

## **Human Computer Interaction (Hindi mein)**

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**Interaction: Lecture 3 Part 1**

**Lec11**

[Music] Namaskar. Saptah teen mein aapka phir se punah swagat hai Human Computer Interaction ke is Hindi bhasha ke course mein. Is saptah mein hum interaction ki baat karenge aur interaction jaisa ki humne pehle discuss kiya yeh humein madad karta hai technology aur upbhokta ke beech mein samvaad ka paraspar kriya ka. Toh chaliye aage badhte hain. Jaisa ki humne pichle vyakhyan mein discuss kiya tha design kya hai? Kise hum design karna chahte hain? Interaction design kya hai? Aur humne inclusivity, accessibility aur design principles ke baare mein baat ki thi. Humne kaise discuss kiya tha ki kaise accessibility aur inclusivity basically humein kisi bhi maanav kendrit design aur solution banane ke liye kaise bahut hi aavashyak hai. Kaise yeh jo hamara seva ya utpaad hum bana rahe hain. Keval kuch logon tak seemit nahi hai. Jabki hum iska upyogita ko ek bade star par bade logon tak dher saare logon tak apni pahunch banane ka prayaas karte hain. Humne pichle saptah mein iske upar ek tutorial panel aur hands-on experience Canva ke saath diya tha aur saptahik assignment ke saath mujhe aasha hai ki aap logon ne kaafi kuch seekha hoga. Toh is saptah ki rooprekha is tarah hai. Hum design thinking ke baare mein baat karenge. Design process prakriya ke baare mein baat karenge. Hum yeh discuss karenge kaise interaction design ke liye kaise design thinking aur design process aavashyak hain aur woh kis tarike se usmein apna yogdaan dete hain. Hum interaction design process ke upar is saptah mein ek tutorial bhi karenge aur aapko Figma tool ke saath ek vyavaharik anubhav bhi pradaan karenge aur ant mein hum aapko is saptah ka assignment bhi denge jisse ki aap jo kuch aapne seekha hai wahan par uska mulyankan kar sakein. Chaliye start karte hain. Interaction paraspar kriya toh sabse pehle hum design thinking, design process aur kaise yeh interaction design mein contribute karte hain, iske baare mein hum charcha karte hain. Interaction design cannot be effective without a blend of creative exploration. Jab hum ek khoj karte hain navachar se juda hua ek khoj karte hain toh mukhyatah use hum design thinking ke baare mein bolte hain aur jab hum uska execution karte hain finally usko hum usko hum patal pe laate hain apne kaarya ek step-by-step process ke through prakriya ke through toh woh mukhyatah design process ke andar aata hai. Isko hum udaharanon ke madhyam se aur bhi detail mein aage discuss karenge. Jaisa ki maine bola dono ek abhinn ang hai interaction design ke. Aur design thinking jo hai mukhyatah ek mindset pradaan karta hai aur design process mukhyatah ek structured ek suniyojit prakriya steps ko pradaan karta hai. Jisse ki hum ek meaningful aur user-centered interaction logon ke beech mein mukhyatah aap keh sakte hain upyogkarta ke

beech mein aur technology ke beech mein pradaan kar sakte hain. Toh yahan par aap dekh sakte hain dono ka role kya hai design process interaction design mein. Toh design thinking sahanubhuti karta hai. Yeh basically ek tarah se yeh mindset hai jo ki logon ki zarooraton ko pata karta hai. Unki zarooratein kya hain? Unki keh sakte hain ki unki mukhya taakatein kya hain? Kya unki kamiyaan hain? Aur jisse ki hum unke samasyaon ka ek achha samadhaan de sakein. Aur design process jaisa ki humne upar bhi bola tha ek systematic structured steps hai jo ki suniyojit steps hai jisko hum follow karke ek concrete apna system bana sakte hain aur build usable testable interaction system jismein aap dekh sakte hain ki kaise pehle prakriya ke dauran hum apne user ke baare mein jaante hain. Doosre prakriya ke dauran unki zarooraton ke hisaab se ek complete system banate hain. Jisko woh upyogkarta apne dainik jeevan mein ya jab bhi usko zaroorat ho uska prayog karta hai. Toh design thinking ke baare mein chaliye thoda sa aur detail mein jaante hain. Toh design thinking is a human-centered approach. Jahan pe humne bola ki vyakti ko aapko center mein rakhna hai. Uski zarooraton ko samajhna hai aur uske motivation ko samajhna hai. Aur uske baad designer ko woh madad karta hai. Deeply understanding user needs, generate creative solution jo ek navachar yukt samadhaan aap pradaan kar sakte hain. And iteratively test them. Jaisa ki humne bola ki design mein human computer interaction mein aap punravritti karte rehte hain jisse ki aap ek ke baad ek ke baad ek ke baad ek naye-naye aur aur uchhtam samadhaan nikal sakein. Toh in interaction design it is used to empathize with user through research. Aapko user research karne ki zaroorat hai. Alag-alag uske tarike hain jo ki hum aage seekhenge. Woh survey ho sakta hai, woh aur unke baare mein interview ho sakta hai aur bhi alag tarikon se hum unke baare mein jaan sakte hain. Unse sahanubhuti kar sakte hain. Uske baad hum usko paribhashit karte hain ki jo aap jis problem ko aap jis problem pe aap kaam kar rahe hain. Chahe woh banking se related app ho, chahe woh education se related app ho. Aap kaise jo aapka upyogkarta hai us app ko use karta hai, prayog karta hai, usko hum define karenge. Agle step mein hum us par vichar karke alag-alag jo intuitive solution hai, sahad solution hai, usko hum banate hain. Aur jaisa ki humne banaya ki apne alag-alag vichaaron ke baad humein ek namoona banana hota hai jisse ki hum jisse ki hum apne jo possible user hain, jo possible upyogkarta hain, woh usko try kar sakein, dekh sakein ki woh kitna achha kaam kar raha hai. Unki zarooraton ke anusar hai ya nahi hai. Aur finally hum uska mulyankan karte hain usability ke liye, upyogita ke liye aur jo aapka upyogkarta hai uske anubhav ke liye. Jaisa ki humne pichle vyakhyanon mein discuss kiya hai ki hamara ultimate aim hai ki hum kaise apne upyogkarta ke anubhav ko zyada se zyada badha sakein. Uske liye jo bhi hum system bana rahe hain bahut aasani se usko use kar sake. Toh yeh ek tarah se iterative cycle hai to designing usable and delightful interaction. Kaise hum ek bahut hi upyogi aur bahut hi khushnuma paraspar kriya pradaan kar sakte hain punravritti ke saath. Toh is tarah se yeh ki yeh punravritti hoti rehti hai aur aap is tarike se ek design thinking prakriya ke madhyam se aap aap ek apne jo upyogkarta hai unke baare mein achhe se jaan sakte hain. Unki zarooraton ke baare mein jaan sakte hain. Design process jaise humne bataya ki agla step hai. Ab ek baar aap samajh gaye. Ek baar aap jaan gaye ki aapke upyogkartaon ki zarooratein kya hain? Unki taakatein kya hai? Unki strength kya hai? Unki kamiyaan kya hain? Uske baad aap step-by-step framework ke madhyam se problem se

