

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

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**Personas, Mental model**

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Namaste everyone. Toh aaj hum kuch important topics padhne waale hain HCI ke jaise ki personas, empathy mapping aur conceptual models. Uh mere saath mere dost bhi hain jo aapko in topic se related jo bhi doubts aayenge, questions honge woh aapke liye solve karenge and jo important questions hain sabse pehle woh discuss karenge. Toh aaiye milte hain. Mera naam Vibhuti hai aur main Devaj Rathore main Syed. Toh pehla topic jisse hum aaj start karne waale hain woh hai personas. Kyun yeh hamare user centered design mein important hota hai banana? Aur sabse pehla step kyun hona chahiye? Ya har ek designer, non-programmer ya koi bhi insaan jisko apna koi idea present karna hai, banana hai, aage lekar jaana hai, development stage, production stage mein. Sabse pehle personas banane kyun important hote hain? Iske baare mein aaj hum padhenge. Ek achha product banane ke liye designers personas ka istemal karte hain. Personas hamare product ke target users ka idealized version hota hai jismein ki demographics hote hain. Jaise unka age, naam, occupation and unka context. Woh kaise background se hain. Iske madhyam se designers yeh samajhte hain ki unke users ki real needs kya hain? And uske basis pe ek solution banate hain jo in users ke real needs meet karenin. Iske madhyam se designers yeh bhi samajhte hain ki in users ke pain points and goals kya hain jisse unka solution constantly viable rahe users ke liye. Ek persona banane mein several steps hote hain jinmein teen key steps hote hain jo hote hain identify unke users ko identify karna, unke baare mein data collect karna and is data mein patterns dhoondna. Ek secondary step bhi hota hai jismein hum yeh ensure karte hain ki hamare personas mein koi bhi stereotypes and biases jo pakshpaat hote hain woh bilkul bhi na ho. Ek persona banane ke liye hamare paas jo key instruments hote hain, woh hote hain surveys and interviews and other research methods jinke madhyam se hum users ke baare mein data create karte hain. Usmein patterns dhoondte hain. And yeh ensure karte hain ki inmein koi bhi stereotypes ya biases na rahe. And ab main questions ki taraf badhunga. Vibhuti ya Syed aapke paas kuch questions hain. Main chahungi ki aap agar is personas banane ke tarike ko ya us process ko koi example ke saath samjha payenge toh shayad woh achhe se samajh aaye. Well jaise agar hum sochein ki ek food delivery app hai hamare paas toh humein pehle sabse pehle unke users ko identify karna padega. Is example mein ek food delivery app ke example mein mere jo users honge woh honge mera ordering wala client jo restaurant se khana order kar raha hai. Hamara restaurant jo us khane ko provide kar raha hai aur hamara delivery person jo us khane ko restaurant se client ke paas leke ja raha hai. Upar se humein yeh bhi identify karna

padega ki jo hamare users hain hamare teen user jo humne identify kare woh alag-alag backgrounds se hain. And jo possible backgrounds jo mere ko lagta hai jo possible backgrounds hain woh main saare encompass karoon. And jab main in backgrounds par research karta hoon jab mere ko realize hota hai ki mere personas mein koi kami hai ya koi bias ya stereotype aa gaya tab main is bias ya stereotype ko remove karoon and yeh ensure karoon ki mera jo persona system hai woh constantly valid rahe mere product ke saath. Theek hai? Aapne explain kiya ki personas ke baare mein main yeh janna chah raha hoon ki uske andar aap kisi bhi stakeholder ki ya aapne teen stakeholder identify kare toh un stakeholders ke andar aap un jo individuals hain aap jab interviews loge so aapke kya main points honge jo aap usmein include karna chahoge usmein jodna chahoge apne personas ke andar ki matlab mujhko yeh yeh cheezein toh chahiye hi apne customer ya apne stakeholders se so woh kya-kya cheezein aap note karna chahoge. Well sabse pehle toh mere paas kuch primary points hote hain jaise unke demographics jaise mention kiya jaise unka background unka occupation unka age ek ek aur cheez jo mere ko hamesha include karni hoti hai woh hai diversity. Mera jo persona hai woh kabhi bhi monotonous nahi hona chahiye. Usmein jo backgrounds hain woh sirf saare same background ke nahi hone chahiye. I have to ensure ki jo mere jo mera data collected hai usmein several types of log hain unmein old age, middle age, young age if possible for my target user group main woh unko include karoon. And also for occupation we can assume ki unka job kis type ka hai? Jaise abhi delivery person hai kya woh full time yeh cheez karta hai ya is he kya woh ek part time job mein is kaam mein kar rahe hain? Mere ko ek aur cheez poochni thi ki jaise ki humne agar persona bana liya apna teen-chaar personas humne starting of your design process bana liya toh kya wahi jo personas hai woh throughout mere design process relevant rahenge aur agar rahenge toh kaise? It is very unlikely. Aisa bahut hona mushkil hai ki jo mere personas hain woh constantly relevant rahein. Isliye jab bhi main apne design process mein design