Modern Indian Architecture
Professor P. S. Chani
Department of Architecture & Planning
Indian Institute of Technology, Roorkee
Lecture – 19
Western Architects in India – Le Corbusier – Part 6

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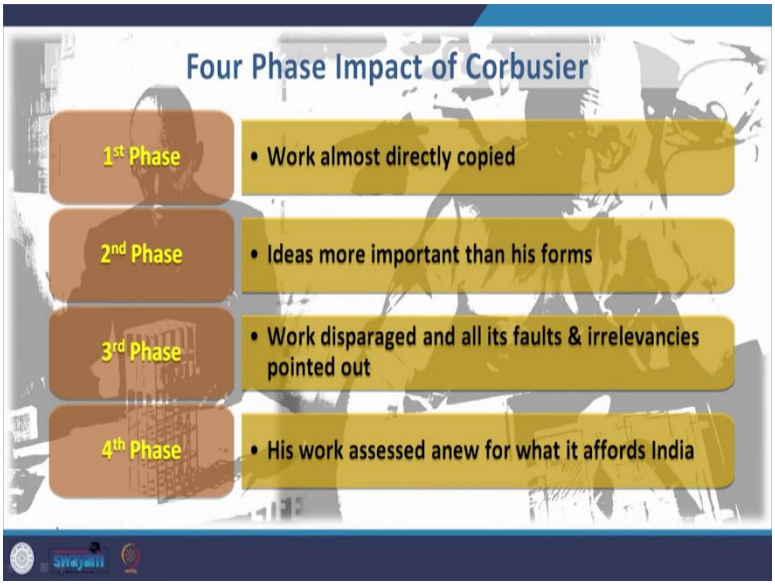

Hello students, we will continue with our presentation on the works of western architects in India and we are focusing right now on Le Corbusier and this is part 6 of that series. There is a four-phase impact of Corbusier pointed out by John Lang. The first is that the work was almost directly copied, the second is that the ideas were considered more important than direct imitation, third was criticism and fourth was a new look at the works of Corbusier particularly in the 21st century.

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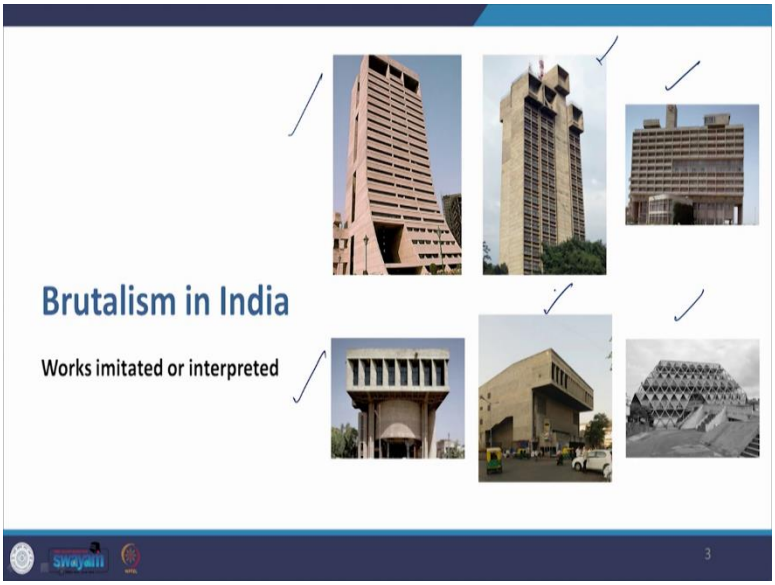

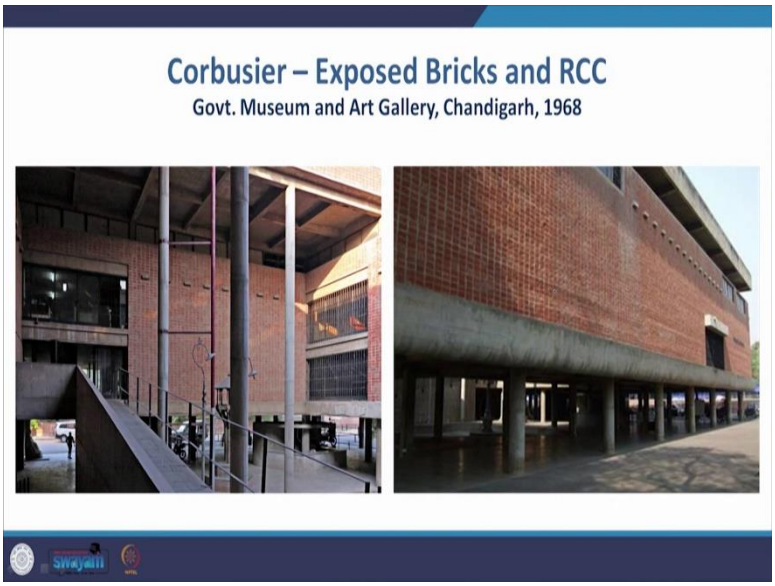

Now many iconic Indian architects adopted brutalism in their work ranging from Shivnath Prasad direct imitation Akbar hotel and then an interpretation by him in the Shi Ram Centre, Raj Rewal Hall of Nations, Vishvesvaraya Central Charles Correa, Kuldeep Singh Palika Kendra and Premabhai Hall by B.V Doshi. So, the works were imitated and interpreted.

The other major subtext or concerning the work of Corbusier is the work in exposed bricks and concrete or RCC. We have seen his contribution with regard to brutalism , with regard to Beton Brut. But there is also a whole range of important buildings he design and exposed brick in concrete and he has a very good sense of scale.

When he is designing institutional buildings or public buildings, he goes in for a monumental scale to create that kind of visual impact on people. When he goes for houses, he goes for a

very human scale, when you look at the government museum and art gallery in Chandigarh particularly when you look at the interior of the building you see this monumentality in the building. He creates this amazingly interesting space on the inside and there is sun filtering in from the top.

This is the exterior facade of the building and like I had earlier pointed out also that this building is a very close link with the museum he designed in Japan in Beton Brut in brutalism.

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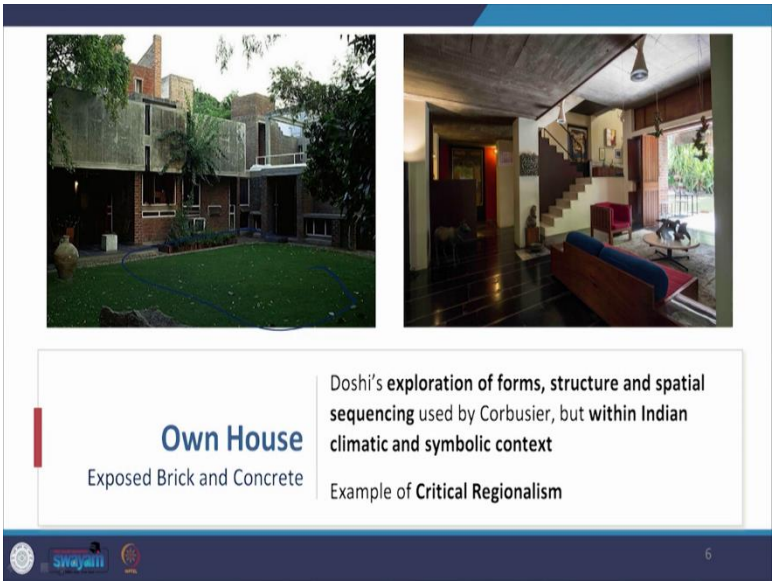

So, we see that in his own house in Ahmedabad, B.V. Doshi 1959-60 we see a second phase that is the ideas of Corbusier are more important than direct imitation and here his ideas of exposed brick and concrete have been taken. This is an evolution in the work of B.V. Doshi.

