Human Computer Interaction (In English)

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Miro

Hello everyone, I'm Vibhuti Malhotra and today we'll be talking about Miro and its tools, how to use it and how to use it in designing processes. So what is Miro? Maybe you've heard about it before if you've tried designing something or making new interfaces, prototypes or flowcharts, diagrams. It is basically a tool for online collaboration. It lets you brainstorm ideas, plan or design any interface on a digital whiteboard. It's also used for visualizing ideas and organizing your projects. It basically works in real time, meaning you can actually share what you're doing, what you're working on with your teammates and let them also pitch in their ideas into it.

So its significance is that it helps you make maps, mind maps and manage your complex processes. It's also great for creating mind maps and flowcharts. So for example, if you're trying to make a new app, if you're trying to make an interface for it, you have to start from the basics. So you think about what the user might want from that app.

You might also work on how you can bring in innovative ideas into it. So all of it can go into your Miro whiteboard. All of those ideas that might be very unorganized. So to basically organize it into one space, you can use Miro. Next, it also offers a variety of templates and There are templates named for brainstorming, for visualizing, for mind mapping, etc.

And we'll dive into it more in the next slides. Fourth, so it also aids in aligning team goals. So if you have like a huge team of 10 to 15 people, every person might have a different idea than yours, right? So you can all put in your ideas into one space and bring it all together into a harmonious project. Fifth, it also helps you make customer journey maps and personas, and it helps you organize your research. So as I was talking about it, Miro has a lot of templates to it, templates that can be used for meetings and workshops.

It can also be used for ideation and brainstorming, for research and design, for strategy and planning, for presentation and slides. And as users, you can customize these templates as per your own needs. If you want something to be there, you can add it there. If you don't want it there, you can remove it from there. And it has a lot of tools.

So you can use those tools to fulfill your needs. So yeah, next slide is, we'll be talking about Miro tools. The first thing that we'll be talking about is create with AI. You can use AI to create a specific flowchart or a diagram that you want. It's actually very easy to do and it saves a lot of time.

Second tool is to select something on your board. So if you have a lot of elements on your board and you want to specifically choose one, you can just use it. It has a lot of templates that I told you about. And then you can use text tools as well. And then you can add a lot of shapes and lines to your project, whatever you want to do.

Then you have a pen tool as well. Frame, if you want a frame of a specific screen like an iPhone or like a laptop, something like that, you can use this frame tool to use it. And then there is sticker emoji and GIFs. You can use a lot of it. They have a variety of their own GIFs and emojis, something that you might not find on your usual phones.

Then you can add comments to it. If you have a lot of team members, they might want to change something that you've already done in your project. They might want to suggest something so they can add comments to the space. Then we have tools, media and integrations. And then we can also undo or redo something that we have done.

Maybe we deleted something by mistake. So yeah, these tools are for that. Next, so Basically, we did talk about the use cases of Miro and one of the most basic and most important one is brainstorming. So brainstorming is a term that we have actually used a lot in our regular lives as well. It's not just something that people in design would talk about, but also in their usual lives.

So if you want to come up with an idea or if you want to execute something big, you brainstorm. Also brainstorming does not take place just between one person. It can also take place between a lot of people. So like in the image that I've shown, There are a lot of different people like Cassie, Trevor and Jules and Mark and Leslie. So everyone has their own set of ideas that they want to implement in the same project.

So they will all be brainstorming together to come up with a proper harmonious project. Basically, they'll find the intersections of what all of them want to achieve and then make a project out of it. Also brainstorming is like, I have an idea. If I have an idea, my teammate might want to add on to it or compliment something or may know something that I don't know about or may have researched about something that I might have missed out. So brainstorming also helps in that.

And it also involves using mind maps, flowcharts, you can also use UML diagrams, you

can use ER diagrams, and you can use voting tools that are specifically there on Miro. And we'll be talking about it in the upcoming slides as well. And like in this image, they've used a lot of sticky notes. So it's also a very nice tool to regulate your thoughts in one space. So next slide is mind map.