life cycle mein koi research karta hoon, koi interview leta hoon ya koi survey leta hoon tab mere ko apne personas ko update karna padta hai according to that research method. Jaise ki agar mere ko design life cycle mein yeh realize hua ki sirf males mere delivery person ki tarah act nahi karte hain. Female delivery persons bhi exist karti hain. Toh I have to ensure ki mere jo personas hain usmein main delivery female persons unke pain points and unke goals bhi encompass karoon. And with every research method I main apne personas ko update karta rahoon. And according to that apne product ko bhi update karta rahoon. Jisse mera product relevant rahe to real users ki needs. I think ek aur point jo mere ko lag raha hai important hoga. Agar hum koi bhi personas banate hain toh it isn't ki hum log diverse set of people lein. Jaise ki aap pehle bhi keh rahe the because phir humein dikhega ki alag-alag audience hai jo hamare product jo jinki needs poori kar sakta hai. Humein shayad dikh raha ho. Mere ko shayad dikhe agar hum ek hi team mein kaam kar rahe hain, ek hi idea pe kaam kar rahe hain. Meri taraf se dekhon toh shayad mujhe lagega itne group of people ko hi help karegi hamari service. But agar aapke yahan aapke nazariye se dekhon toh aapko aur audiences bhi dikh sakte hain alag age group ke ya alag occupation ke. Toh at the end of the day I think hamara jitne bhi personas ka agar data set hai, pehle toh relevant hona chahiye. Aise nahi cluttered rahe. But yeh bhi ho ki bada ho, diverse ho, alag-alag jagah se hum log dekhein aur

unke apne unke pain points jaane, unke motivations jaane. Yeh theek baat hai ki agar hum different ho sakta hai ki mere mere views alag honge, inke alag honge, aapke alag. So uske liye generally kiya jaata hai ki aap multiple collections aap different jo stakeholders hain sabse pehle unko identify kara and then throughout the process aap user feedback ke through aap usko yaani ki concise karne ki koshish karoge ki pehle jab for example jaise hi aapne koi product launch karne ki starting ki preparation hai toh first stages ke andar aap koshish karoge ki pehle aap bada group identify kara ki sab jo jisne jo identify kare sabko ek saath kar liya. Phir uske andar se dekhiye kya redundant redundancy toh nahi aa rahi hai. Matlab repeat toh nahi ho rahe hain ki for example aisa ho sakta hai ki aap ek side maine identify kiya ki 19 to humein identify karne hain 19 to 25 years age ke group. Aap bol rahe ho ki college person identify karne hain toh woh ek type se redundant information ho gayi hai ki toh is cheez ko hum remove kar sakte hain aur usko ek common category mein daal sakte hain ki hum usko matlab ya toh hum usko bol dein ki college group bol dein ya age ke according kar dein toh yahan pe hum ek redundancy remove kar sakte hain. And aise hi similarly hum aur cheezon mein bhi kar sakte hain ki aap bol rahe ho ki working professionals hain agar and then aap saath mein compare kar rahe ho kisi aur group ko jo ki usi se matlab wahi same pattern show kar raha hai ki ek working aapne identify kiya ki ek working group ko identify kiya jo ki for example Bangalore mein as a software job kar raha hai software engineer aapne wahi doosra group identify kiya jo ki Bangalore mein nahi kisi India ke kisi aur part mein work kar raha hai aur as a woh job nahi kar raha koi business kar raha hai apna. So aapne dekha but unke jo key points hain ya jo unki earning potentials hain and unke jo pain points hain ya unki jo demographic needs hain woh kind of similar si hain. Toh hum wahan pe unko remove kar sakte hain redundancy aur ek as a common ground leke aage badh. Ek aur mere ko jo example yaad aa raha hai matlab woh hum real life mein bhi dekh sakte hain. Jaise ki Google search pehle use karte the sab log. But I think Google ne apne personas ke through empathy mapping ke through realize kiya hoga ki aise bahut zyada audience hai jo jinko maybe bolna aata ho type na karna aata ho matlab English mein type na kar paayein bol paayein sirf likh na paayein toh unhone voice search jaise engines daaliye uske andar apne search ke andar taaki saare alag-alag logon ke problems cater ho aur sab use kar paayein usko toh unhone biases matlab pakshpaat bhi hata diye ki sirf ab jinko English aati hai woh hi nahi use karenge jinko bolna bhi aata hai woh bhi kar sakte hain. Phir Hinglish bhi add kar diya language Hindi plus English toh aisa nahi hai ki zaroori ki sirf Hindi aati ho tab use karo. Sirf English aati ho mixture waale bhi sab use kar sakte hain ab audience. Toh I think aise chhote-chhote updates bhi la-la ke unhone apne platform mein apne audience badhaye aur apne personas sabse pehle badhaye. Tabhi woh yeh saare features add on kar paaye, dekh paaye ki inki zaroorat bhi hai logon ko. Haan yes ki like jaise jab first identify kiya hoga Google ne initial stages mein toh yeh problem aayi hogi ki koi English samajh sakta hai koi Hindi agar like initial stages mein ki Google obviously US company hai toh woh unhone English search starting mein diya but jaise India mein aur saath by side ismein role aata hai technology ka ki jaise-jaise Hindi ke andar jo hamari jo language hai computer Hindi ko bhi achhe se process karne laga toh ek role yahan pe technology ka bhi aata hai ki unhone pehle persona mein identify kiya ki aisi bhi need hai ki