In his earlier buildings, for example, in the Premabhai Hall or even in the Institute of Indology we find a significant imprint of Corbusier.

Here in this building, we find the ideas becoming more important. So, this is also a very good example of sustainable architecture. This is the view of the entrance of his own house in Ahmedabad and this is the rear of the house and he also does one thing, he creates the garden at the rear of the building of the house as done in Villa Shodhan.

Now this has a very important significance the same thing happens in Villa Sarabhai or Sarabhai house, so the garden is at the rear. There is a reason for that and the reason is that in many cases in India, the garden in row housing or semi-detached detached housing is provided in the front. So, that works not only for its important for aesthetic reasons but also highlights the greatness of the building so to speak.

But in the mind of these architects that should be a private space, a place where you can informally gather with your family and friends and this idea was there in Corbusier's mind. I can put it in that manner and we see this idea being also put forward with B.V. Doshi. Now this idea of informally putting the garden at the rear is similar to raising the garden vertically in the roof garden of say for example Villa Savoye or even Villa Shring etc because that also retains the privacy of the garden for the use of the family members and those they want to provide access to.

Now Doshi's exploration of forms, structure and spatial sequencing in his buildings was as it was used by Corbusier but also Doshi brought in Indian climatic and symbolic context and we will see more of that in his later buildings. Now Corbusier also used Indian climatic context and there is a certain Indian symbolism as we saw for example, the use of the thermal power station, the cooling transmission ,imagery in the assembly building. So, we will also see later that this house is also an example of regional modernism or critical regionalism.

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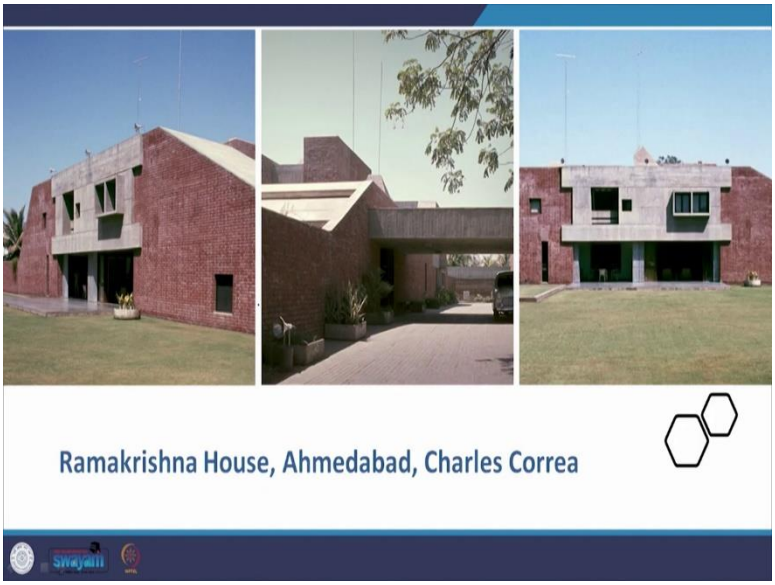

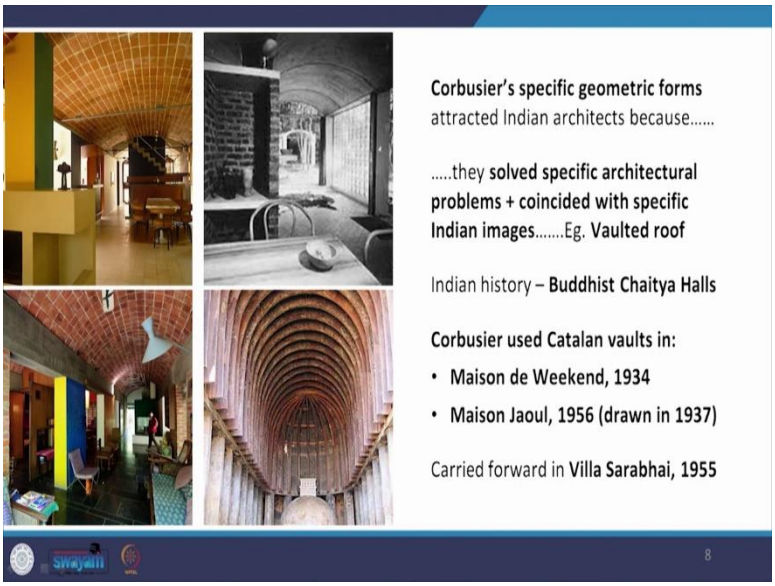

Then there is the Ramakrishna house in Ahmedabad by Charles Correa. Again, in exposed brick and concrete again an example of regional modernism. Now, one more important thing that Corbusier brought in was the vault. Now, vault was already there in India, the barrel vault was already there.

Now Corbusier's specific geometric forms attracted Indian architects because they solved specific architectural problems and they also coincided with specific traditional Indian images of for example the vaulted roof as we see in the Buddhist Chaitya Halls. This is the vault in the Buddhist Chaitya Hall.

Now Corbusier had begun using the Catalan vault, he used that in Maison de Weekend here in 1934 and he used that in Maison Jaoul in 1956. We will see this very interesting study of

Maison Jauol in a coming presentation where we will see the connect between Maison Jauol to Sarabhai house and we will then connect the Sarabhai house to the own house of B.V Doshi.

This is now the Sarabhai house and you can see how these three are interconnected with each other. So, the idea of the Catalan vault that came up in concrete in Maison de Weekend was brought by him in brick in Maison Jaoul which was a set of two houses twin houses and then he carried forward that idea into India in the Villa Sarabhai.

Now you would say that how can that be possible if Maison Jaoul was done in 56 and Sarabhai in 55 that is because Maison Jaoul was designed earlier in 1937 not executed on site in 1956.

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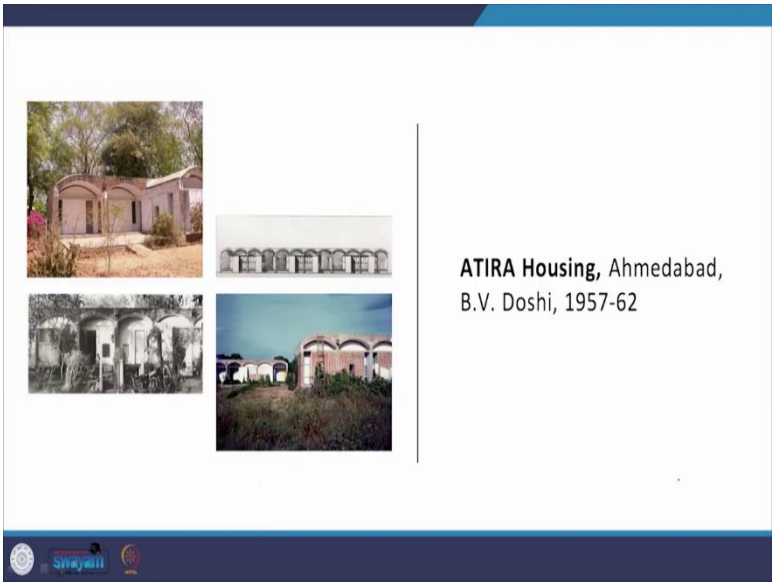

So, this is the Catalan vault in the Sarabhai house in 1951 by Corbusier. Then Doshi took the idea forward in the ATIRA housing in Ahmedabad from 1957 to 62 and the use of the barrel vault. Not only that in the ATIRA housing Doshi used other elements as I had pointed out earlier when I was talking about the use of rain water spouts in the work of Corbusier and I pointed out then that these elements would then come in the works of Indian architects, so here they are.