As we also talked about this before, mind map is also very important part of your project when you're trying to come up with what the customer might want, what all services can I provide or can my app or my service provide. so mind map is basically a visual tool that organizes all the information that you have like if i have a central idea that i want to make a social media app okay so mind map will help me decide like what all can that can that app or my service do the things that i might have decided that okay my social media app will connect a lot of people together um based on their hobbies so my mind first step will be this and then i'll make more branches into it and decide that oh okay uh if i want to connect people through my social media app maybe i'll do it on the basis of their hobbies or maybe i'll do it on the basis of their age and then make more branches into it like if i can go further into it so we'll also have like an example and we'll go into it so yeah basically So if you're in a company and you are like a manager there and there is an upcoming product launch in your company that you need to manage and hold. So what will you do? You'll open your Miro app, you'll take a whiteboard and then you'll type in the first thing that, oh, okay, I need to plan for a product launch. Then we'll add branches to it. that oh okay I need a product I am doing a product launch so what all things do I need to focus on first I need to market it well so that people know about it second I need to design the product in such a way that people actually find it attractive or pleasing or something that actually caters to their needs and then also design a Even in marketing, you use a lot of designing to make posters and stuff like that.

So that is also one thing. Then the next thing is budgeting. So you need to figure out the budget for the place that you'll be having your product launch at and the food that will be served, the vendors, everything like that. And the timeline, of course, that when will it take place, from what time to what time, etc. So coming over to step three.

we'll take up one branch, one specific branch. So till now we have product launch and then we have four branches around it, naming marketing, designing, budgeting, and then timeline. So we'll take marketing, just marketing, and then think about it. Okay, if you want to market something, what all do you usually use? And you can use like different colors or different icons to group your ideas. to make it more visually pleasing or not even pleasing but just to make you understand and your teammates understand easily what all goals you want to achieve.

So next topic that we'll be discussing is a mental model. So a mental model is basically

something that is seen from a user's perspective. It helps in your decision making process, in problem solving and understanding complex systems and how the user views your product or your app or your service. What are the things that are there that can help him or her achieve their goals through the service that you are providing. and how you can make so when you're coming up with a product you also need to see it from your user's perspective right so how does miro help in that is that it can help in visually mapping your uh the ideas and the thoughts that a user might have when when he or she is using your product or service Then you can also brainstorm with your teammates that someone might think that this is the one thing that the user might feel when they're using your product and some other person might feel differently about it.

So that is what will come under your collaborative brainstorming. Next is structuring complex ideas. If you have a difficult idea or something that has a lot of branches to it, a lot of divisions to it, you can use Miro to organize it. And next is we'll be understanding what a mental model is through an example. So we'll be taking up the basic problem of a decision-making process that, okay, the user has a decision to make and how can he use Miro and basically make a mental model out of it to get to a solution, okay? So the first step will be defining your problem.

So you will be using a mind map to break down what your main problem is. For example, if you're a person and you have a decision making problem where you need to decide that which project should I be investing in. So We'll have a lot of different branches to it, like timeline. What is the timeline of that investment? What is the budget? How much budget is required to invest in that project? And the objectives, like if I have a company and if I invest in some product or some other stocks of a company, how is it benefiting me? What are the objectives that I am fulfilling via it? So you'll be defining this problem as a mind map in your Miro whiteboard. And how will you be doing it? And what tools will you use while you do it? We'll be discussing this right now.

Okay, so the next step that you need to do is gather information. If you're investing in a product, in some stock or in anything, you need to gather all the information that you can regarding it. Like what will be the market trends in the future? How will it actually evolve in the future? How will it help me? How will it help my company? By how much can I grow or my money grow, right? So you will be using like sticky notes and comments. Sticky notes are these, in this image, you can see the pink and bluish notes that are there. So, you can actually divide your thoughts or the information that you're gathering from different sources into small pointers, whatever you gather from different sources.

put it into small bullet points and you can actually use sticky notes to understand it and

organize it in a better way. And if you share it with your teammates, they can add comments to it that, oh, okay, maybe this is the point that is actually important and actually fulfilling our objective. And maybe this is the point that is not actually helping us or our company in any way. So this is how you can use sticky notes and comments. As we talked about it, you can populate your sticky notes with collected data points.

And you can add documents on your product history, project history, financials, and the export opinions. Some researchers might have export opinions on the investment plan that you have. So you can also add that to your sticky notes so that when you want to go back to it, you don't need to open that whole article where the export is saying this and that. Sticky notes are these, in this image, you can see the pink and bluish notes that are there. So, you can actually divide your thoughts or the information that you're gathering from different sources into small pointers, whatever you gather from different sources.