logon ko Hindi mein search karna hai. And then jab us level pe technology pahunch paayi toh unhone us sabse pehle usi personas ko jab Google ne starting mein create kiye honge apne time pe jab India mein ya aur alag countries mein Google expand kar raha tha toh unhein jo needs dikhi thi users ki toh unhone us technology ko solve karne ke liye work kiya. And sirf Hindi and English bhi nahi jab unhone baaki languages bhi encompass kari. Jaise Gujarati, Marathi toh aisa nahi hai ki ek baar unka language mein aur diversity thodi aa gayi toh woh ruk gaye. Toh unhein constantly English Hindi uske baad bhi koi unhone Gujarati, Marathi, Kannada waise language bhi include kari usmein. Haan wahi ki like agar ek point pe hamare personas create ho gaya hai toh agar user ko for example starting mein need hoti hai ki mujhe se Hindi mein search karne ka mile. Ab uske paas woh option aa gaya toh hamare paas matlab hamara jo expectation hai woh badh jaati hai. Toh agar koi wapas ab mujhse agar koi poochta hai toh ab yeh bhi demand hogi ki agar main for example agar bilkul native language aati hai jo Hindi bhi nahi matlab for example aapne Gujarati ka example diya toh woh chahega ki main Hindi mein bhi kar pa raha hoon toh mujhe Gujarati mein bhi chahiye. So yeh ek achha hai ki matlab persona expand kar raha hai expand ho rahe hain throughout the design throughout the process aur yeh continuous process hai chalta rahega tabhi hum yeh saare jo hum aaj methods padh rahe hain woh hum keh rahe hain user centered design hai kyunki yeh matlab user se hi nikal ke aayi hai yeh saari cheezein user ke pain point taaki hum dekh paayein samajh paayein unke emotions ko woh kahan se aa rahe hain aur kya cheez ki unhein actual mein need hai yeh sab dekhne ke liye pehle conceptual models aur yeh empathy maps aur personas ko samajhna zaroori ho jaata hai saare students ke liye. Agle question mera yeh rahega final hoga mere khayal se is topic ka. Aapko kya lagta hai ki ismein sabse badi matlab problem duvidha like kya aa sakti hai agar koi personas banane ka try karta hai aur phir usko overcome kaise karenge? Personas banate hue sabse badi challenge jo hamare paas aata hai, jo sabse badi duvidha hamare paas hoti hai, woh hai ki hamare stereotypes and biases anjaane mein hamare personas ke andar ghus jaate hain. And humein yeh ensure karna padta hai ki hum identify karen ki hamare yeh stereotypes and biases pakshpaat hain kya? And unko jaise maine pehle bataya tha constant research methods interview surveys ke saath hum persona jab hum iterate karenge tab hum yeh ensure karen ki yeh stereotypes and biases hamare persona se bahar nikal jaaye. Main ek cheez aur poochna chahunga yeh persona se humne discuss kar liya ki matlab ek starting mein jab design process hum kar rahe hain ek matlab initial product ke liye toh kitne matlab aap kaise ensure karoge ki jo aapne target group identify kiya hai woh correctly represent kar raha hai. Like yeh I think pooch chuke hain hum. Matlab is pe aap aur thoda bata paoge ki matlab target group ho gaya. Aap kaise karoge ki aapne sahi identify kiya hai? Well target groups jab hum identify karte hain pehle toh hum personas jab hamara design life cycle ke starting phases mein hota hai tab hum apna jo product ka target user se base hai woh identify karte hain. Jaise humein surveys lete hue interviews lete hue realize hota hai ki hamare jo target users hain woh jo humne pehle design life cycle mein soche the usse zyada hain tab hum extra personas add karte hain. Jisse hum saare diverse target users ko apne personas mein encompass kar paayein. Haan, jaisa aapne bola ki agar hum generally assume karte hain ki male riders honge. But agar aapko realize hota hai ki aapka interviews karte hue ki female riders bhi hoti

hain. Toh theek hai aapke point ki hum humein continuous feedback ke time pe humein naye users bhi humko mil sakte hain. Like initial humne kuch aur users ka set banaya tha. But on the go humko naye users bhi mil sakte hain. Isse pehle ki hum personas khatam karein. Mera aap dono se ek sawaal tha ki aapko kya lagta hai humein ek design life cycle mein kitne personas rakhne chahiye? Mere ko lagta hai personally ki aisa bhi nahi hona chahiye ki aapka poora design process clutter ho jaaye aur aap itne personas bhar do. Matlab theek hai. Agar aapne like bahut saare personas le liye hain. But aisa nahi hona chahiye ki sabke pain points repeat ho rahe hain ya beech mein koi bhi repetition aa rahi hai basically ki koi redundant koi useless persona bhi aapne daala hua hai. Aisa nahi hona chahiye. Haan. Halaanki aap jitne persona chaho aap daal sakte ho. But as long as aapne ek pain point guess kar liya hai toh us pain point se related aur personas rakhna apne jahan bhi aap collect kar rahe ho sab kuch woh mere ko lagta hai thoda kaam use nahi karega. Useful nahi rahega. What do you think? Wahi I think ek number toh hum nahi bol sakte ki itne number hai kyunki I think yeh bahut factors pe depend karta hai ki aapka initial hai ki aap kaun