solution ki aur samasya se samadhaan ki aur aage badh sakte hain. Toh interaction design mein yeh ek tarah se mukhyatah keh sakte hain ki yeh steps hote hain user research, persona aur scenario creation. Again hum agle adhyayon mein agle saptahon mein iske baare mein hum detail mein charcha karenge. Information architecture, architecture, wireframing, prototype, interaction flows aur usability testing and iteration. Toh ek tarah se yeh ek vyavasthit suniyojit prakriya hai jo ki humein jitne bhi interaction ke element hain, chahe woh button ho, chahe feedback loop ho is intentionally and effectively designed. Usko soch samajh ke hum design kar sakte hain aur apne upyogkarta ki zarooraton ko poora kar sakte hain. Toh jaisa ki humne bataya design thinking aur design process mein mukhyatah yeh key steps hain aur agar hum dekhein toh ek tarah se inki yeh mapping hai. Jaise design thinking humne bataya ki ek tarah se yeh mindset hai aur design process ek tarah se uska execution hai. Toh empathize hum apne user se sympathize, sympathize kaise karenge? Toh us case mein user research ke madhyam se karenge. Hum samasya ko paribhashit kaise karenge? Usko hum persona aur IA ke madhyam se karenge. Hum vichaar kaise karenge? Toh aap alag-alag tarike se wireframe of prototypes bana sakte hain. Aur ek tarah se yeh dono ismein ho gaye. Test kaise karenge? Usko testing aur iteration ke through karenge. Aur jab yeh saari cheezein ho jayengi tab ek tarah se final interaction design aapke saamne aa jayega. Toh ek tarah se ab hum chaliye design thinking aur design process ke baare mein thoda aur vistar se discuss karte hain. Toh jaisa ki humne pehle bhi discuss kiya design thinking ek user-centered iterative process for problem solving hai. Aur yahan pe jo mukhya uddeshya hota hai woh hamara empathy hota hai. Creativity hota hai aur experimentation hota hai. Aur iski zaroorat kyun ki hai? Yeh humein encourage karta hai innovation aur creative solutions ki aur aur hamare jitne bhi upyogkarta hain unki zarooraton ko samajhna aur uske hisaab se sahi samadhaan dena yeh usmein madad karta hai. Toh design thinking mein jaisa ki humne pehle bataya is framework mein mukhyatah chheh stages hote hain. Kai jagah aapko paanch stages bhi dikhaye jaate hain. Toh pehla jo stage hota hai usmein hum aap ek tarah se kar sakte hain, samajh sakte hain. Hum samajhne ki koshish karte hain aur usmein hum problem, apne upyogkarta ko samajhne ki koshish karte hain aur unko zarooraton ko samajhne ki koshish karte hain aur usko paribhashit kar sakte hain. Toh ek tarah se dekh sakte hain ki pehle understand jo phase hai usmein hum empathize karte hain. Sahanubhuti dikhate hain. Jo hamara by conducting research to develop an understanding of your user, jo aapka upyogkarta hai, uske baare mein samajh hum viksit karte hain. Aur jab ek baar aap apne upyogkarta ko samajh gaye, uski zarooraton ko samajh gaye, toh combine all the research and observation from your users, your problem exists. Toh hum usko paribhashit kar sakte hain kyunki jab tak hum samasya ko achhe se paribhashit nahi karenge hum uska ek sahi uttar ya sahi samadhaan nahi nikal sakte hain. Ek baar jab hamari humne samasya ko achhe se paribhashit kar diya tab hum ideate karne lagte hain. Vichaar karne lagte hain ki unki samasyaon ka samadhaan kaise kar sakte hain. Kya-kya tarike se kar sakte hain. Toh ek tarah se yeh dekh sakte hain ki pehle phase mein jo ki understanding phase tha, wahan pe hum understand the user karte hain aur uski zarooraton ko samajhte hain aur clearly jo problem hai jo samasyayein woh face kar rahe hain usko achhe se paribhashit karte hain. Jo agla phase humne bataya ideate jahan explore

phase mein explore mein hum ek tarah se dekh sakte hain ki hum pehle alag-alag jo solution ho sakte hain uske baare mein sochte hain aur uska namoona banate hain jisko upyogkarta prayaas kar sakta hai, dekh sakta hai. Toh ek tarah se aap dekh sakte hain explore phase mein yeh ideate aur prototype hota hai. Ideation mein hum charcha ke madhyam se aur alag-alag tarikon ke madhyam se woh charchayein aap jo upyogkarta ho sakte hain, unse bhi kar sakte hain.

Alag-alag expert bhi kar sakte hain aur uske madhyam se potential jo possible solution hai kuch unko nikalne ki koshish karte hain aur uske corresponding kuch tangible solution banate hain jisko aap chhu sakte hain, touch kar sakte hain, dekh sakte hain, uske saath khel sakte hain aur ek kuch namoone banate hain. Us namoone mein ho sakta hai ki saare features, saari functionality na ho. Par koi baat nahi. At least unko ek feel aa jaati hai ki hamara jo end product ya seva banega woh kuch is tarike se hoga. Uske baad hum materialize phase mein aate hain. Jahan pe aap dekh sakte hain ki hum mulyankan karte hain ki jo humne prototype banaya hai woh kis kis had tak jo aapke upyogkarta hai unke anuroop hai. Unke liye zarooraton ke anuroop hai. Aur uske baad finally aap punravritti karte rehte hain aur implement jo aapka vision tha usko ek tarah se hum effect mein daalne ke liye implement karte hain. Toh ek tarah se dekh sakte hain yeh kaafi iterative nature hai. Punravritti ismein hoti rehti hai aur kabhi-kabhi stages overlap bhi karte hain, repeat bhi karte hain. Aur aisa nahi ki ek ke baad aise hota jaaye. Woh repeat bhi kar sakta hai, wapas aa sakta hai aur usi tarike se punravritti ke madhyam se hum isko bade achhe se paribhashit kar sakte hain, khoj sakte hain aur uska samadhaan nikal sakte hain aur finally usko hum implement kar sakte hain. Toh ek case study ke madhyam se Airbnb ko agar hum dekhein toh Airbnb ek bahut hi charchit, well-known, ek tarah se company hai jo ki humein ek tarah se hotel ka alternative provide karti hai agar aap naye jagahon par jaate hain aur aap isko isliye pasand karte hain kyunki ek tarah se aapko ghar jaisa mahaul deta hai, matlab ghar se aap door jaakar bhi jaise ghar pe rehte hain, saari suvidhaon ke saath rehte hain toh ek tarah se inka jo idea tha AirBed & Breakfast, Air Bed and Breakfast, kaafi popular ho raha tha. But 2008 mein aap dekh sakte hain ki unka website kuch is tarike se tha aur 2009 mein dheere-dheere aap dekh sakte hain ki is tarah se aage badha. But ek samay unhone dekha ki 2008 mein jab inhone banaya toh inko, ki idea bahut achha tha. Ki kyunki yeh log bahut use kar sakte the. Lekin unhone dekha ki bahut log use nahi kar rahe hain. Jaisa woh soch rahe the. Jaisi woh aasha kar rahe the ki isko launch karne ke baad hazaron, lakhon, karodon log isko turant use karne lagenge aur hamari company bahut badi ho jayegi. But aisa hua nahi. Toh unhone phir uske us pe design thinking, apna jo process tha usko apply kiya. Design thinking jo process tha apply kiya. Pehle design thinking ke madhyam se woh apne jitne bhi upyogkarta, unke mindset ko samajhne ki koshish kiya. Unki zarooraton ko samajhne ki koshish kiya. Keval ab yahan pe do tarah ke upyogkarta hai. Ek upyogkarta woh hai jisko apne ghar se door jaake ghar jaisa, ghar jaisa mahaul chahiye aur ghar chahiye kiraye pe aur doosra vyakti upyogkarta aisa hai jo apne ghar ko ek tarah se kiraye pe de raha hai temporary. Toh uski dono ki apni alag-alag samasyayein aur dono ki apni-apni aashayein hain. Jaise upyogkarta jo ghar kiraye par lena chahta hai woh chahta hai usko saaf-suthra achha ghar mile. Safe ghar mile. Wahan par saari suvidhayein ho. Jo vyakti ghar kiraye par de raha hai. Woh chahta hai ki uske ghar ko koi nuksaan na ho. Uske ghar se koi