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And you can add documents on your product history, project history, financials, and the export opinions. Some researchers might have export opinions on the investment plan that you have. So you can also add that to your sticky notes so that when you want to go back to it, you don't need to open that whole article where the export is saying this and that. You can just open your Miro board and check what all you wrote in it and what all were the things that you found were important. Okay, so the next step is identifying options.

So you can use flowcharts. So there are a lot of templates of flowcharts as well that are available on Miro. You can use whichever actually fulfill your needs and everything. So you use flowcharts to outline potential options and their processes. So for example, if you were to continue the example that we had previously for the investment process, Okay, so before this, we had decided that we want to invest in something and that is new in project investment example that we took. So in the next step, we have decided to create branches.

So if you want to invest, there are three options. Either we fully invest in it or we partially invested like financially speaking. And then maybe you just don't invest at all. These are the options that you have and you can actually put it into your flowcharts. If you look at the image that is on the right side, it actually tells us, it gives us a hiring

flowchart.

So if you want to, if a company or a person, a hiring recruiter wants to recruit people, what he or she will do, That is, they'll tell the new hires that these are the job requirements and write your job description and criteria. You can also review the applicants. If they fail, then just send them the thank you email. And if they pass, then actually publish that these jobs are open and you can do this. So if they pass that, then you can go for the interview.

If they pass that, interview two, interview three. And lastly, you can send them an offer. This is how a flow chart basically works. Also, you can use different shapes, colors, fonts. You can also use different frames to adjust your flow chart as per your needs.

Coming on to the next step. So you need to evaluate the consequences of all your options, right? How can you do that using Miro? You have your pros and cons tables or a grid chart. As you can see in the image that is on the right, it shows what are, you have used sticky notes first of all. In one column, you're telling key, oh, okay, these are the advantages. And in the other column, you're telling them, oh, these are the cons of what you want to do. And then you're using these tables to actually come to a decision.

Oh, maybe. So you can think that, oh, maybe the pros are less and the cons are more of this project. So maybe I should just drop it and not invest in it. Something of that sort. So you'll create a table with columns, you'll add rows, and you'll add rows if you are to talk about the investment process that we were tackling. You can add rows for potential financial returns, risks, impact on your team resources, and if it aligns with your long-term goals.

Okay, so the next step that you need to do is make a decision. Now you've already talked about the different alternatives that you have and if those alternatives are actually that fruitful as you think they are. So now you need to make a decision which one to choose. Maybe we have some backlog.

Maybe we have some files to make or files to do. So you can use a Miro tool called Kanban boards or like task lists. It actually divides all your tasks into different columns and it also... divides it in a way that every person can see oh these are the tasks that we have to do and these are the tasks that they need to do it also helps you to see the flow of the flow of order and everything so to break down the decision into actionable steps that this is the first step, second step, third step that I need to do, these are the tasks, these are the deadlines, something like that.

And then, okay, if you are to make a Kanban board for full investment option and add tasks for budget allocation, who will be doing the budget allocation part? Who will be managing the product? Who will be tracking the progress of the project? Everything. can be done using a Kanban board, which will be shared among all your teammates. And they can see whatever work they need to do in real time. Okay, so the last step is review and learn. After you have done everything, like after you have decided that this is the decision that I'm going to make, the last step that comes is after a period of time, you need to decide whether the decision that you made was fruitful for you, was helpful for you or was it disadvantageous.

For the same thing, we can use a retrospective template that Miro provides. It basically divides your Miro board into four parts. First is if we should continue with the same, if you were to talk about the same investment example, the first thing that we'll be thinking about is whether we should continue the investment plan after this financial year or not. Second will be if we should stop this, if we should not continue with this project and it maybe it is making you losses or it is not making you profit.

So you'll think about stopping it. Or you'll think that maybe we can do things differently. Maybe I can invest just this much amount in it.

Or maybe I can invest this... Or maybe I can invest the same amount in some other investment project, not this one particularly. And the last thing that a retrospective template provides us is act. So act basically is what should we do next? What will be the best step or best thing for our company that we can do after we have made this investment process decision? So for example, you can hold a review session with a retrospective template where participants add sticky notes under what went well, challenges, improvements, or capturing insights for future decisions. So the next topic that we'll be talking about is conceptual modeling. Conceptual modeling is how the creator or the one who's making the project sees their project and thinks maybe this project or things that maybe this step needs to be taken after this step, this step needs to be taken after this step.

