge skills, but in contemporary times just to have a look how it is getting transcended into different expressions in different ideas, I just put some pictures.

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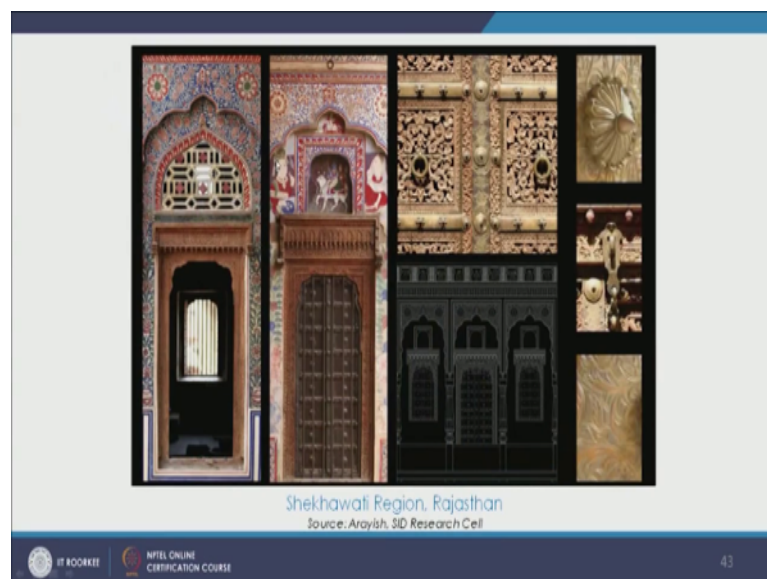
So, these are some contemporary uses and of course, the mirrors are not the same which we see in city palace Udaipur, they are very the first category of mirrors that we saw they look quite artificial, they are of recent origin. And they are just fix with the help of adhesives it is not lime plaster over here, then I saw this interesting partition screen at NID, where they use this MDF framework and they are put this mirror over here, these mirror pieces and they are try to create partition screens.

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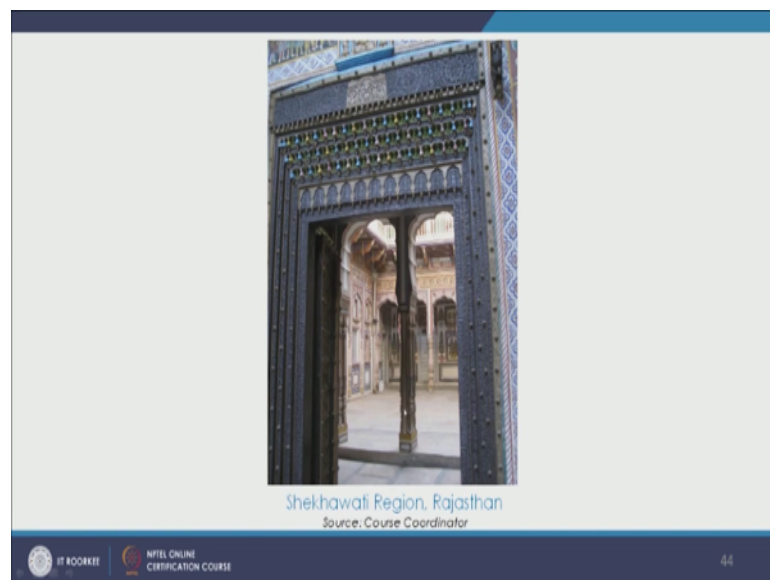
So, they were some contemporary examples, these are some photographs of Vedas new Delhi, it is a restaurant and here there is an extensive application of mirror work and, it is very contemporary, its techniques are quite different. So, here over here we can see the details over here. So, these are contemporary expressions. Now, we will move on to Shekhawati. So, it is a region in Rajasthan and it is very famous for its Havelis.

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And we see the Havelis of Shekhawati, it has very rich building crafts and space making elements, we can see the surface narrative crafts, we can see the timber craft over here, we see metal crafts over here, we see you know also the details in the hardware. So, we see all these details in this these Havelis and they are particularly known for their paintings and these paintings were done with natural pigments they were all done by hands and we captured different subjects, different stories from that era, different aspects of society.