cheezein chura ke koi na le jaaye ya uske ghar ki koi cheezon ko bekaar na kiya jaaye. Toda na jaaye ya uske ghar ko saaf-suthra rakha jaaye. Toh dono ki apni alag-alag zarooratein hain. Toh is design thinking process ke dauran jo inke founder the unhone kiya ki aisa karte hain ki hum hi log apne ghar ko kiraye par dete hain ya hum hi log kisi ke ghar par jaakar kiraye par rehte hain aur khud booking karte hain aur realize karne ki koshish karte hain ki kya galti ho rahi hai. Kyun log ghar, apne ghar ko kiraye pe nahi de rahe hain. Kya baat hai ki log is tarah ke ghar ko log kiraye pe nahi le rahe hain? Ah jabki overall yeh jo vichaar hai bahut achha hai kyunki yeh relatively sasta hai. Relatively zyada features hain, facilities hain. Kyun nahi phir bhi yeh aage badh pa raha hai. Toh is tarah se aap dekhenge design thinking aur design process ko follow karne ke baad. Aaj ke time par inka website kuch is tarike se hai aur ab yeh bahut badi company ban gayi hai. Iske baare mein aur detail mein aage charcha karenge. Toh is example ke madhyam se aap dekhenge ki Airbnb jo thi ab dheere-dheere yeh nearly 100 billion ke aaspaas ki company ban gayi hai. Agar iska market valuation ki baat karen toh toh jaisa ki pichle vyakhyan mein humne discuss kiya tha Airbnb mein Y Combinator ne ek tarah se apne kuch paise invest kiye the 2009 ke aaspaas. Toh 2009 ke aaspaas jab unhone paise invest kiye the toh 2-4 million ke valuation ke hisaab se kiye the aur unhone \$20,000 usmein kharch kiye the. Kharch nahi ki kahe the, matlab \$20,000 invest kiye the aur 6% stake ke hisaab se agar hum is 6% stake ko agar aaj ki date pe dekhein toh inka jo \$20,000 tha woh kareeb-kareeb \$6 billion ke aaspaas uski value ho gayi. Toh ek tarah se keh sakte hain ki maatra 15 saalon mein yeh dhaai lakh se bhi zyada return aapko diya hai is company ne. Toh is tarah ke yeh aisa possible kaise hua? Toh aise possible aise hi hua hai. Agar aap dekh sakte hain 2008 mein aisa tha jab Y Combinator ne 2009 mein ismein invest kiya toh in logon ne us paise ka achhe se use bhi kiya aur apne overall jo utpaad hai aur seva hai usko aur achha banane ke liye design thinking, design process in sab cheezon ko follow karte hue aur bhi cheezein kiya. But yeh mukhyatah hai aur aaj ke time pe yeh aisa hai aur itni badi company ban gayi hai. Toh jaisa ki humne bataya design thinking mein kuch mukhya steps hain. Pehla hai Empathize. Kaise aap aapke upyogkarta ke baare mein deep understanding prapt kar sakte hain. Unki zarooraton ke baare mein. Toh aap alag-alag methods follow kar sakte hain. User interview kar sakte hain. Observe kar sakte hain. Kaise aapka upyogkarta aapke system aur seva ko use kar raha hai. Aap empathy mapping bana sakte hain jo ki hum aage ke vyakhyanon mein aur bhi detail mein discuss karenge. Survey kar sakte hain. Spend time with user, shadow them. Unke saath aap samay bitaiye. Woh dekhiye kaise aapke system ko use kar rahe hain. Aapke seva ko use kar rahe hain. Observe them their behavior in natural environment. Toh aisa nahi hona chahiye ki aap jo aapke upyogkarta hain unko bahar kabhi chai pe bula ke unse pooch rahe hain. Achha kya hua? Kaise hua? Agar aap unko unke real environment jaise agar woh ghar pe reh rahe hain toh ghar pe jaake dekhein. Agar woh aap host kar rahe hain toh wahan par aap host karke logon ko dekhein. Kis tarah ki samasyaon ka saamna karna pad raha hai aur jaisa hi aisa hi unke founder logon ne bhi kiya jaisa ki maine bataya is tarah se unhone jo user ka jo motivation hai, behavior hai, jo samasyayein hain, jo unki ichhayein hain, unko bade achhe se samjha aur usko aage kiya. Aur bhi company ka example aap dekh sakte hain. Procter & Gamble used empathy to redesign their line of sweeper products by observing people cleaning their