se stage mein ho apne design process ke aur aapka product jo hai woh matlab kitna kitna bada hai ya kitne logon ko woh affect karega. So is cheez pe bhi depend karega. Also time ke saath agar aapka idea bahut bada hai ya aap expand kare ja rahe ho kare ja rahe ho usko alag-alag features la rahe ho toh iska matlab hai aap aur personas bana hi rahege tabhi aap woh updates aapko dikh rahe hain ki aane chahiye aapke app mein ya aapke service mein toh iska matlab hai personas badh rahe hain throughout aapka design cycle design process toh haan hum number nahi de sakte isko but ascending order mein jayega. Okay right toh iske saath I think hamara ka part. Haan jaise main ismein add on karna chahunga isi point pe ki like jaise colleges waghera ke agar aap personas bana rahe ho like for example attendance system toh aapka I think ka jo persona hai woh number aap rakh sakte ho ki five to six ke beech mein ki kyunki aap chhota group ko identify kar rahe ho ki aapne students ko identify kar liya teachers ko identify kar liya and then jo tech team hai jo attendance management dekh rahi hai usko dekh liya but for example agar aap Google like kuch banana chah rahe ho jiske andar aapka user code bahut hi bada hone wala countries ko target karega. So wahan par aapko obviously jo hai woh increase karega. Like jaise aapne bola ki ascendingly woh increase hi karta hai. Ji aur upar se phir countries aa jayenge aur nationalities sabki apni-apni ho gayi aur matlab bahut saari cheezein hoti hain har cheez mein. Agar dekho toh aap kaise background mein reh rahe ho, kya schools mein jaate ho. Demographics jaise aapne bola yeh kisi bhi user ka bahut bada ho sakta hai. Aap dekhoge toh teen-chaar cheezein nahi aati mein bahut saari cheezein aa jaati hain. Toh sirf unko sambhalna sirf usmein bifurcate aur differences dekhna yeh kaafi bada task ho jaata hai. Toh uske alawa bhi phir aap age aur occupation laao. Toh occupation se bahut saare pain points nikalte hain kaafi saare users ke ki woh kaisi occupation kar rahe hain. Income kya hai unki? In cheezon se bhi nikalati hai. Unki needs ya expectations pata lagti hain. Toh bahut saare personas aa sakte hain isse. Ki even ek ek person ka bhi jo uske pain points hain woh I think continuously change hote rehte hain ki woh fix nahi rehte hain. Bilkul bilkul. Agar aapka ek pain point khatam hua like agar level levels dekhein toh. Toh agar aapki itni expectations poori ho rahi hai toh aapki nayi expectations bhi saath mein aati hain, arise hoti hain. Toh phir unko phir

poora karne ke liye aur services aati hain aur apps bante hain aur technology evolve hoti hai. Toh ab hum next topic pe jaate hain jo ki empathy mapping hai. Toh empathy mapping kaafi matlab easy topic hai samajhne ke liye. Ismein itna basic yahi hai ki agar aap design bana rahe ho, agar aap koi idea banana chah rahe ho, aap koi programmer ho, developer ho, kuch bhi ho aap. Theek hai? Aapko apne aapko pehle toh user ke pairon mein rakh kar dekhna hai aur uske perspective se sochna hai ki usko actual mein kis cheez ki zaroorat hai. Kya cheez woh bol raha hai, kya cheez woh nahi bol raha hai. Yeh sab cheezein dekhna zyada important ho jaata hai. Toh iske liye hum kya karte hain? Jab hum empathy mapping banate hain toh hum apne page ko chaar hisson mein baant denge. Chaar quadrants mein baant denge. Theek hai? Ek rahega say, think, do and then feel. Theek hai? Toh jab hum say ki baat karte hain say mein yeh aa jaata hai ki woh jo user hai woh apne interviews ya apne survey ya feedback mein in sab cheezon mein kya bol raha hai? Bas apne munh se kya bol raha hai jo hum sun pa rahe hain uski baat ko bas phir hum jab aate hain think pe. Think mein yahi rehta hai ki aapka user soch kya raha hai? Ho sakta hai woh bol kuch raha ho camera ke aage ya aapke aage jab aap koi survey le rahe ho research kar rahe ho kuch bhi data aap usse collect kar rahe ho woh bol kuch raha hoga but maybe woh soch kuch raha hai uske intentions kuch aur ho uske motivations kuch aur ho woh aapko through the lines read karna padta hai ki uske actual mein pain point hai kya aur kya woh chhupana chah raha hai. Theek hai? Doosri cheez rehti hai do. Do matlab ho gaya ki woh kar kya raha hai? Throughout the process agar aapne koi aapne koi prototype bana diya and aapne ek user set define kiya hai aur aapne unhein deploy kar diya ki aap log use kar sakte hain services and aap app use karke bataye ki kya like loopholes kya kami reh gayi ho ya kya hum improve kar sakte hain. Toh agar usne dekhna shuru kiya and woh koi features use karta hai koi nahi karta koi buttons use karta hai kuch buttons mein usko lag raha hai user ko ki glitch aa raha hai ya problem aa rahi hai kuch ya iske aesthetics achhe nahi hain. Yeh dikh achha nahi raha hai page aisa-aisa kuch bhi lag raha hai usko toh yeh saari cheezein woh aapke do mein aapko dikh jaayengi ki use aap jaise journey maps bhi hote hain user ke. Ab aap unke through bhi dekh sakte hain ki kaun sa feature hamari app ka hamari service ka woh user achhe se use kar raha hai and kaun si cheezein nahi use kar raha jo use itni redundant ho sakti hain ya humne shayad usko achhe se bana nahi rakha technology