They are appearing here as the rain water spout in the ATIRA housing, then there is the slit lighting that you see in the housing of Chandigarh by Pierre Genere, Maxwell Fry, Jane Drew and this is the barrel vault.

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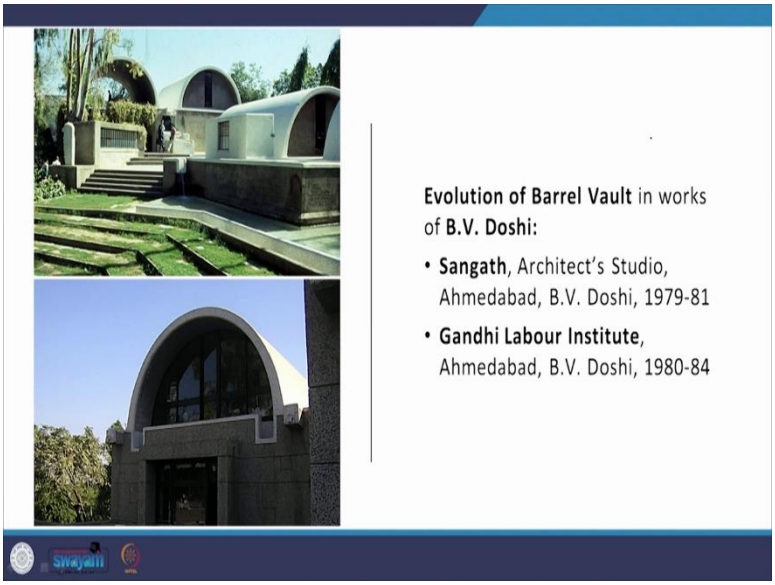

The barrel vault was then taken forward by Doshi and amazingly interpreted into very wonderful buildings, the Sangath his own studio from 1979 to 81 and the Gandhi Labour Institute 1980 to 84. This is the evolution of the barrel vault in the works of B.V Doshi and by the time he reaches here, he has taken the barrel vault much ahead from the original idea that Corbusier had brought into India of the Catalan vault.

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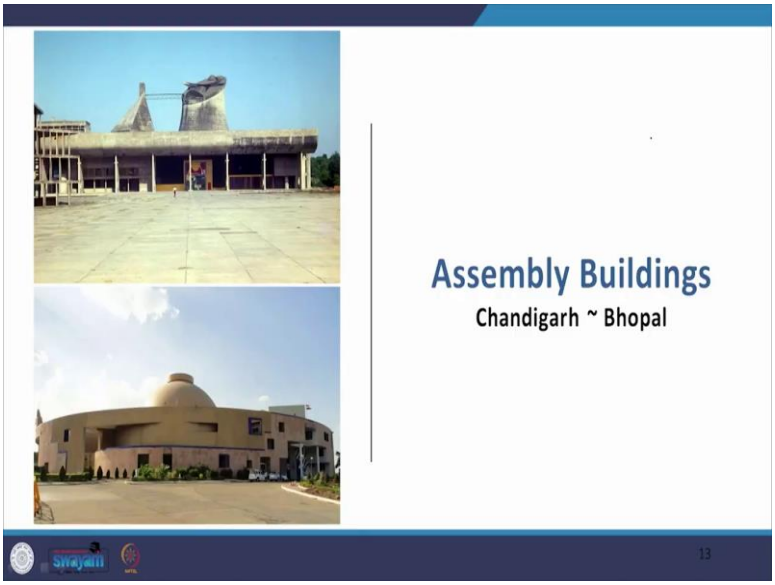

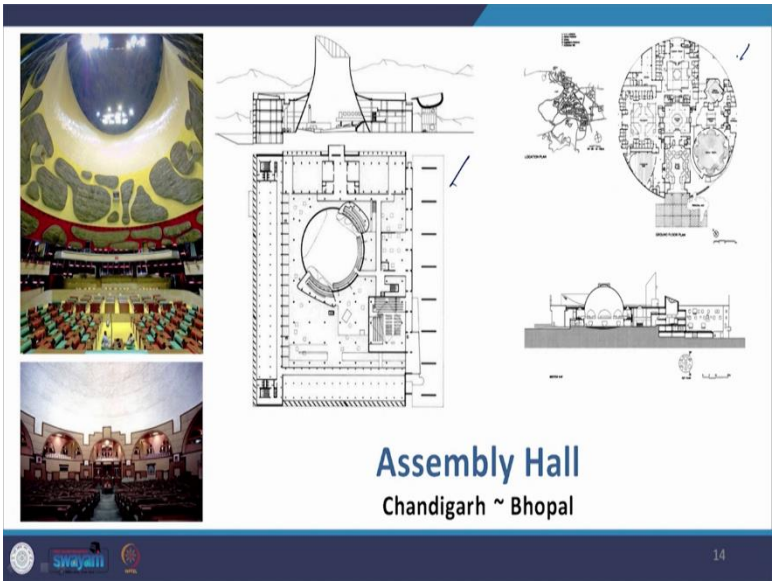

Now in the assembly buildings, we also see a link or rather a comparison between Chandigarh and the assembly building in Bhopal design by Charles Correa. Now the assembly building in Chandigarh is cuboidal. In Bhopal it is circular or you can say cylindrical. So, this is the plan of assembly building Chandigarh and the assembly building Bhopal.

This is the assembly hall of the assembly building in Chandigarh and this is in Bhopal. What is the difference? In Chandigarh this is like an inverted funnel or a frustum and light is filtering in from the top. In Bhopal it is domical, it is a dome which is the assembly hall and again light is coming in from the top. So, the frustum becomes a funnel, a dome mounted over a cylinder. This is the space; this is the assembly hall here and this is the assembly hall here. So, how closely linked both of them are.

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Evolution is also there in the hotel design. Now there are three, we have already seen two of them, I will connect one more with them. We have seen how Ashok hotel that was designed by architect doctor and this hotel was a modernist building superimposed by traditional Indian elements. Then we have the Akbar hotel which is a very close imitation of Unite d'habitation.

Then we carry on to the Oberoi hotel which is a modernist building. It is not an imitation; it is like any other modernist design. So, this kind of series we find in the hotels. We will take it forward later and we will link it with the critically regional building, the Mughal Sheraton and we will also again highlight the work of Satish Grover in the revivalist building - the Oberoi hotel in Bhuvaneshwar.