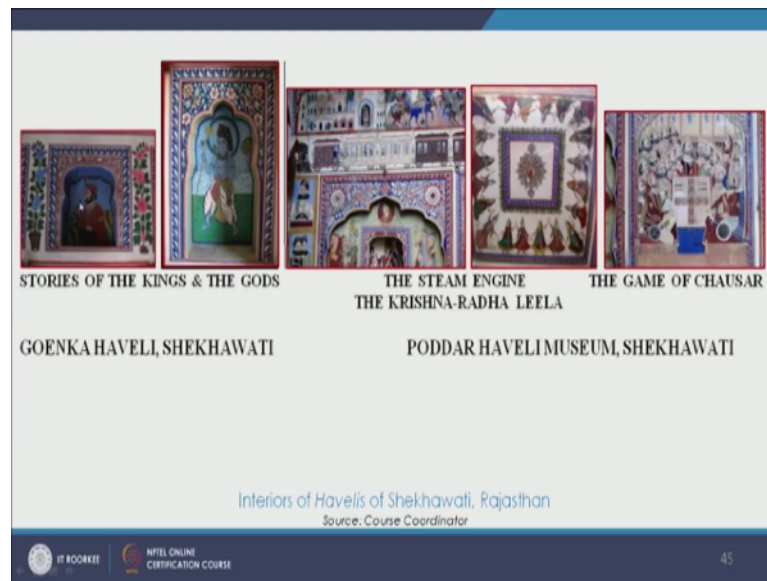
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So, all those subjects in contents they are reflected in all these narrative works. This is one of the Haveli in Shekhawati and this is the entrance door and we can see how intricate and how ornamental it is and it is all done in timber and like many of the places we seen Uttarakhand also. They have the Ganesha motif over here and this is to keep off the evils.

And if you are standing over here we get a glimpse into the inside world so this is the central courtyard and these are beautiful space making elements and all the narrative surface craft that we see over here, we also see the structural elements like brackets. So, all those details are seen and these are the different subject that I was mentioning.

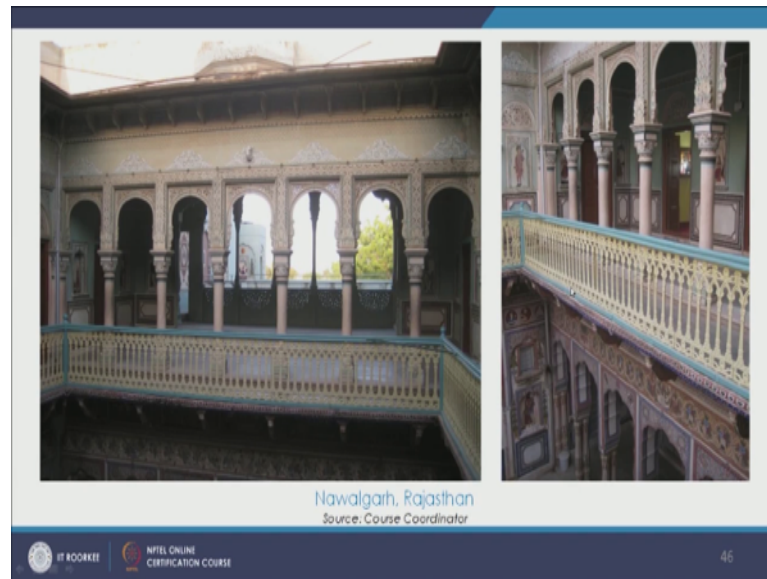
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So, there are stories of kings there are stories of gods, we see this steam engine which is more out of curiosity and imagination because, you know there is something like this which the subjects or the masses, they wanted to see India as well if it was happening abroad or it was a recent invention with which the Britishers brought with them.

So, all those kind of stories; so it could be to celebrate something which has recently come to our country or it could be out of curiosity and imagination in out of that desire in will to have it. So, those kinds of details you also see the details of the palace over here, interior architecture this main door over here. All these you know paintings and motifs flower motifs, we also see the Krishna Radha Leela on one of the ceilings over here. And this is very interesting we see the game of *Chausar* being depicted over here so, all these are different subjects and contents we seen the different Havelis of Shekhawati.