wise yeh sab cheezein. Uske baad fourth quadrant aa jaata hai feel ki throughout the process usko feel kya ho raha hai? Kya uski jo problem thi woh solve ho pa rahi hai? Woh us feel se pata chal jaata hai ki kya woh aapki service ko use karke disappointed hain. Woh aap read bhi kar sakte hain. Wahi ho gaya ki empathy mapping is jo main keh rahi hoon empathy mapping wahi hai ki empathize karna hai aapko apne user ke saath. Aapko apne aapko unki jagah pe rakh kar dekhna hai ki woh kya bol rahe hain, kya soch rahe hain, kya kar rahe hain aur kya mehsoos kar rahe hain. Toh empathy mapping chhote mein batayein toh yahi hota hai. Uske alawa kuch traditional process bhi hote hain. Design processes. Hum isliye kehte hain ki traditional design processes thode different hote hain hamare user centered design processes se jismein empathy mapping ya personas jaisi cheezein banani aati hain. Toh yeh hai agar aapko kuch sawaal ho toh aap pooch sakte hain. So is poore process ke andar toh like aap yeh kaise ensure karoge ki jo biases ya pakshpaat hain aap matlab apne kuch pakshpaati apne biases usmein empathy mapping

mein na daal do ki like kayi baar aisa sochte hain ki hum agar aisa hum jab kuch cheez develop kar rahe hain toh hum soch lete hain apne aapko as a client side rakh ke ki agar as a client mujhko problem aayi thi toh unko bhi aa sakti hai. Bilkul. Toh kya yeh aisa karna theek rahega? Keju apni aapko agar aap feel karein ki yeh mere ko aayi thi toh usko bhi aa sakti hai. Haan yeh ek pain point ho sakta hai but ismein end nahi honge. Aapke jo pain points hain aapko aur collect karne honge. Toh kya hoga? Agar hum sirf apni problem dekh rahe hain na ki humein yeh aayi thi toh isko bhi aayi hogi. Iska matlab hai hum ek do personas se zyada le hi nahi rahe hain kyunki humein zyada pain points hi nahi dikh rahe hain. Toh uske liye aapko pehle personas bhi apne number of personas badhane padenge design process mein. Phir next stage aayega. Haan phir aap agar aapke personas zyada hain na toh empathy mapping mein bhi aapke paas kaafi points kaafi pain points gain points aapke paas already aa jayenge ki kya problems log face kar rahe hain aur kya unhein zaroorat hai kis cheez ki toh yeh poora process aise saath-saath chalta hai ki pehla step aap theek kar rahe hain toh second step mein bhi aap theek kar sakte hain. Galtiyan hone ke bahut kam chances rahenge. Doosri cheez agar hum koi example dekhein ki kahan pe hum dekh paayein ki pakshpaat nahi hua ya hatane ki koshish kari gayi kisi idea mein kisi product mein toh ek achha example hai Google ka again. Toh Google ne dekha ki bahut log hain rural areas mein jo rehte hain gaon mein ya jahan pe network issues hote hain. Zyada network packages nahi hote. Towers nahi lage hue hain. Toh unke liye unhone socha ki hum kya kar sakte hain jisse hamari services unhein achhe se provide ho YouTube aur yeh saari jo bhi cheezein videos dekhni hai kisi ko yeh sab cheezein provide ho paaye unhein achhe se. Toh uske liye unhone apne log like apne jo employees hain unhein bheja teams mein baanta and unhone field research ke liye bheja ki actual mein aap jao rural areas mein dekho ki unke pain points kya hain aur unhein kya cheez ki zaroorat hai. Toh unhone yeh bhi dekha ki bahut zyada users Google se YouTube use karte hain. Toh unhone ek naya feature laya apne app mein ki hum laayenge YouTube Lite jiske through log offline download karke rakh sakte hain apni videos ko aur phir dekh sakte hain. Toh usse kya hua ki jo logon ke pain points the ki hum hamare paas network kam aata hai toh hum dekh nahi pa rahe videos ya humein jo bhi dekhna hai hum use nahi kar pa rahe dhang se services woh khatam ho gaye toh pakshpaat aise hata ki unhone na bahut diverse logon ko dekha ki unke pain points kya hain aur field research pe zyada focus kiya rather than online aapko koi data ya table ya statistics mile yeh nahi use kiya inhone actual mein jaa ke logon se baat kari unhein samajhne ki koshish kari ki unhein zaroorat kya hai actual. Aur yeh network ka issue kyunki actual mein bahut prevalent tha aise areas mein isliye woh phir YouTube Lite laane ka decide kiya unhone. So toh kya hum yeh bol sakte hain ki personas, empathy mapping and surveys yeh ek hi saath group hai. Yeh ek hi saath iteratively repeat hote rehta hai sir jo surveys hai and dono ko hi update karta hai personas ko bhi and empathy mapping ko bhi. Mere ko lagta hai aap jo keh rahe hain woh main agree karungi isse toh kyunki persona, empathy mapping ho gayi. Yeh saari cheezein aapko repeatedly update karni hi padengi kyunki overtime aapka aapka jo user hai woh bhi evolve kar raha hai. Uski needs bhi evolve kar rahi hain. Toh aapko apne idea ko uske saath evolve karana padega. Us cheez ki wajah se mujhe lagta hai yeh saara ka saara aapko aise nahi hai ki ek baar aapne persona bana diya toh aap chhod