homes, leading to innovation and solution. Is tarike se dekh sakte hain. Unhone Procter & Gamble ne banaya aur bade achhe se uska use kiya. Toh humne jaise bataya ki pehle steps mein pata karne ke baad ki aapki upyogkartaon ki samasyayein kya hain? Unki ichhayein kya hain? Toh uske baad aap usko paribhashit kar sakte hain. Jab tak aap unko achhe se paribhashit nahi karenge yeh aap uska ek structured tarike se sahi solution nahi nikal sakte hain. Toh ek tarah se define jo step hota hai woh humein identify karta hai key insights and patterns from the user research jo ki humne pichle step mein kiya tha. Aur uske baad hum problem statement ko clear and concise banate hain. Aur yeh karne ke liye "How might we" is tarike se format ko aap creative solution nikal sakte hain. Jisko hum aage dekhenge. So fall in love with the problem, not the solution. Jab tak aap samasyaon ko achhe se nahi samjhenge aap unka solution bhi achhe se nahi nikal sakte hain. Jaise example ke taur pe aap dekh sakte hain Nike ne Nike+ app ko banaya tha and they defined the problem around the motivation to exercise focusing on social and personal encouragement. Toh is tarah se aap dekh sakte hain. So agla step hai ideate. Kaise aap apne vichaar ko aage karte hain alag-alag solution nikalne ke liye. Toh yeh basically generate karta hai wide range of ideas and potential solution. Alag-alag pehluon pe yeh vichaar karta hai. Alag-alag pehluon pe charcha karta hai. Uh jo uske possible upyogkarta ho sakte hain, jo expert ho sakte hain, jo stakeholder ho sakte hain aur uske baad woh potential solution nikalte hain. Toh iske liye alag-alag takneekiyan hain, alag-alag solution hai jo ki hum aage aur bhi detail mein discuss karenge. Jaise brainstorming ke through, mind mapping ke through, SCAMPER ke through, sketching aur storyboarding ke through. Toh yahan pe ek cheez dhyan dene ki bahut zaroorat hai. Khaastaur pe jab hum brainstorming aur idea pe vichaar pe baat kar sakte hain. Humein jitne bhi log usmein bhaag le rahe hain unko yeh batane ki zaroorat hai. Kuch bhi chhota nahi hai. Koi bhi idea chhota nahi hai. Aapke mann mein jo aa raha hai aap boliye. Aapke mann mein jo prashn aa raha hai, chodiye. Woh aapko bekaar se bekaar prashn lag sakta hai. Silly se silly idea lag sakta hai. Lekin phir bhi aap boliye kyunki uske baad jab us pe charchayein hoti hain toh kuch achhi cheezein nikal ke aati hain. Toh yahan pe isliye ideation stage mein humein yeh clearly encourage karne ki zaroorat hai. No idea is a bad idea. Aur yeh basically humein ek tarah se foster creativity karta hai. Aur is tarah se aap kai technique hain jaise Crazy Eights, where participants sketch eight different ideas in just 8 minutes to encourage quick thinking. Uske baad usko vichaar pe uske alag-alag pehluon pe charcha kariye. Kya achha hai ismein? Kya bura hai? Aur uske baad probably sabhi log milke jo achhi cheezein thi usko combine karke ek aur bhi achha solution ek group ke madhyam se nikal sakte hain. Toh example ke taur pe yahan pe dekh sakte hain IDEO shopping cart project. Ismein ek tarah se aaj ke time pe aap jab malls waghera mein jaate hain toh is tarah alag-alag tarike ke shopping cart samay ke saath develop hue hain, aaye hain jo ki alag-alag ek tarah se kar sakte hain jo aapke upyogkarta hai. Unko saamaan khareedne mein, unko le jaane mein bahut madadgaar saabit hue hain. So a team brainstormed hundreds of ideas leading to an innovative concept like safer, more convenient and more user-friendly shopping cart. Toh aaj ke time pe aaj jo shopping cart dekhte hain aisa nahi woh 1 din mein aa gaya hai. Usmein dher saari charchayein hui hain. Dher saare solution hue nikle hain. Uske baad jo usmein optimal aur best solution tha usko uska kriyanvayan hote hue

aap apne real life mein vyavaharik jeevan mein dekhte hain. Prototype jab ek baar aap possible solution nikal liya toh aapko kuch concrete, kuch tangible banane ki zaroorat hai. Jisko aap chhu sakte hain, dekh sakte hain, khel sakte hain. Toh, uske liye aapko kuch namoone banane ki zaroorat hoti hai. Toh uske liye aap alag-alag tarike ke prototypes bana sakte hain, namoone bana sakte hain. Aur yeh namoone bhi kai tarike ke hote hain. Simple, bahut hi low version ka bana sakte hain. Jise aap low fidelity bolte hain. Yahan pe fidelity ka arth kitna, kitna vastavik hai jo aapne namoona banaya hai. Actual product ya seva jab aap kal ko banayenge toh is tarah se dekh sakte hain low fidelity jo ki bahut hi crude, bahut hi simple namoona hota hai. Aap sketch ke madhyam se bana sakte hain. Wireframes ke madhyam se bana sakte hain. Even mockup kar sakte hain. Mid-fidelity jo ki thoda sa structured hota hai. Thoda sa grayscale aur interactive hota hai. Kuch had tak usmein paraspar kriya kar sakte hain. But kaafi features aur functionality usmein missing hoti hai. High fidelity jo ki ek thoda-thoda detail hota hai aur thoda interactive prototype hota hai. Jahan pe aap samvaad sthapit kar sakte hain. Jo utpaad ya seva hai uske saath interaction paraspar kriya ke madhyam se aap usmein aur bhi cheezein dekh sakte hain. Toh alag-alag tarike ke prototype tool hain jismein Figma, Adobe XD, Sketch, cardboard, paper aur yeh saari cheezein. Again jab hum prototype ke upar detail mein agle kuch saptah mein charcha karenge toh hum iske baare mein baat karenge. Toh yahan pe hamara mukhya uddeshya yahi hai. Kitna jaldi se jaldi hum prototype, namoona bana sakte hain. Explore solutions, get feedback, check its feasibility and so on. Toh us tarike se Apple ne dheron prototype aise banaye. Uske baad uske baad unhone iPhone ko ek tarah se market mein laaya aur unhone basically test everything from alag-alag jo uske sizes hone chahiye, button hone chahiye, woh button kahan pe hone chahiye, color scheme kya hone chahiye? iPhone ka size kya hona chahiye? Aur alag-alag uske jo bhi pehlu hain woh karke phir usko unhone aage market mein laaya jisse ki user ka anubhav jo tha, upbhokta ka jo anubhav tha bahut hi achhe se, bahut hi zyada se zyada kiya ja sake aur yahi vajah hai ki jab bhi iPhone koi launch hota hai toh log paaglon ki tarah dukaan par toot padte hain. Lambi-lambi linon pe lag jaate hain. Ek-ek din pehle se lag jaate hain. Jisse ki woh pehle din hi use khareedna chahte hain. Aur jaisa ki humne pehle bataya jo bhi namoone batayein aapne, woh kitna maapdand, un maapdandon par khara utarta hai jaisa ki aapke upyogkarta ki zarooratein hain, toh aapko mulyankan karne ki zaroorat hai, toh test karne ki zaroorat hai, toh iske liye validate and refine prototype with real users, toh jaisa ki humne bataya namoona aapne banaya, apni soch samajh ke hisaab se banaya, thode bahut discussion ke hisaab se banaya, kuch users ko dhyan mein rakh ke banaya, but humne ko usko aage aise banana hai ki user apne saare cheezon ko bade achhe se kar sake. Apne kaarya ko poora kar sake. Toh usmein baar-baar ho sakta hai aapko refine karne ki zaroorat pade. Jo bhi aapko feedback, jo bhi issues aapko gyaat hote hain is madhyam se. Toh alag-alag iske methods hain. Usability testing hum kar sakte hain. Upyogita ka mulyankan kar sakte hain. A/B testing kar sakte hain. Jahan par humne pehle bhi bataya tha upyogkarta ko do option diye jayenge aur unse poocha jayega ki dono mein se aapne kaun sa zyada pasand kiya aur ChatGPT ke madhyam se humne example yeh discuss kiya tha pichle vyakhyan mein, user feedback session kar sakte hain. Aur qualitative aur quantitative dono tarike ke data collect karke aur aap dekh sakte hain ki zyada tar jo aapko