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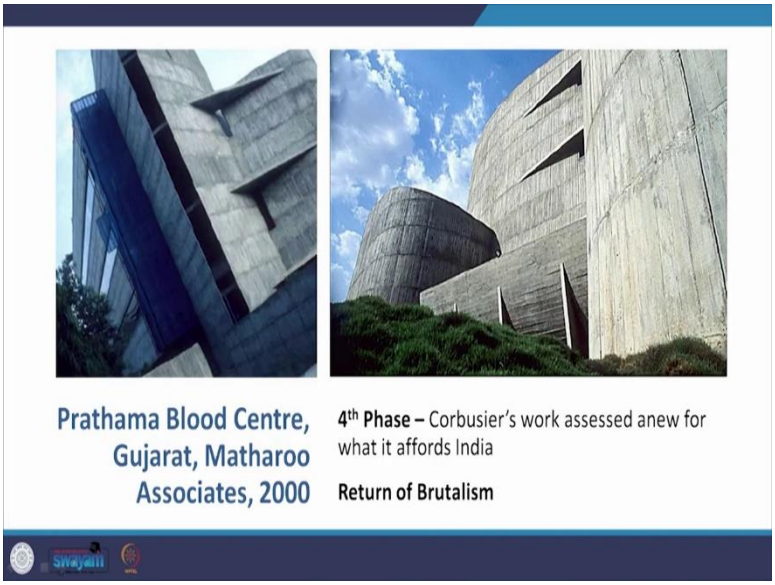

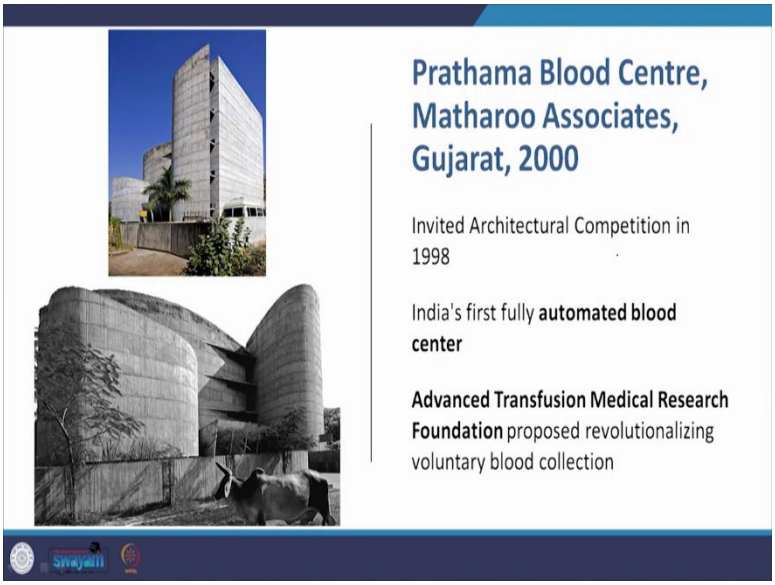

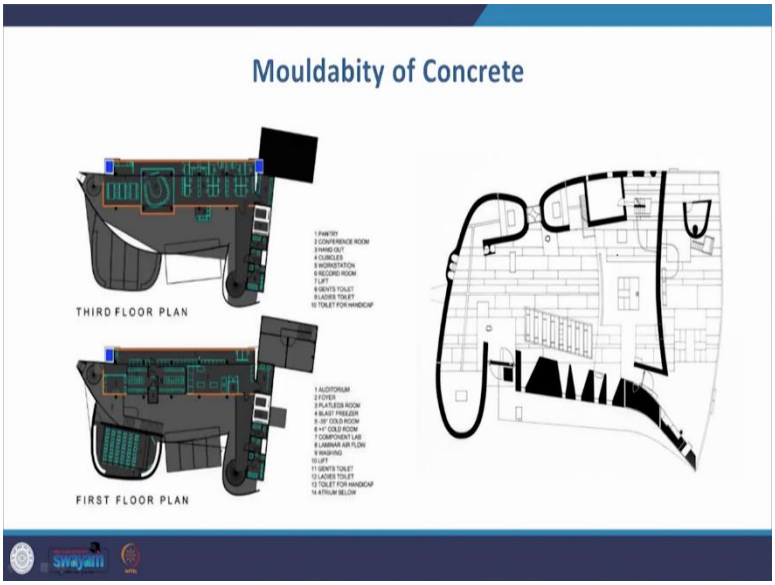

Now in the 21st century, there was again a renewal of brutalism in India or a re-look at the works of Chandigarh, the fourth phase. His works were assessed a new and we find that in the Prathama Blood Centre by Matharoo Associates in year 2000, this is the return of brutalism. Now this was done through an invited architectural competition in 98.

It is India's first fully automated blood centre. It is an advanced transfusion medical research foundation proposed revolutionizing voluntary blood donation or blood collection in India and there is this moldability of concrete or plastic quality of concrete that we see in the plan of the Prathama centre as linked to the Ronchamp Chapel in Notre Dame by Corbusier.

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And this is how, this sculptural form has evolved. As I discussed last time, as I mentioned last time that the later stages of Corbusier, he was designing several many several buildings that were sculptural in their overall form and we see that in the Ronchamp Chapel and we also see that in the Prathama Centre. How the idea is then again brought forward in the 21st century. So, this is the idea of the built form being again re-done in India.

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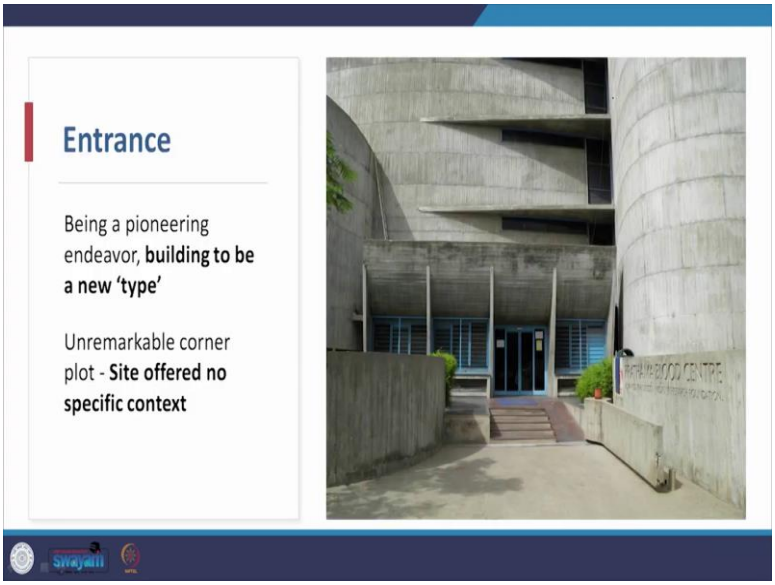

The entrance being a pioneering endeavour, this building is to be a new type. It is on a very unremarkable plot and the site does not offer any context. This entrance is a very interesting derivation and we look at that in the plan.

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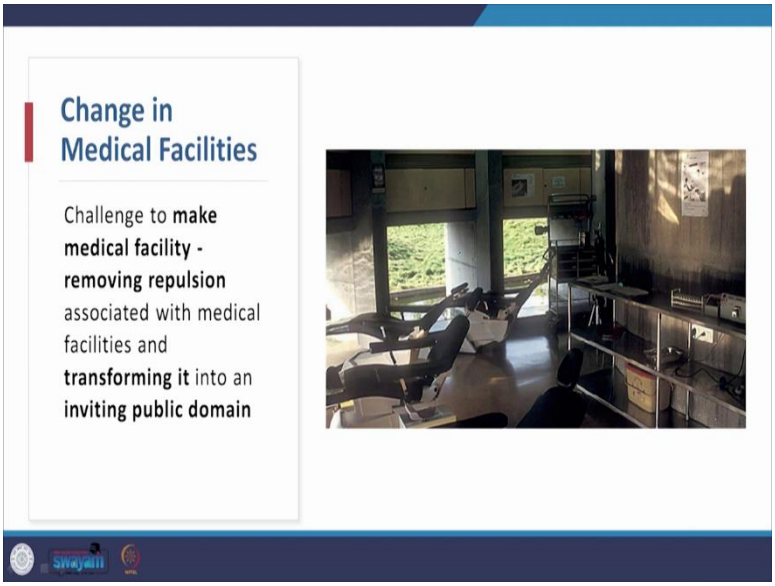

Now there is a change coming in medical facilities in India and the challenge is to make the medical facility in such a way that we remove the repulsion associated with them. We know that we would never like to go to a hospital if we are healthy. We only go there when we are facing health issues.