sakte ho ya ek baar empathy mapping bana di toh chhod sakte ho. Throughout the process repeatedly aapko karna pad banana padega. Naye-naye updates laane padenge usmein. Mera ek prashn yeh hai ki aapne ek baar yeh empathy mapping bana di. Phir aap isko apni design team ke workflow mein integrate kaise karte ho? Achha toh design team ka jo workflow hai woh shuru hi empathy mapping se hoga. Matlab usse pehle personas aayenge but uske baad empathy mapping se hi shuru hoga. Toh aisa nahi hai ki humne kahin baad mein development ya production stage mein hum la rahe hain. Jab aapka idea shuru hi ho raha hai na jab aap brainstorming kar rahe ho. Aap soch rahe ho ki hum ismein yeh feature daal sakte hain, yeh daal sakte hain. Hum in logon ko cater karenge. Yeh target audience hai. Yeh investors ko target karna hai. Hum jab shuru kar rahe hain apna idea jab humne information architecture bana rahe hain hum apna tabhi humein apna empathy mapping bhi ready rakhna hai. Balki usse pehle se hi ready rakhna hai. Toh jaise-jaise aapke personas banne shuru hote hain, I think aapko tabhi apni empathy mapping bhi saath mein banani padegi kyunki woh udhar se derive hogi aur bhi bahut sources se derive hota hai empathy mapping. But iske saath jaise hi aapne surveys lene shuru kar diye aur audience se poochne lag gaye ki aapke pain points gain points kya hain? Yeh sab cheezein jaise shuru hoti hain waise hi aap apna empathy mapping ka process bhi shuru kar sakte hain. So matlab hum kind of bol sakte hain ki persona as an empathy go hand in hand matlab saath-saath hi challenge is type se. Haan bol sakte hain. Bilkul bilkul. Okay. Par aapne kuch sources mention kare jahan se main empathy mapping ke liye data create kar sakta hoon. Kya aap un sources ke baare mein aur bata sakte hain? Toh empathy mapping ke liye jaise aapka ho gaya user journey maps hote hain. Jaise personas toh humne discuss kar hi liye. Uske alawa bhi customer user journey maps jaise ki agar aapne testing ke liye apne prototype ko de diya hai kuch users ko a set of users ko toh woh kaise use kar rahe hain? Kya features use kar rahe hain? Kya buttons use kar rahe hain? Aur kya cheezein unko useful nahi lag rahi hain. Basically aap thode se logon ko kind of ek glimpse de rahe ho apne idea mein apne product ya service mein and phir unka jo bhi feedback rahega usko use karke aap us woh apni unse apni observations draw kar sakte ho. Toh user journey maps ek aur example ho gaya personas ke. So aapne traditional methods ke baare mein bataya tha. Toh empathy map jo empathy mapping hai usse kaise differ karti hai? Matlab kya benefit hai isko use karne ka? Toh traditional user jo traditional research methods hote hain woh saare ke saare bahut fact based hote hain ya phir statistic based honge. Theek hai? Toh jo aapke paas knowledge aapko internet pe ya books mein mil rahi hai us pe based hai aapka. Par kya hota hai jab hum user centered design ki baat kar rahe hain matlab ki hum user ko sabse pehli priority de rahe hain. Hum sabse upar unko rakh rahe hain. Hum dekhna chah rahe hain ki woh kaisa feel kar rahe hain aur unhein kin cheezon ki need hai. Agar woh bol nahi pa rahe hain tab bhi hum samajhne ka try karte hain ki kya zaroorat hai unko taaki hamara jo product hai ya service hai woh sabse zyada market mein hit kare logon ko achhe se. Toh yeh cheez rehti hai. Ab jo user centered design hai isiliye woh kehta hai ki thoda better rehta hai aapke traditional method se. Isiliye bhi alag ho jaata hai kyunki user centered mein hum empathy maps, conceptual models, mental models, information architecture yeh aisi cheezon ke baare mein padhte hain jo hum sirf kitabon mein ya hum tables mein ya statistics mein hum nahi dhoondh sakte hain. Woh uske liye

humein actual mein user ke level pe aake uske saath empathize karna padta hai. Samajhna padta hai uske problems ko. Tabhi hum aisa koi product ya service bana sakte hain jo actual mein society mein impact laaye and use ho paaye logon se. Toh haan aur waise bhi kuch examples bhi ho sakte hain. Like ek do example hai jismein empathy mapping ne improve kiya hai design bahut zyada kisi service app ka. Toh ek health tech company thi. Unhone ek diabetes management system banaya tha. Ek app banayi thi usse related. Toh kya hua? Dekha unhone ki jaise-jaise woh notifications aati thi na like us app ki users ke paas ki ab aapki dawai ka time ho gaya ya you need to walk itni der ke liye ya kuch aisa. Toh log thoda sa na taboo ki tarah dekhne lag gaye ki matlab notification aati thi kisi aur ke saamne toh unhein sharam aa jaati thi kyunki society mein aisa raha hai hamesha se ki diabetes hai tumhein toh tum thode weak ho ya healthy nahi ho ya matlab dawaiyan khaate hoge bahut zyada toh aise taboos rahe hain stereotypes rahe hain pakshpaat bahut rahe toh phir log use nahi karte the us app ko kam kar diya unhone use karna download karne ke baad bhi toh yeh cheez unhone jo bhi developers the, designers the. Unhone empathy mapping apni wapas se jab banayi, apne personas naye liye. Unke actual mein pain points dekhe ki achha inhein thodi sharam aati hogi ya anxiety hoti hogi doosron ke saamne app kholne mein woh. Jab unhone woh dekha toh unhone apna interface badla, apna logo badla, apna jo naam hai app ka woh sab badal diya aur jo notifications aane ke tarike the woh bhi badal diye. Jisse ki dekhne waale ko doosre dekhne waale ko lage ki health tracking app hai yeh toh koi na ki koi diabetes management system taaki phir thoda jo stereotypes