upyogkarta hain unko kis tarah ki samasya ho rahi hai. Kya woh jo aap soch rahe hain uske hisaab se kaam kar rahe hain. Jaise yahan pe aap dekh sakte hain ki yahan pe aapne koi ek message diya for example "Sale! Buy this product for 50% off". Toh kya zyada tar log us pe jaa rahe hain? Us pe click kar rahe hain? Isi tarike se aapne alag-alag buttons press kiye. Yahan par mention kiye aur aap chahte hain ki jo aapka upyogkarta hai in buttons ko click kare. Toh ek tarah se yahan pe heatmap ke through aap dekh sakte hain ki zyada tar user kahan pe click kar rahe hain. Kahan pe apne mouse ko hover kar rahe hain aur is tarike se aap ek tarah se heatmap bana sakte hain aur dekh sakte hain ki kya upyogkarta aapke anusaar kaam kar raha hai ki nahi. Aur agar nahi kar raha hai toh phir aapko in cheezon ko change karne ki zaroorat hai. Inke color ko, inke location ko, inke font ko, jo bhi cheezein ho sakti hain upyogkartaon se charcha ke baad usko aapko badalne ki zaroorat hai. So Google design sprint process includes very rapid testing and iteration of a new product idea in just five days. Toh, ek tarah se paanch din ke andar unko very quick prototype bana ke ek idea mil jaata hai ki yeh kaam karega, nahi karega. Kyunki aap jitna lamba samay lenge, jitna zyada logon ko lagayenge, jitna der karenge, aap ek tarah se ho sakta hai ki galat direction mein jaa rahe ho aur bahut door jaa rahe ho. Ek samay aisa ho sakta hai ki shayad aap itne door chale gaye ki wapas aana mushkil ho. Aur uske baad aap finally implementation stage hota hai jismein hum jab humne apne upyogkarta se discussion ke baad, punravritti ke baad prototype ko ek tarah se aisa bana diya jo ki ab keh sakte hain ki upyogkarta ke anuroop hai. Unki aashaon ke anuroop hai. Unki zarooraton ke anuroop hai. Toh aap ek aisa solution materialize kar sakte hain. And touches the life of your end-user. Toh ek tarah se yeh final critical step hai design thinking mein that often gets overlooked. Toh jaisa Don Norman ne bola tha, "We need more design doing". So design thinking is not just about ideation, it requires action. Toh again us tarah se dekhein toh isko baad mein design process se kaafi relation hum kar sakte hain. Implementation is where creativity is tested and ideas become reality. Toh is tarike se aap dekh sakte hain ki alag-alag logon ne implementation stage ke baare mein aage bataya hai. Toh jaisa ki humne pehle hi bataya ki yeh kaafi ismein punravritti hoti rehti hai. Aisa nahi ki aapne ek baar start kiya toh khatam kar doge ek baar mein. Aapko punravritti alag-alag stages mein, chahe woh understanding mein bhi aapko kai baar punravritt karne ki zaroorat padegi. Exploration mein bhi punravritt karne ki zaroorat padegi. Kabhi-kabhi ho sakta hai ki exploration mein hi aap aage-peeche jaayein ya ho sakta hai ki aapko punah wapas shuruwat se phir se saari cheezein shuru karni pade jo based on aapki learning hai abhi tak. Same usi tarike se jab aapke paas materialize stage mein jaate hain toh aapko testing ke dauran phir se ho sakta hai prototype banana pade. Phir se ho sakta hai implement karna pade aur wapas punah shuruwat se aake apne learning ke hisaab se usko poora karna pade. Toh is tarah se aap dekh sakte hain yeh ek linear process nahi hai. Yeh ek arekhiya process hai jahan pe alag-alag stages ko phir se punravritti ki jaati hai. Aur yahan pe mulyankan ke madhyam se jo problem hai usko bhi phir se define kiya jaata hai. Redefine kiya jaata hai. Continuous improvement through the user feedback. Yahan pe jaise-jaise aapke upyogkartaon ke feedback aapko milte rehte hain. Aap apne solutions ko aur bhi improve karte jaate hain. Toh ek tarah se aap dekh rahe hain keep refining the design until the user needs are fully met. Jab tak poori tarike se aapke upyogkarta ki zarooratein aur aashayein