So, it is not a place we visit because for the pleasure of it. But when we are in need of it but there is a certain repulsion associated with going to a medical facility and in this case, it was

a blood donation centre. So, the endeavour was to remove that repulsion by transforming it into an inviting public domain. So, when for example, you are, the person is donating his blood there is an amazing view outside of greens and water body as he sits there in this very serene atmosphere.

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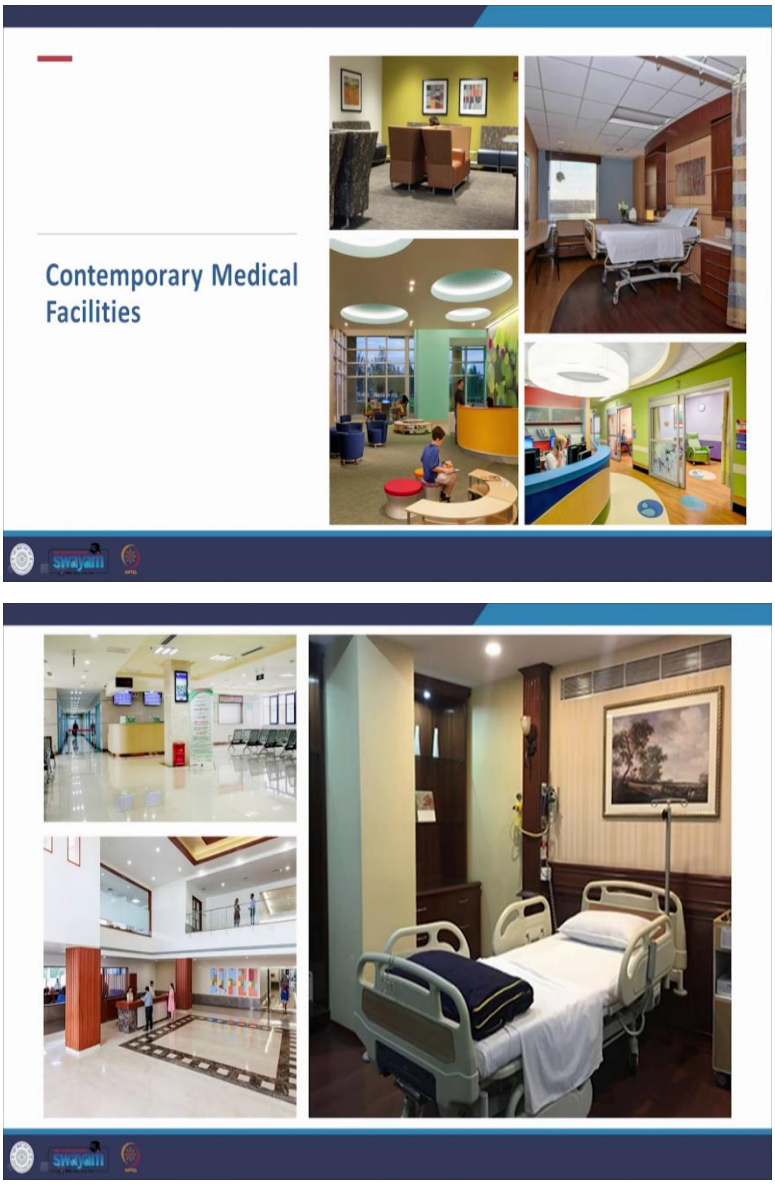

Now this is an attempt being made in contemporary medical facilities in India and abroad where the facilities are being made to appear like any other building, like a home environment, like a play environment. For example, for children so that when they come to a hospital they are not taken in only by the idea of painful injections and painful procedures but it relaxes and soothes them. So, here it is the new concept of doing the interiors of hospitals.

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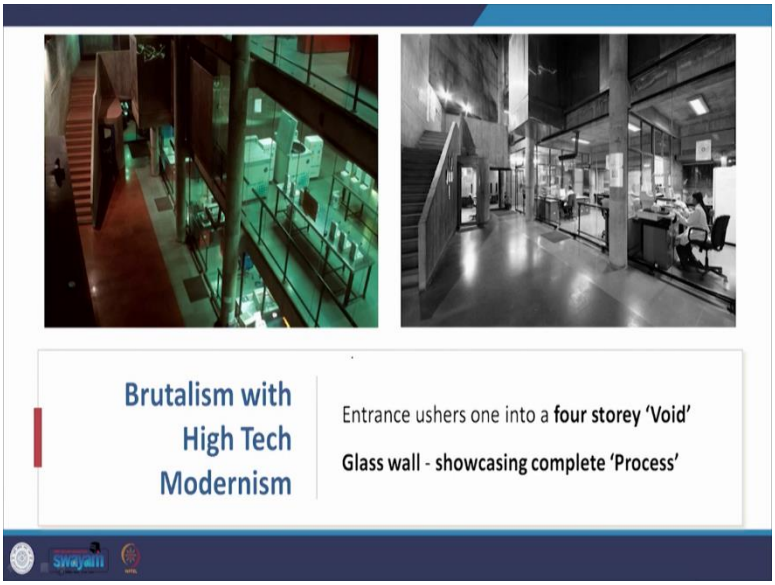

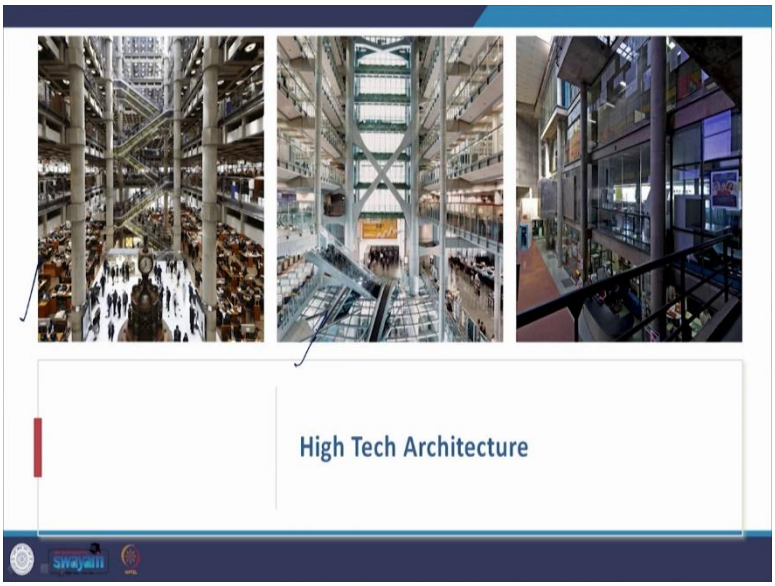

Now this is brutalism with high-tech modernism. I hope that I get an opportunity to give you an idea of high-tech architecture later but high-tech architecture was practiced in the 70's and 80's , it began then with the works of Richard Rogers, Renzo Piano, Norman Foster, etc Michael Hopkins and several other architects and the entrance of this building ushers a person into a four-story void.

So, there is this vast atrium of four stories and there is a glass wall here where the entire process of the blood collection or the entire process of the centre is conducted with transparency. This idea comes from high tech architecture like we see in the Lloyds of London by Rogers or the HSBC by Norman Foster in Hong Kong and that is that the building

from the inside is high tech building which depicts all the processes of the building as the ornaments and there is a lot of transparency in the building.