So for example, if you open a social media app and you've forgotten your password. So as someone who has made that social media app , they will be doing the conceptual modeling part they'll be thinking that if someone needs to log into an account, if they forget the password, I need to add something that can let them make a new password. So they'll add under the enter your password screen, forgot your password question mark, and that will lead you to a screen that will help you to recover your password. So small things like these come under conceptual modeling. So it is usually used in data sciences and software development, business analysis.

It is also the process of creating abstract representations. These representations are usually models or diagrams or flow charts. It can be anything. It does not have just one particular format. Okay, so for example, if you want to make a conceptual model for an online store, You can have entities like customer, order, product, and whatever relationships that they have. And why is conceptual modeling important? So the first point is abstract representation.

It basically simplifies your complex ideas and thoughts and systems into an understandable model. Second, it also helps you to clarify relationships, to understand that which relationship, which entity is connected to which entity, which entity helps the other entity or uses the other entity in producing the output. Third is high level overview. So a conceptual model actually focuses on what and how rather than the technical details of why and when, something like that. Also, as I told you before, tools that can be used are diagrams, Doja, QML, ER diagrams, etc.

It basically helps you in decision-making and problem-solving. So, the basic components of a conceptual model are as follows. First, it is entities. What are the main components? So what are the main objects that come into your conceptual model? They can be something like customer, product, or order. Also, attributes are something that these entities see as their characteristics. So a customer might have characteristics like customer name, first name, last name.

and their phone number. For a product, it can have attributes like a product or product number or product price or product quality, something like that. The third is relationship. So how is customer related to product or how is customer name related to product price? Any two entities, how are they connected to each other? That is how, so relationships help us to connect these two entities and tell us how are they connected. Processes, actions or operations that entities can undergo. So if you want to, if you're talking about specifically just one entity, order, it can go through a lot of processes like if you want to actually put an order or if you want to return an order or if you get a defective order or if you want to pay for an order.

So the next component is assumption. There are a lot of underlying assumptions or constraints about the system that maybe if you're putting a specific type of address maybe the one who has created the system, they must have put in a lot of constraints that an address needs to be of three lines, an address needs to have some numeric number, numeric order to it. So these are the constraints or assumptions that can come under a conceptual model. and there are boundaries. So you need to define the scope or limits of the model. What is included? What is not included? What is required in a model? What is

not required in a model? What is unnecessary for the model to include? Or what might clutter the model? You need to make a scope and let the users know that these are the things that does not include in our model.

 So you can, So you can use sticky notes or shapes to list these key entities like customer, product, order or payment. Next, you need to identify relationships. As we talked about it earlier, all these entities will be related to or connected to each other in some way or another. And you need to specify it on your Miro board as well. So if you're connecting customer with a product and you have an arrow in between, above that arrow, you can add that customer orders a product, something like that, so that we know how these two are connected to each other.

 Then we can add attributes. So like I said, every entity will have its own attributes, have its own characteristics, like customer have a customer name, it has its own phone number, it has its own email ID. So all these come into attributes and you need to put them in your Miro board using sticky notes to help yourself understand better about these entities. You can also use text boxes for the same. So the next step is you can outline processes. You can use flowchart shapes to represent key processes like order processing or payment verification.

 And next is, as we talked about it earlier as well, boundaries and assumptions. These are kind of related to each other and similar as well. So you can use frames to mark the scope of your model or the assumptions that you might have. Now, these are the last two steps for our conceptual model. You can basically collaborate with your teammates and they can refine your project or your flowchart or your model.

 And they can review your project. and add their own feedback or comments into your Miro board. And the last step is that you can finalize whatever you've done till now and export or share the Miro board with the stakeholders involved. The next part is, so we've talked about two models, mental model and conceptual model, and how are they different? When you actually construct a conceptual model, you need to see it from the designer's point of view. And when you construct a mental model, you need to see it from the user's point of view. If we have an interface, we need to see how the user will see the same interface and what all problems can he or she face.

 And the designer needs to see what all problems they're solving for the user as well. So information architecture basically comes under a conceptual model or it actually helps us understand conceptual model in a better way. And it organizes information within a product. It also defines how content is categorized, labeled and navigated. So the key elements that come under information architecture are navigation, hierarchy, and data

flow. And we'll be seeing a particular example and we'll get to understand how IA works in a better way.