poori nahi ho jaati hain. At least kuch had tak jitna aap minimum aap expect kar rahe hain tab tak aapko refine karna padega. Aapko punravritti karni padegi. Jaise yahan pe dekh sakte hain Netflix regularly iterates its recommendation algorithms and interfaces based on the user feedback, contesting to improve user engagement. ChatGPT ka example bhi humne jo discuss kiya tha ki jaise aajkal ChatGPT aapko aapke prompt ke, prompt ke liye do ek tarah se option deta hai aur aap usmein choose karte hain kaun sa prefer karte hain. Ek level tak karne ke baad woh usko band kar dega aur dekhega ki zyada tar jo upyogkarta hai woh option one ko select kar raha hai. Toh phir woh final jo implementation karega woh option one ke saath karega. Toh iska fayda kya hai? Toh encourage innovation karta hai. Risk ko kam karta hai. Jisse ki aapko poora complete karne ke baad wapas na aana pade. Beech mein shuruwat mein hi aap early feedback ke madhyam se wapas aaye. Human-kendrit hota hai. Foster collaboration hota hai. Kyunki yahan pe aap alag-alag perspective ke saath, drishtikon ke saath ek holistic solution ka nirman karte hain. Toh ek tarah se keh sakte hain ki if you think good design is expensive, you should look at the cost of bad design. Toh ho sakta hai aur aisa hota hai ki achhi design banane ke liye shuruwat mein aapko kuch kharch karna padta hai, zyada kharch karna pad sakta hai but long term mein woh aapke liye bahut hi zyada faydemand aur kifayati hota hai, rather than aap dekh sakte hain jaldibaazi mein aapne kuch cheezein bana di, long term mein woh aap usko bas leke aage chal rahe hain, usko chhod bhi nahi sakte aur is tarah se aap uska zyada nuksaan hota hai toh case study mein design thinking alag-alag jo work mein use hote hain. Toh Stanford d.school's approach to reimagining patient's experience. Toh aap ek tarah se dekh sakte hain ki kaise patient ke experience ke hisaab se yahan pe problem ko define kiya, problem ko bataya gaya hai. Improving the experience of pediatric patient in hospital. Toh uske liye aapne pehle empathize kiya. Aapne interview kiya patient ke saath, parent ke saath, hospital staff ke saath. Phir usko ek tarah se usko paribhashit kiya ki yeh jo problem hai humein anxiety ko kam karna hai children during the hospital visit aur uske baad hum usmein vichaar karte hain alag-alag ideas ke saath aur possible solution ke baare mein sochte hain aur prototype ke dauran hum ek tarah se namoona banate hain jo ki friendly ho, waiting room mein ho aur finally uska hum mulyankan karte hain. Jo bhi feedback mila uske hisaab se usko further iterate karke banate hain. Aur finally ek tarah se outcome jo hamara aata hai, jo nishkarsh aata hai, samadhaan aata hai, woh kaafi engaging aur less stressful environment hota hai young patient ke liye. Toh usi tarike se aap dekh sakte hain visually impaired person ke liye hum kaise problem, empathy, define, idea, prototype, test aur outcome pe kar sakte hain. Toh yeh main aapke upar chhodta hoon. Aap kaise isko aur imagine kar sakte hain, visualize kar sakte hain aur iske baare mein aur information le sakte hain. Toh aur bhi dher saare aise solutions aap kar sakte hain. Toh is kaarya ke liye main aapko ghar ke liye kaarya de raha hoon. Aap dekh sakte hain ki imagine a passenger's experience for cab booking. So cab booking mein kis tarah ki samasyaon ka aapko saamna karna padta hai. Kis tarah ki pareshaniyon ka saamna karna padta hai. Agar aapko iska solution banana hota toh kaise aap in alag-alag steps ke madhyam se, stages ke madhyam se aap yahan pe in cheezon ko batayenge aur ek solution batayenge ki kaise aap passenger ke experience ko aur achha kar sakte hain. Toh ismein kai challenges bhi aate hain. Jaise alag-alag

stakeholder ko saath mein laana aur unko in agreement ke, unka agreement lena toh thoda sa aur unke goal, sabhi ke golon ke hisaab se align karna bada mushkil hota hai. Balancing creativity with practical constraints. Toh aapke paas bahut dher saare navachar vichaar ho sakte hain. Creative ekdam thinking ho sakti hai. But shayad usko laagu karna bada mushkil ho sakta hai alag-alag constraint ki wajah se. Similarly aap managing iteration cycle with tight deadline, har koi chahta hai, har company chahta hai aap usko jaldi se jaldi solution, samadhaan nikal ke dein toh usmein aap kai baar aisa nahi kar sakte ki baar-baar iteration karta rahe, usi loop mein aap ghoomte rahein, ghoomte rahein aur aapka jo company hai, aapka wait karta rahe, karta rahe, toh ek tarah se woh bhi ek tarah se constraint hai, aapke paas samay kam se kam hota hai aur jaldi se jaldi aapko achha se achha uttar, samadhaan nikalna padta hai. Ensuring diverse representation for inclusive solution jaisa ki humne pehle bhi discuss kiya tha kaise hum ek dher, aneko logon ko, dher se zyada se zyada logon ko apna yeh solution bana sakte hain, uske liye diverse banane ke liye yeh bhi ek bada mushkil sawaal hai. Kaise aap har tarah ke logon ko include kar paayein, at least designing aur development phase mein. Toh yeh aap example dekh sakte hain. Toh in summary, design thinking jo hai ek tarah se design thinking is a flexible user-centered approach jo ki mukhyatah empathy, creativity aur iteration pe aadharit hai. Aur iska jo moolbhoot cheezein hain woh complex aur ambiguous problem ko solve karna hai. Toh ek tarah se hum take away yahan par yahi hai ki hum apne user ko dhyan mein rakhte hue koi cheezein banayein aur jo bhi failure ho raha hai use as a learning opportunity lein aur usmein punravritti ke madhyam se usko fix karne ki koshish karein aur isko tab tak punravritti karte rahein jab tak jo aapke upyogkartaon ki zarooratein hain poori tarah meet nahi ho jaati. The only way to learn is learn faster than anyone else. Chaliye toh design thinking ke baad hum design process ke baare mein baat karte hain. Jaisa ki humne pehle discuss kiya design thinking ek tarah se mindset hai aur design process ek tarah se uska execution hai. Toh execution kaise ho sakta hai? Toh design process is a series of structured steps followed by the designer to identify the problem, generate ideas, creative solution and evaluate results. Toh, ek tarah se yeh designer ko batata hai kaise aap jo aapke jo aapke upyogkarta hain aur unki zarooratein hain, unki samasyayein hain. Kaise unko samajh sakte hain, unka samadhaan nikal sakte hain. Yeh bhi creativity aur more structured tarike se iteration ke madhyam se isko karta hai. Toh key stages ismein ek tarah se dekh sakte hain. Kaafi similar jaisa design thinking mein tha. Research, ideation, prototype, testing and implementation. Toh iske dher saare aise design process hain. Toh hum mukhyatah Double Diamond design process ke baare mein baat karenge. Toh yahan par aap dekh sakte hain Double design process mein, Double Diamond design process mein, ek tarah se mukhyatah do stages hain. Jo pehla stage hai use hum bolte hain problem space. Toh problem space mein aap dekh sakte hain hum samasya kshetra keh sakte hain. Jo doosra stage hota hai woh mukhyatah keh sakte hain solution space. Samasya ke baad samadhaan ka jo kshetra hai. Ab samasya kshetra mein hum kya kar sakte hain? Samasya kshetra mein toh pehle toh humein khojna padega na ki samasya kya hai? Toh that is called discover. Toh discover stage mein hum kya karte hain? Hum saari, saari jitni bhi possible samasya ho sakti hain usko dhoondne ki koshish karte hain. Aur yahan par hum kuch limit nahi karte hain. Hum bas jitna possible aap dhoondo, pata karo