Now if you look at the Prathama Centre, we find a similar approach. In fact, the RCC circular column of the Lloyds of London, there is a similarity with that of the Prathama Centre.

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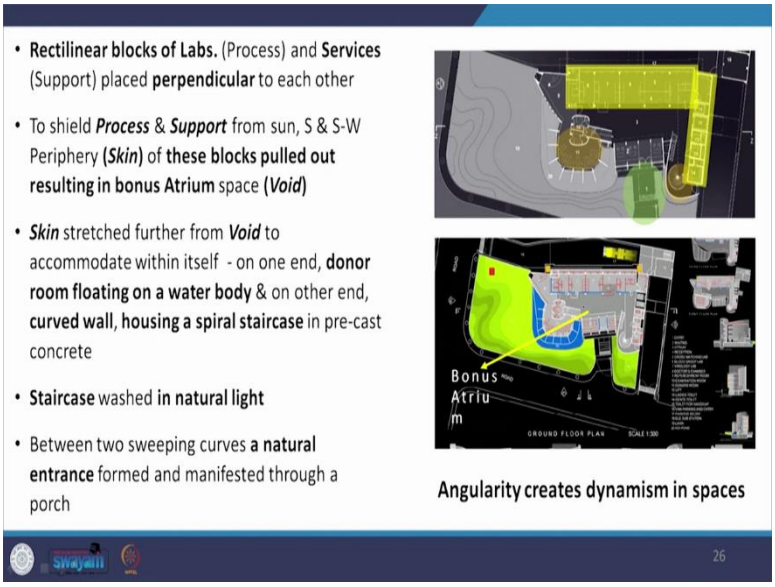

Now, just to give you a quick idea of this plan of this building because it is very interesting that there are two blocks, there are the labs and there are the services. They are placed at near perpendicular, they are place nearly perpendicular to each other and to shield this process and support from the south and the south-west side - the periphery, this part has been pulled out. The skin has been pulled out so that direct sunlight from the south and southwest does not impinge on the process and support areas.

The skin is stretched further from the void to accommodate within itself on one end. The donor room, this is the donor room or the picture that I showed you where it is opening out to a green area and a water body in this manner and on the other side, it opens up to create a spiral staircase and intertwined between them is the creation of a natural entrance. That is what I told you a while back, how interestingly the entrance of this building was derived.

Now the staircase itself is washed with natural light and between these two sweeping curves, this natural entrance has been created as you can see here also. So, this is the donation room and there is the water body and the green areas around it.

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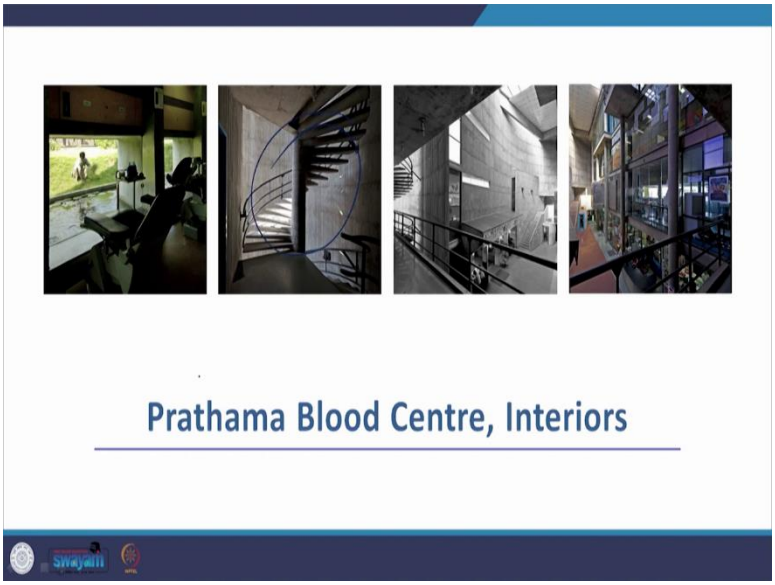

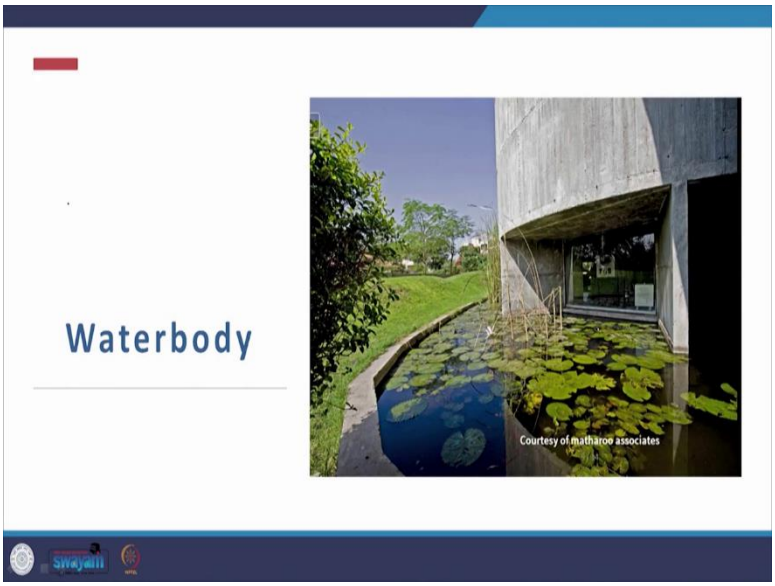

These are the interiors of Prathama, there is the spiral staircase and there is again exposed concrete within, this is the void or the four-story atrium there is light filtering in from the top and this is the blood donation room with the greenery and the water body on the outside, this is the water body.

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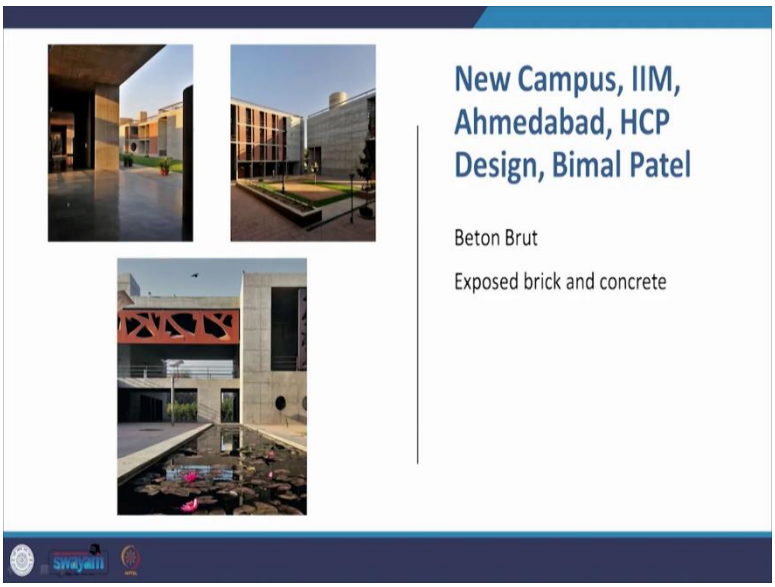

Now, Matharoo Associates have been in the forefront of the revival of brutalism in the 21st century appearing in several buildings. Hopefully we will look at some of these houses later or buildings later. These are other examples of the interior and exterior of these buildings and then there is the new campus of IIM Ahmedabad by Hashmook C. Patel design consultants and the design of Bimal Patel which has got both Beton Brut as you see here and exposed brick and concrete as you see here and here etcetera. So, both have been combined together.