hain society mein woh jo user hain unko na jhelna pade aur woh aaram se woh apps use bhi kar paayein. And uske baad unhone dekha ki increase ho gaye unke users number of users aur easily use kar pa rahe hain sab aise anxious hue bina society mein. Haan. Toh is example jaise main samajh pa raha hoon ki aisa hota hai ki starting mein toh users ne bola hoga ki humein constant notification chahiye. But jab unhone dekhna start kiya notifications aa rahe hain toh unko thodi anxiety ya thoda matlab aisa feel hone laga ki koi mujhe judge na kare. Toh I think unke jo pain points initially kuch the aur last mein jaake kuch aur bhi ho gaye. Bilkul jo woh pehle bata hi nahi rahe. Pehle toh unhone bataya hamare pain points yahi hai ki humein diabetes hai. Humein yaad nahi rehta apni dawai khana ya walk karna bhool jaate hain jo bhi hai. Par baad mein dikha designers ko ki actual mein pain points toh hai ki unhein chhupana hai thoda apni like unko achha nahi lag raha batana logon ko ki unhein diabetes hai. Toh unhein yeh bhi hai ki hum walk karein hum dawai khayein. But doosre logon ko aise pata na chale ya society mein taaki unhein agar jo bhi problem ya jo woh feel kar rahe hain ganda agar feel kar rahe hain kuch bhi sharam sharminda feel kar rahe hain woh na ho unko toh app ka design change karne se interface logo ya notification jis tarike se aati thi yeh chhoti-chhoti changes karne se bahut bada impact hota hai logon pe aur users pe number of users pe toh bilkul bahut bada impact raha. Empathy mapping hamari design process ko kaise enhance karta hai? Toh empathy mapping kaafi tarikon se enhance karta hai hamare design process ko. Jaise ki pehle toh humne yeh point discuss toh kar liya already ki pain points main yahi pe point rehta hai ki empathy mapping help kaise kar raha hai design process ko? Sabse pehle yahi aata hai ki kisi user ka jo pain point hai woh actual mein accurately guess karna samajhna yeh sabse badi help karta hai usmein. Toh iske liye bhi ek example le sakte hain Air

BNB ka. I think hum log ko pata hai Air BNB yahi app hai ki aap jisse online rent kar sakein koi bhi space rehne ke liye toh but woh jo jagah hoti hai woh actual log logon ne own ki hoti hai rather than hotels ya koi bade MNCs ya groups ne toh kya raha jab Air BNB ban raha tha toh unhone starting mein notice kiya jo designers hain developers hain ki in inmein log kya kar rahe hain jo users hain na jo apne places ko rent pe daal rahe hain udhar unko thodi thodi problem ho rahi hai. Unhein lag raha hai ki woh feel kar rahe hain. Yeh unke feel ke quadrant mein dekha gaya jo empathy maps mein nikla ki jo log maybe aayenge unka ghar use karne ya unki jagah use karne woh kaise property damage na kar dein ya koi galat log na ho matlab properly verified ho unki profiles and sab kuch. Yeh issues bahut na starting mein unhone dekhna shuru kiya. Jiski wajah se log apne rent pe daal hi nahi rahe the jagah. Toh BNB Air BNB mein users kam ho rahe the. Toh jab yeh notice hua empathy maps mein toh unhone aage aage jaake apna design process change kiya jiske andar unhone app mein apne aise features daal diye jismein logon ko profile verify karni padegi apni isse pehle ki woh kuch bhi jagah rent karein matlab apna Aadhar card ya apna ID card koi bhi share karna padta hai BNB aur BNB ke saath taaki aapki profile पूरी तारीके से verify ho paaye. Doosra point yeh bhi rehta hai ki agar property damage ka jaise ki bahut logon ko darr tha ho sakta hai toh unhone kaha ki hum insurance claim ki policy daal dete hain ki agar koi bhi tootati hai cheez kisi ke ghar mein ya kisi ki jagah pe toh uske liye woh claim kar paaye aur paise use mil paaye wapas apne jo bhi third party jo bhi aa rahi hai rehne ke liye usse woh paise apne le paaye wapas. Toh ek yeh example tha jo kaafi dikhta hai jismein ki empathy mapping ne help kari design process mein. Kya main empathy maps ko baaki design methods ke saath bhi use kar sakta hoon jisse woh mere design process ko aur enhance karein? Haan, yeh humne pehle bhi discuss kiya tha. Ismein tum personas ya phir jo user journey maps hote hain unke saath aap use kar sakte hain apne empathy maps ko taaki design process aur enhance ho jaaye. Aur iska ek bahut achha example mere paas hai dene ke liye taaki isko achhe se samajh paayein. Jaise ki ab jab Spotify ban raha tha toh unke bahut saare features the play button aur shuffle play ho gaya ki aapke paas koi bhi random gaana chal jaayega koi playlist mein se aise bahut saare features achhe-achhe aaye the toh unhone kya notice kiya ki unke paas jo personas the woh bahut saare the ki koi apne college jaa raha hai gaane sunte hue koi college student ho gaya ya koi office work kar raha hai office mein kaam karte-karte use gaane sunne hain aise koi ho gaya teesra type ek aur bhi tha ki koi ghar pe relax karna chahta hai toh usne aise hi bas aise slow sa music ya aise neend aane wala music kuch aise normal sa chala liya. Toh unhone kya notice kiya? Jo third aspect tha, third target audience tha, third persona tha unka. Waise type ke log jo relax karna chah rahe hain ghar pe unko loud music toh nahi chahiye hoga. Toh pehle kya tha jo features hamare paas Spotify mein the uske andar auto play ka button rehta tha. Toh auto play ke through na koi bhi random gaana chal jayega. Random gaana chal sakta hai. Beech mein kabhi-kabhi aapke paas koi loud music bhi aa sakta hai. But jo banda Sunday ko aise AC mein aaram se apne ghar pe baith ke sona chah raha hai thoda gaane sunte-sunte usko loud music nahi chahiye hoga. Toh pehle auto play button tha but ab unhone thode time baad auto play off button bhi daal diya specifically users ke liye jo ki pehle available nahi tha. Agar jaise aapke paas subscription nahi hai toh aap auto play off nahi kar sakte the. Ab kya hota hai? Ab auto play off