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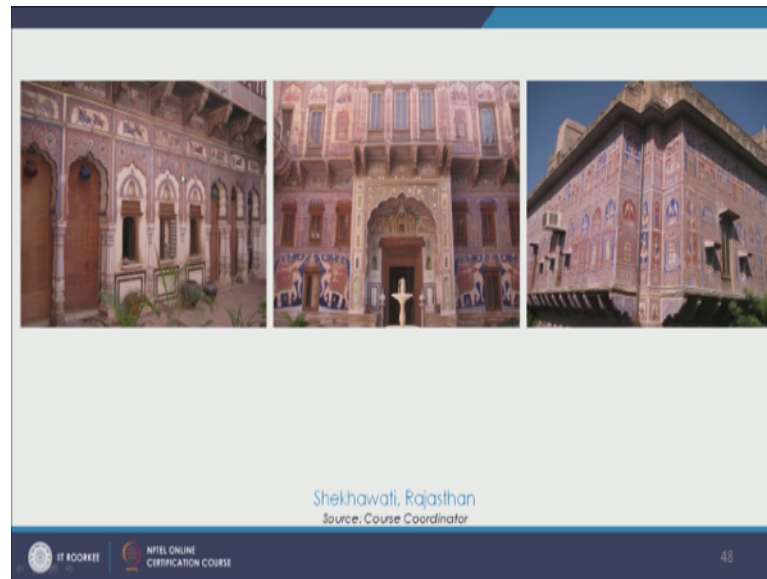
These are some more pictures, again we see the space making elements and how the connections are established you know between the first floor and the ground floor and all these structural details and the narrative works over here this is from outside the facade.

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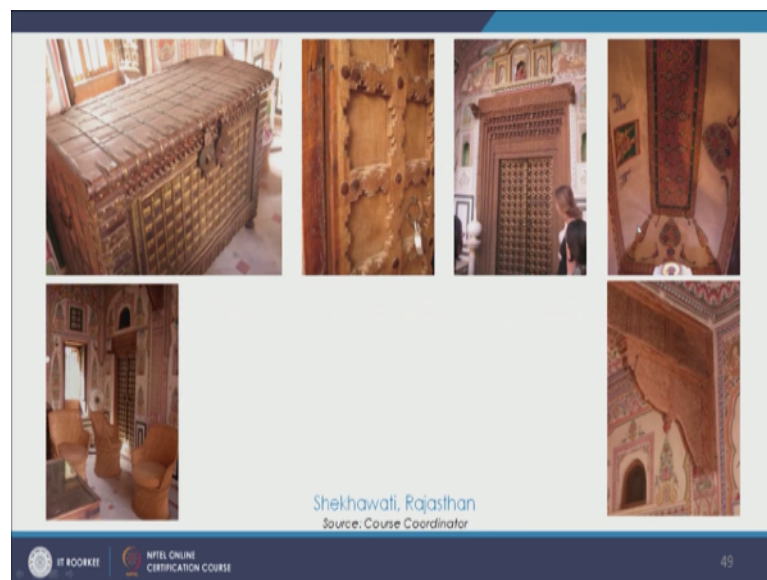
So, we see them in the interiors as well as on the facades of the building and they are quite detailed out with lot of stories even in the niches and small corners we see the narrative space making crafts like these.

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Again some very rich narrative surface crafts, we see over here very richly detailed work done. These are the corner details, again structural elements surface narrative crafts over here.

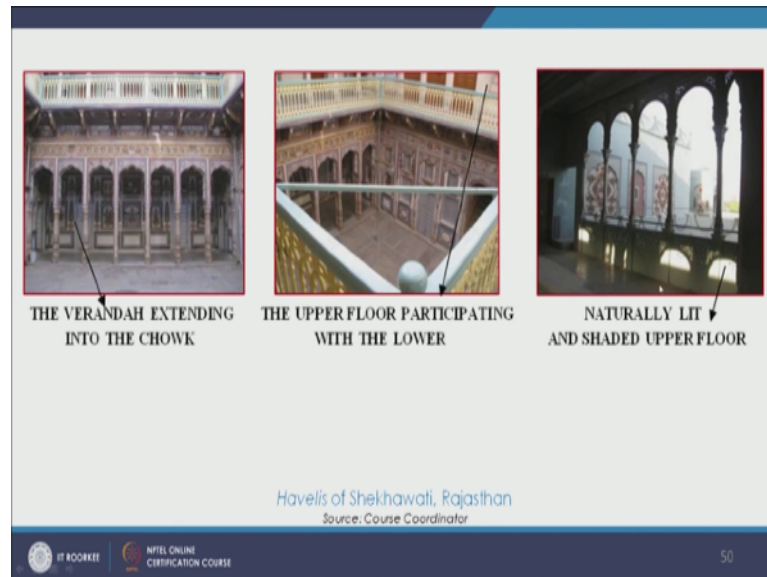
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We also see certain details in furniture and hardware. So, here we see metal and timber work and this we see over here some detail and design also in the handles and the hardware. We see the details and the timber and metal door this is a very very intricate