kya-kya samasya hai. Aur is wajah se aap dekh sakte hain, it's more divergent ki aap socho jitne possible ho sake, sabko socho, discover karo, khojo aur ek baar jab saari samasyayein ek tarah se samaan aa gayi, tab usmein se sabko toh aap kar nahi sakte. Toh aapko jo mukhya samasyayein lag rahi hain, aap us pe converge karo jo main hai. Toh define the area of focus, area to focus upon. Unmein se jo aapko mukhya samasyayein lag rahi hain. Ab un pe focus karo aur usko achhe se bade clear tarike se, bahut saaf-suthre tarike se usko define karo. Usko paribhashit karo. Toh ek tarah se problem space mein pehle hum samasyaon ko khojte hain. Phir unmein se mukhya samasyaon ka paribhasha dete hain. Usko achhe se batate hain. Toh jab aapke paas samasyaon ka paribhasha nikal gaya, toh ab yahan pe design brief ho gaya. Toh design brief ke baad ek tarah se aap dekh rahe hain. Problem definition ho gaya. Design brief mein ab dekh rahe hain ki hum pehle samasya ka samadhaan nikalne mein hum mukhyatah do cheezein karenge. Pehle potential jo ek se zyada, ab yahan par bhi ek tarah se divergent phase hai. Matlab kisi bhi samasya ke ek se zyada samadhaan ho sakte hain. Toh yahan pe aap alag-alag brainstorming ke through, alag-alag madhyam se, jaisa humne pichle discuss kiya tha ideation aur ideation aur alag stage mein, toh aap alag-alag potential solution ko develop kariye, banaiye. Toh usmein aap dekh sakte hain ki yahan par alag-alag potential solution aap nikalte hain aur unmein se jo best solution hota hai, toh deliver that solution, solution that works, kyunki inmein se aap 10 possible ideas nikal sakte hain but jaisa ki humne bataya ki alag-alag constraint ki wajah se, alag-alag kaaronon ki wajah se, ho sakta hai ki saari cheezein work na karein. Toh aapko kya kar sakte hain? Aap unmein se un solutions ko le sakte hain jo ki aapke zarooraton ke hisaab se kaam kar rahi hai aur usko aap deliver kar dete hain. Us tarah se aap yahan pe solutions mein aa jaate hain. Toh yahan pe jo mukhya uddeshya hai balance divergent exploring hai aur doosra hai convergent hai jo ki focusing on thinking hai. Toh agar iske beech mein aap taalmel banaake ek achha solution nikal lenge toh yeh bahut hi shaandaar aapne ek structured tarike se apna solution nikala hai. Toh yeh basically UK Design Council ne banaya tha aur aaj ke time pe yeh kaafi use hota hai aur isse kuch variant hai jo ki kaafi use hote hain alag-alag companyon ke. Toh chaliye isko thoda sa aur detail mein dekhte hain. Toh discover ka jo main purpose hai research and understand the problem. Jo samasyayein hain aapke upyogkarta ki usko achhe se samajhna. Toh uske liye jaise humne bataya user interview kar sakte hain. Market analysis kar sakte hain. Alag-alag company ko contact de sakte hain ki aap pata kariye ki kya-kya samasya ho rahi hai. Competitor research kar sakte hain. Aapke aisa toh hai nahi ki aap koi samasya ka samadhaan nikal rahe hain. Toh aisa pehle hi ho. Dher saari solution aise hain, unmein kya samasya hai, woh bhi aapko samasya hai ya aap unmein kya jaise e-commerce ke liye already Amazon tha toh Flipkart ne kyun banaya, Snapdeal ne kyun banaya, usi tarike se Uber pehle se tha toh Ola ne kyun banaya, Blue Smart ne kyun banaya, toh woh cheezein ek tarah se aapko madad karti hai competitor analysis ke madhyam se aur sarvekshan ke madhyam se aap alag-alag cheezein kar sakte hain. Toh iska mukhya uddeshya yeh hai ki aap jo upyogkarta hain, unki insights ko jaane aur unki key challenges jo unko samasyayein ho rahi hai unko jaane. Uske baad aap define stage mein jaise aate hain toh yahan pe narrow down the focus on clear and concise problem statement. Toh aap jo bhi divergent stage ke paas convergent stage mein aate hain toh narrow

down to just one problem. Yahan pe ek se zyada ho sakte hain. But jo bhi aapko mukhya samasya lag rahi hai, aap wahan pe focus kariye. Usko achhe se define kariye. Alag-alag tarike hote hain. Affinity mapping, problem framing, create user persona jo ki hum aage alag saptah mein discuss karenge. Toh iska jo outcome niklega woh hoga well-defined problem and design brief. Uske baad ek cheez aap dekh sakte hain, pehle discover design phase mein. Jaise humne bataya ki user research karna hai. Market research karna hai, brainstorming karna hai, contextual inquiry karna hai. Toh, yeh saari cheezein yahan divergence discover stage mein karenge. Aur defining ke liye aap alag-alag cheezein use kar sakte hain. Toh yahan pe synthesis of research karenge, user persona banayenge, problem definition banayenge, point of view banayenge and problem framing karenge. Jo doosra stage hai jismein humne bataya ki hum samasya ke baad samadhaan kshetra mein kaam karenge. Toh us case mein pehla jo divergent stage hai, consider every potential solution. Toh wahan par jitne bhi possible solution hai, sabke baare mein aap sochiye. Alag-alag jo idea generate kariye, nikaliye. Uske liye aap brainstorming, sketching, prototyping, usability testing, yeh saari cheezein kar sakte hain. Jisse ki aapko ek se zyada possible solution nikle. Toh deliver stage mein aap unmein se find the perfect solution, jo bhi aapka best solution given the constraint hai, usko aap choose karenge. Toh yahan pe refine, test aur finalize the solution karenge. High fidelity prototype banayenge. User testing karenge. Final adjustment karenge. And jo iska outcome aayega woh ek polished and user-approved product ready for the launch hoga jo ki aap aage kar sakte hain. Aur jaisa ki maine bataya ki divergence mein, develop mein hum basically rapid sketching kar sakte hain. Low-fidelity wireframe bana sakte hain. Proper prototype bana sakte hain. Aur deliver stage mein aap refine sketching kar sakte hain. High-fidelity prototype bana sakte hain aur interactive prototype bana sakte hain. Toh framework in interaction design toh five dimensions of interaction design hai 1D to 5D, toh pehla word hai, visual hai, physical object aur space hai, time hai aur behavior hai, toh usability heuristics by Jakob Nielsen jo ki bahut hi gyaat, bahut hi popular researcher hain. Toh unhone bola hai visibility of system status, match between system and real world and user control and freedom hona chahiye. Aur agar hum double diamond aur interaction design ki baat karein toh both involve iterative process that encourage feedback and refinement, emphasis on user-centered design and aim to solve real-world problem aur dono mein antar jo hai, ek tarah se keh sakte hain Double Diamond is a high-level design process and interaction design framework focus more on specific details of user interaction and usability, aur agar hum real world ki baat karein toh Spotify, Airbnb in logon ne design process ko follow karke apne jo bhi utpaad hai, sevayein hain, usko aur bhi achha banaya aur in companies ko bahut aage aur bahut badi company banne mein ek achha khasa yogdaan diya. Toh jaise aap dekh sakte hain Spotify logon ne Double Diamond, Airbnb ne Double Diamond process ko follow karte hue jo host hai jo traveler hain dono ki zarooraton ko samajhne ki koshish ki aur employed interaction design framework for booking interactions and clear communication between the host and the guest. Aur uske baad aap dekh sakte hain. Toh conclusion iska design process ka yeh hai. Design is not just what it looks and feels like, design is how it works. Toh ismein take away aap bol sakte hain ki kisi bhi successful design process ke liye whether go through Double Diamond or interaction