So it also plays a crucial role in shaping the conceptual model of a product by organizing, structuring information in a way that makes it easy to understand for everyone. So if we are to take this example for IA, It is for Amazon. It is, um, okay. So when you open Amazon, there are a lot of things that you might see on the interface, but one of those will be the category page that, um, what are the category of products that it has? Okay.

So if you go to a particular product page, you see that it has a lot of, uh, it has a title. It has a image. It has a description. It has a buy now, uh, button. Another thing that you might see when you open Amazon is your shipping cart, right? But shipping cart is also related to the, when we go to a product page and see add to shopping cart, we can also, if we click on that button, we can directly go to shipping cart.

So there are two ways to go to a shipping cart. Either you open Amazon and directly go to it or you go to category page, product page and then add to shopping cart and eventually shipping cart. right so shipping cart has its own attributes list of items price total price pay now again if you want to open pay you can go to payment information but if you choose buy now from product page you can then also go to payment information so basically it tells you that um It tells you step by step simultaneously that these buttons go to these buttons. If you click on this step, you can go to this step and how they're all interlinked with each other. Okay, so let's take another example for an IA and understand how it works.

First of all, you will define the scope and your goals. So what do you want to achieve through your IA? For example, if you want to create a blog website, what your goal is to create a clear organized layout so users can find it easy to read the articles and find whatever they want to find through it. Second, you need to also understand your audience and specify what it is basically. If you are making a blog that is related to technology, you need to understand that you will be handling audiences that will be into that field as well. The next step is gather content inventory.

So you need to understand what all will be covered under your IA. Like, okay, for example, home, technology, lifestyle, business. Basically, if you want to come up with a blog website, you'll be thinking these are the subcategories that we'll be having. Then you'll be prioritizing that which category is more important and which category needs to be displayed first, last, something like that. For the same, you'll be opening your Miro and then you'll be going to a whiteboard and use sticky notes or shapes to represent the

main pages and subcategories that we just decided in our previous slide.

Next, as we talked about it earlier, IEA has a hierarchy system. So top level pages like home, technology, lifestyle, business, about us and contact will be above all those other subcategories. Then you'll be adding sub pages. So if you click on the page for technology, you'll be adding news to it, tutorials to it, reviews to it. Then you'll be using connectors. You'll be drawing lines and arrows to show relationships between the top level pages and their sub pages.

So the next step will be for each and every top-level page or sub-page that you might have, you'll be having labels. Basically, if you want to add small comments to a specific page that, oh, this page will include this service as well. So you'll be using sticky notes to add those comments or just comment tool to add the same things. optionally you can add brief descriptions to explain each page pages purposes and for tutorials uh under technology you can add uh oh so we can add we can also add guides and how to's to uh this same page So the next step is organizing for flow and navigation. You can use flow arrows as we talked about it earlier and ensure that the layout aligns with the expected user flow.

So users visit homepage and then they select a specific category technology and then they choose an article under news. So your IA should be able to correctly follow a path that takes us from homepage to technology to news. So the next step, that is the final step, is finalize and share. So you need to adjust the spacing and ensure readability so each one of your teammates can understand it.

You can use comments, you can share the Meet Award with your stakeholders. And then, as we talked about it, the example that we were taking, So for an IEA, you can actually, if you want to put the same example into an IEA, you will be taking your top level pages as these and the second level pages as these. And the last topic that we'll be covering in this lecture is some Miro tips. So Miro has an outline feature as well. It allows you to create a structured clickable outline for navigating larger boards.

The second thing that it has is an attention management system. If all the collaborators are on the same page on Miro and if you want them to focus on just one aspect of the board, you can just outline it and bring the attention of all the viewers to that one specific part of your board. Then we have Miroverse. So Miroverse is basically a gallery of user-contributed templates. So a lot of users are there on Miro and they've created their own templates as well.

And all those templates club together is called Miroverse. And a user can use these

templates as well to structure their ideas. Okay. Okay, so the last point that I'm going to talk about is card-based Kanban view that we talked about previously as well. It offers a card style objects that work well for Kanban boards and it allows team members to track their tasks easily, which task is assigned to which member, when is the deadline, etc.

It all shows on one specific template that is known as Kanban. So this is the last slide and we have some references for you. You can refer to these websites, these YouTube pages to understand Miro better and get a better hand at it. Thank you.