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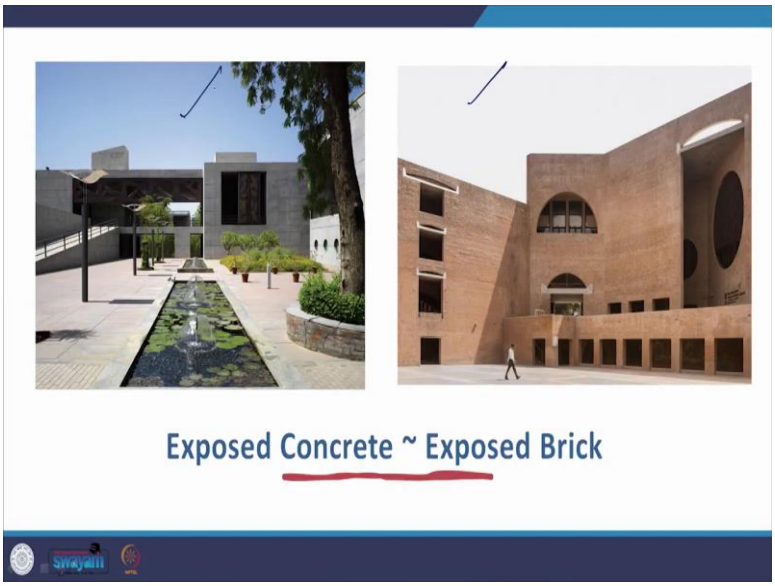

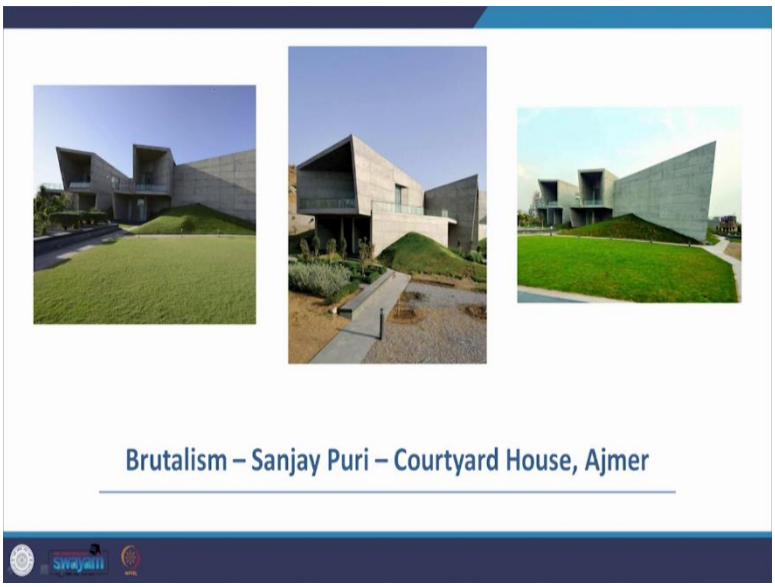

Now this is in direct contrast to the exposed brick of the older IIM campus by Louis Kahn. This is the exposed brick versus the exposed concrete but remember that there is also exposed brick and concrete in the new campus. Then there is brutalism by Sanjay Puri, we see that in

the courtyard house in Ajmer and we will again look at this house to see how the buildings are being made climatically responsive in the 21st century.

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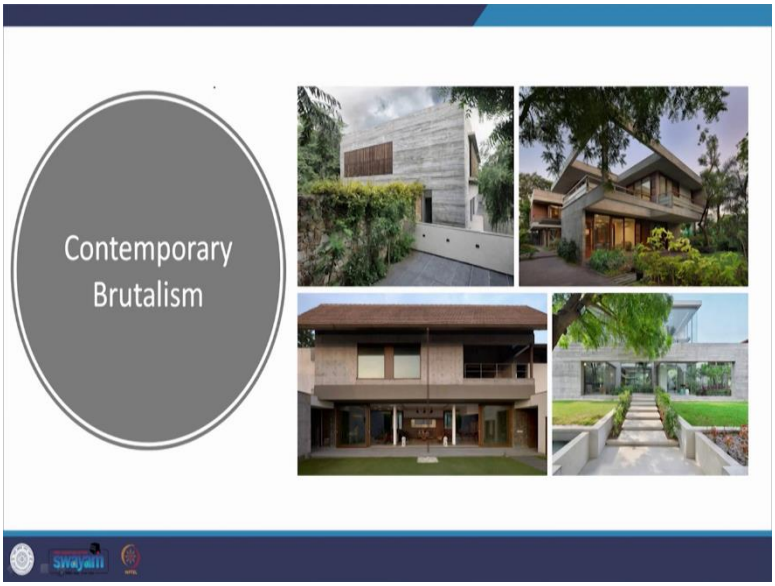

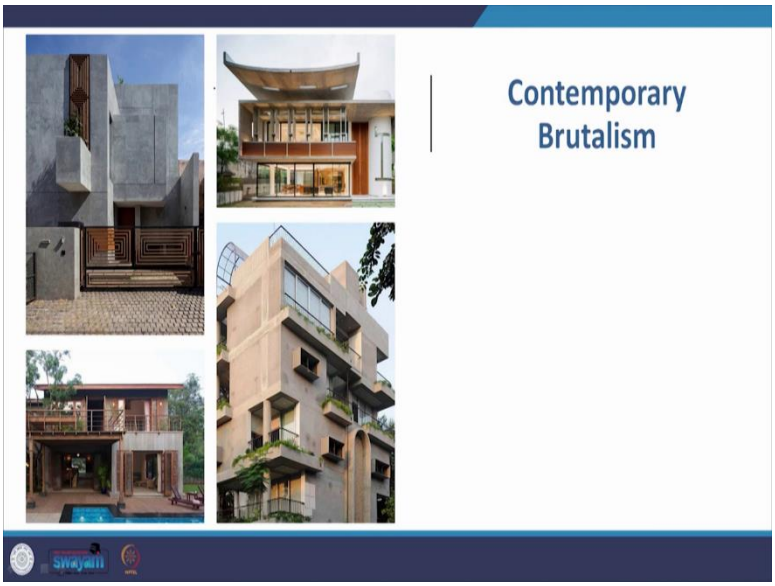

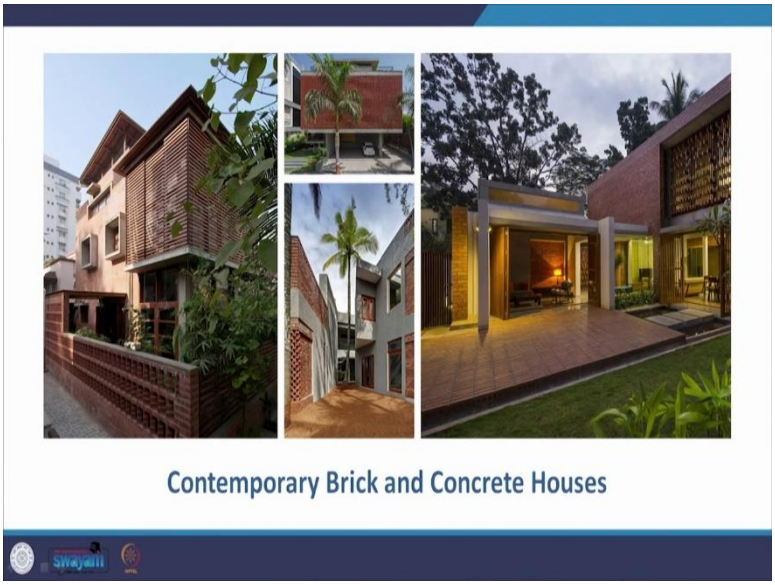

Then there is contemporary brutalism in many other works, this is again an example of series of buildings contemporary brutalist buildings and then there are contemporary brick and concrete houses. So, this brick and concrete texture or this concept is very strongly being used even in the 21st century.