design framework or it is about creating solution. So hamara jo main hona chahiye, yeh functional toh hona hi chahiye but saath-saath user-centric hona chahiye. Toh ek tarah se aap main difference dekh sakte hain design thinking aur design process mein. Design process kaafi structured sequence of steps hai. Design thinking thoda sa mindset hai and problem solving hai apne user ko janne ke baad. Toh chaliye ek example ke madhyam se dekhte hain. Toh design thinking mein it involves user-centered mindset that begins with understanding the problem. Jaise Airbnb ke case mein humne bataya tha ki pehle design thinking ke madhyam se aap pehle apne user ko, host ko, unki samasyaon ko, unki zarooraton ko samajh sakte hain aur design process aur interaction design ke madhyam se aap finally usko kriyanvit kar sakte hain. Toh yeh humne bataya kriyanvayan step aur design thinking ke beech mein jo main difference hai, aap dekh sakte hain jo ki humne pehle bhi bataya tha. Toh hum isko dobara nahi bhoolte hain. Aur agar hum action mein baat karein, ek example ke madhyam se, ek case study ke madhyam se, suppose aapko ek mobile banking app banana hai, toh aapko kya karna padega? Design thinking mein aapko kya karna padega, design process mein? Toh aap dekh sakte hain design thinking ke samay woh emphasize, empathize karega, interviews lega jisse ki banking jo app hai, current apps hain, current samasyayein hain, unko abhi kaise use kar raha hai, uske baad paribhashit karega samasyayein jaise is case mein ek usko simple aur secure tarika chahiye apne bank mein balance check karne ke liye, paise ko transfer karne ke liye, alag-alag jo uski utilities hai uske bill ko pay karne ke liye, jaise bijli ka bill, paani ka bill, mobile ka bill. Uske baad alag-alag aap brainstorming ke madhyam se solution nikalenge. Kaise check kar sakta hai? Kya kar sakta hai? Jaise voice assistant ho sakta hai. Fingerprint ke saath login ho sakta hai. Usko secure banane ke liye one-click balance check ho sakta hai. Ki turant aap jaldi se jaldi pata karna chahte hain. Uske baad aap prototype bana sakte hain. Create low-fidelity wireframe aur clickable prototypes aur usko finally uska mulyankan kar sakte hain ki kaise woh sahi kaam kar raha hai. Toh, yahan pe mukhya ek tarah se jo aap cheezein dekh sakte hain. This is human-centered exploration that shapes meaningful interaction. Aur usi tarike se design process mein corresponding user research hota hai jismein survey, interview karte hain. Persona banate hain. Jaise hum batate hain ki jaise Raj jo ki 60 year ke hain. Mobile balance, mobile banking ek hafte mein ek baar check karte hain. Usi tarike se ek Vishal ek college student hai jo ki class keh sakte hain ki B.Tech second year ka hai aur woh itni baar apne mobile app ko use karta hai. Daily khane pe canteen mein jaata hai toh use karta hai. Again, information architecture kaise aap navigation, menus, task flow ko define karenge. Kaise aap wireframe banayenge prototype ke liye, yeh dekhenge. Phir develop prototype mockup, Figma ke through kar sakte hain. Phir finally usability testing kar sakte hain, A/B testing aur behavioral testing ke liye. Toh ek tarah se yeh structured execution hai jo ki humne pehle more mindset ke madhyam se dekha tha. Toh dekh sakte hain. Toh yeh jo combined impact hai dono ka interaction design ke upar. Ab jo final app banega woh easy to navigate hoga. Woh support karega surakshit aur saahaj interaction ko, paraspar kriya ko aur work across different devices and user abilities, alag-alag tarike ke jo upyogkarta hain. Chahe woh Raj ho jo ki 60 year ke old person hai ya Vishal ho jo ki college going B.Tech second year ke chhaatra hain. It offers a satisfying experience and thanks to the iterative feedback jo ki baar-baar

punravritti ke baad in cheezon ko bade achhe se handle kiya gaya hai. Toh is vyakhyan ko khatam karne ke pehle main aapko ghar ke liye kaarya dena chahta hoon. Main chahta hoon ki design thinking aur design process ke liye jo is tarah ke following apps hain. Aap in app ke liye usi tarike se kaise design thinking mein aap kya kar sakte hain? Design process mein kya kar sakte hain? Aur finally yeh app banane ke liye kaise aap kar sakte hain? Jaisa ki humne pehle example ke madhyam se bataya tha. Toh designing a digital wallet for users. Kaise aap redesigning hospital appointment system bana sakte hain? Kaise aap smart learning app for jo nahi dekh sakte ya kam dekh sakte hain, unke liye bana sakte hain. Kaise aap hyperlocal grocery delivery app for senior citizen bana sakte hain. Kaise aap public transport ko ticketing system bana sakte hain. Jisse ki bade aasani se aap ticket khareed sakein. Ek jagah se doosri jagah jaa sakein. Cancel kar sakein. Date change kar sakein. Reschedule kar sakein. Yeh saari cheezein kar sakein. Mental health support ke liye aap bata sakte hain. Aajkal colleges mein itne dher saare kaam diye jaate hain aur dher saare stress hote hain jo ki bachhe usse kaise ubhar sake, us pe hum kuch kar sakein. Income tax filing hum behtar tarike se bade achhe tarike se kar sakein. Sugamta ke saath kar sakein. Khaastaur pe woh jo pehli baar kar rahe hain. Toh kaise hum kar sakte hain? Designing a smartphone control app for the elderly. Ghar mein aajkal itne naye devices, IoT based devices aa rahe hain. Toh kaise jo old age ke log hain woh bade achhe se kar sakte hain? Creating e-governance service app jo gaanv, grameen kshetron mein log reh rahe hain, unke liye hum achhe se kaise bana sakte hain. Redesigning return exchange process for e-commerce. Jaise aaj ke time pe hum alag-alag tarike ke e-commerce app use kar rahe hain. Kaise usko hum use karke bana sakte hain. Toh yeh kuch udaharan hai. Aap apne mann se aur bhi example le sakte hain aur us pe kaarya kar sakte hain. Toh iske saath main yeh vyakhyan abhi yahan pe rokta hoon aur hum dobara milenge. Dhanyavaad. [Music]