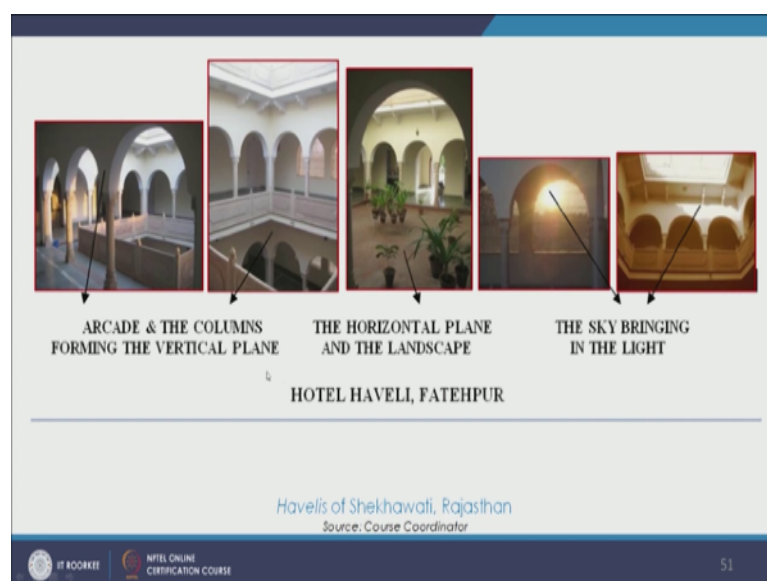
and beautiful entrance door this is metal and timber we see that, again another surface narrative craft on one of the ceilings here we see this richly carved and ornamental bracket, which is made out of timbers. So, all these details are seen over there.

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Again some pictures of the Havelis and the space making elements and the narrative works.

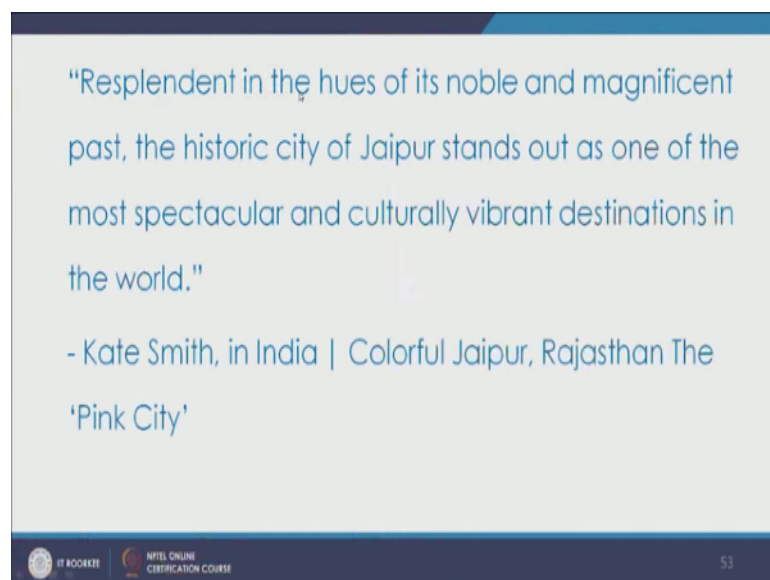
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This is a recent example which is adaptive reuse of course it does not have the same spirit and feeling, the narratives are missing, but in terms of space making elements and in terms of the quality of space still it is a good example to have a look at.

So, I would like to end up with two interesting quotes, “Architecture should speak of its time and place, but yearn for timelessness.” So, whichever examples that we saw from Rajasthan, they are very distinct and unique and they have a timelessness about them and, that is what a design should aim at it should yearn for timelessness, whether it is a small product or interior architecture.

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Another one which is specific to Jaipur since we are talking about Rajasthan, “Resplendent in the hues of its noble and magnificent past, the historic city of Jaipur stands out as one of the most spectacular and culturally vibrant destinations in the world.” So, this is very interesting, it is very culturally vibrant and what happens in the culture and the way people live also reflect on it is interior architecture, costumes, food and different other creative and cultural activities.

Next module we will focus on case studies from Uttarakhand and now the references.

(Refer Slide Time: 39:56)

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These are very specific to today's module, and then later as usual we will have a summation of all the other important references. So, city palace museum Udaipur the paintings that we saw, technique of glass making, scientific study of Indian glass; though we have not gone to the details of scientific study and the techniques here this was more of a visual repository and just to you know map in document what are the different kinds of techniques and the space making craft that we see.

But in one of the modules when we talk about decoding system, probably we will see little details about the system embedded within this craft of mirror work and glass work. So, nuances of *Thikri Kaam* and then understanding the importance of art and interior architecture. So, these are few specific ones that are detailed out for this module.

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These are summed up from what all we have been discussing together.

Thank you.