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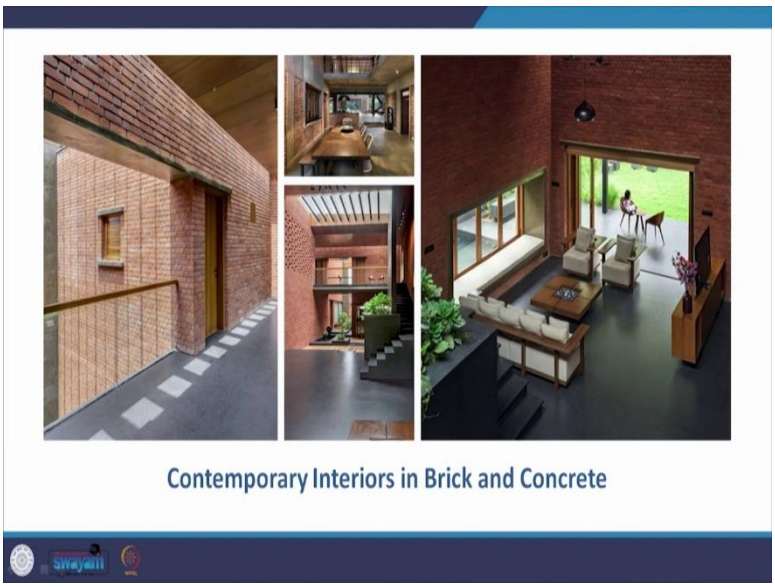

These are again examples of that or for example this house in Pune by Anil Kothari in 2019 and just give you an idea it is not just brick and concrete, it is brick and concrete along with vastu that play a vital role in the house of bungalow's design and he blends tradition with contemporary design.

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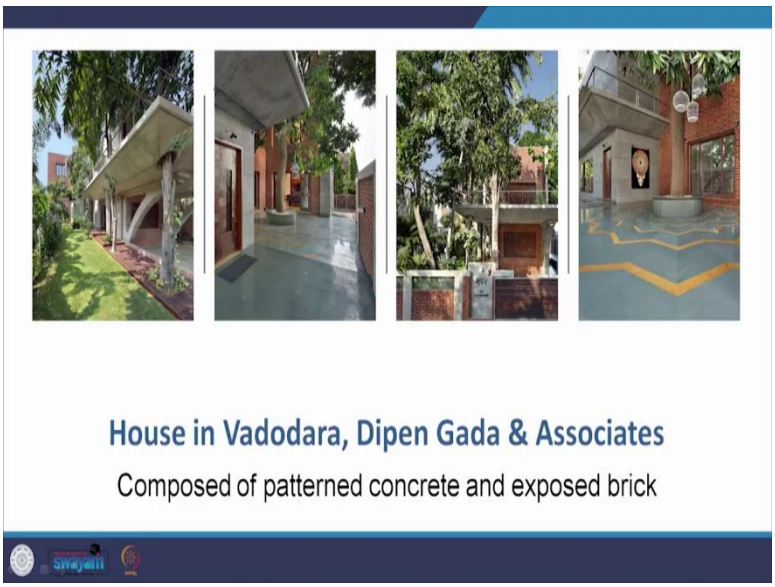

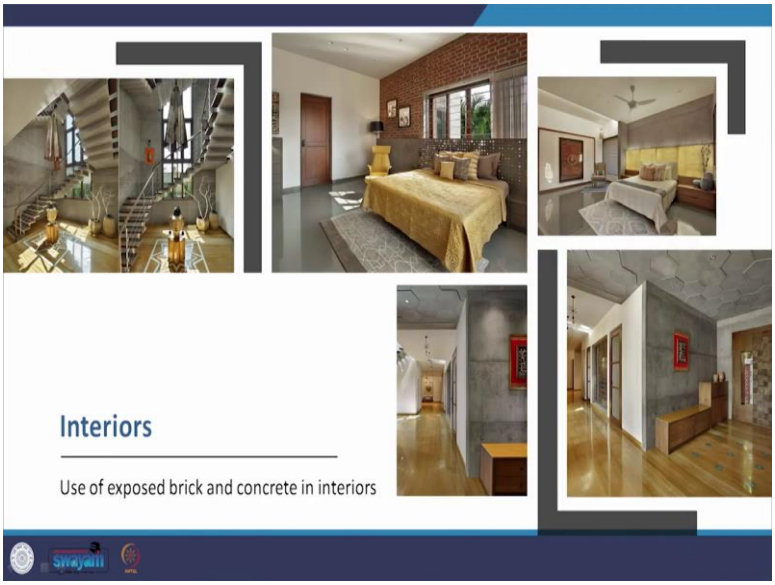

This house in Vadodara by Dipen Gada and Associates is composed of patterned concrete and exposed brick. These are the interiors.

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And this is a brick housing Trivandrum by Srijit Srinivas in 2019 which is using locally sourced materials, it has the construction techniques which are of that area and the attempt is to power the entire house by solar energy and this will be again an idea that we will discuss later.

These are the interiors of this building. Now what I want to point out to you here is, if you just look at where these houses have been built. If you take these last three examples, this is in Pune in Maharashtra, this is in Gujarat and this is in Kerala. So, the expanse of brick and concrete houses for example is vast. It is being done all over the country. It is being done in Delhi, it is being done in Bangalore and many other places.

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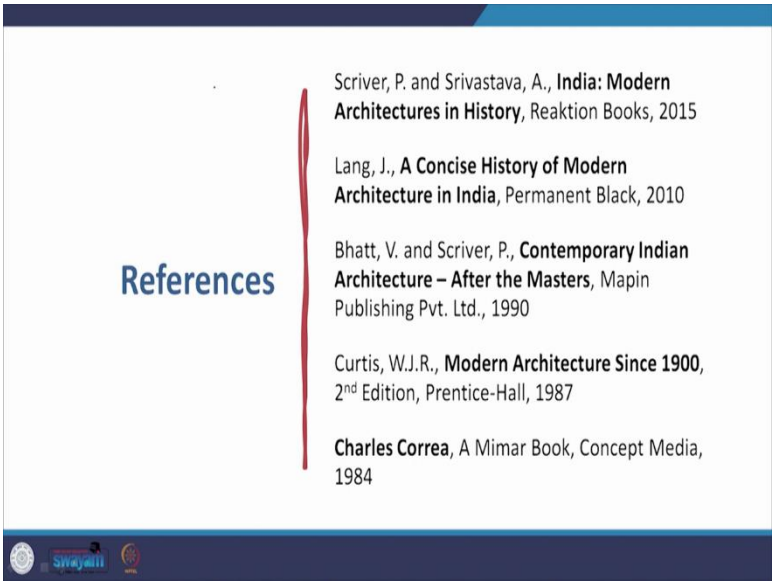

So, we will we will stop here and by this we have concluded our summarized presentation of the impact of Corbusier. The impact of Corbusier is more detailed than this. Every building is a case study in itself and I hope that this will bring in you a desire to explore those buildings closely, at least pick up one or two case studies and study them more in detail. For example, you can take one brutalist building and one building an exposed brick and concrete and study them in detail.

This will also help you in your design studios that all these ideas with regard to materials, with regard to form, with regard to planning and with regard to the use of technology and climatic design can all be incorporated as a part of your design problem. Thank you so much.