button bhi aa gaya hai. Toh jo users hain jinko aise specific aise matlab random bilkul gaane nahi sunne hain. Apne rhythm se chalna hai ya kuch bhi ho woh waise hi use kar sakte hain. Toh uske liye Spotify naye features laya. Toh yeh feature tabhi aa paya jab unhone user journey maps apne padhe hain ya persona specifically padhe ki aise type ke log bhi ya aise audience bhi hamare paas hai jinki needs humein cater karni hai. Toh I hope isse thoda clear ho gaya ho. So is example mein humne apne journey mapping ko empathy mapping ke saath use kiya jisse hum apna design process enhance kar sakein. Even personas ko bhi use kiya iske andar. Dono use hue toh aapka empathy mapping achhe se enhance ho paaya. So I think yahan tak haan ab I think ab hum teesre topic se teesre topic ke aage badh sakte hain jo ki start hota hai hamara. Sabse pehle hum mental model and conceptual model. So humne yeh sab jo dekha personas, empathy mapping. Toh ab yeh kis side leke jaa rahe hain humko? Matlab hamara next step hoga ki humne mental model jo hota hai mental model pehle samajhte hain mental model hai kya? Toh mental model ek jo user hai hamara jo aapka client hai ya jo bhi us service ko use karne waala hai woh kya soch le kar aa raha hai ki jo aapki service ya product hai woh kaise work karega? Matlab uske ek mind mein kya ek road map kya ban raha hai ki for example ki hum usko samajh sakte hain ki agar ek woh shopping app par aa raha hai jismein like for example ke liye Amazon hai toh uski kya expectation hai toh usko yeh hoga na ki pehle search button hoga usmein product type hoga and then woh uske product search hokar aayenge phir unmein prices hoga unko cart mein generally add karne ka option hoga payment ka option hoga toh yeh generally jo user soch kar aa raha hai yeh hamara kehlayega hamara mental model kya hai user ne jo apne according jo soch le kar aa raha hai user. Ab mental model mein bhi yeh hota hai ki jo mental model fix nahi hota hai. Har kisi user ka different hota hai. Woh differ karta hai hamare past experiences pe ki agar for example ke liye agar koi first time Amazon use kar raha hai toh uske liye poora different alag hoga. Hoga road map jo hoga woh kya soch kar aa raha hai. Usko nahi pata ki cart mein add on hota hai. Payment kaise hota hai. But jo generally use karta rehta hai aur koi shopping app use kiya hai pehle toh usko pata hoga ki generally yeh yeh cheezein hoti hain traditionally jo hai and yahi ismein main expect kar sakta hoon. Toh yeh hamara ho jayega mental model. So ab hum next dekh rahe hain conceptual model. So conceptual model jo hota hai woh designer ka ek architecture hai ki designer jab ek koi cheez product bana raha hai toh uska overall flow woh kaise maintain karega ki first jo agar user aayega toh usko kya home screen pehle dikhayega login lega sign up iske baad woh jab main page par aayega toh usko kya-kya options dikhenge ki search option kahan hoga ya ek aapne dekha hoga ki jo shopping apps hote hain phone mein unmein ek upar button hota hai uske through aap settings mein ja sakte ho ya apne accounts mein ya aur different features usko generally hum burger bol rahe hain agar uski development ki language mein ki search mein usmein hum lens ka button denge, cart ka button denge aur jo aapke product show honge unmein image kitni badi honggi? Uska price kaise likha hoga? User pehle cart mein cheezein add karega ki direct check out kar sakta hai. Payment ka flow kaise hoga? Toh ek architect ne jo designer team hai ya jo software development team hai unhone as a overall high level overview kaise flow banaya hai woh hum count karte hain hamare conceptual model ke andar. So iske andar generally jo hamara designer hai woh yahi cheezein use karta hai

ki red button agar woh de raha hai iska matlab kuch warning hai. Ki agar achanak se user ne ekdam back button click kar diya payment ke beech mein toh ek warning sign aana chahiye ki payment is in the process something. Toh jo ek traditional approach hai ki green matlab matlab correct hai yaani ki aap okay aage badh sakte ho. Red matlab problematic hai something kuch ya usko cart mein se kuch cheez remove karni hai toh ek red aata hai ki aap remove kar rahe ho. Toh yeh jo ek high level overview hai yeh hamara conceptual model aa jaata hai. So isko generally agar hum main similar matlab aasan language mein kehna chahoon toh conceptual model designer side and mental model hamara user side. So ismein agar hum next dekhein ki ab yeh hum bana kaise rahe hain ki conceptual model isse pehle ki aap continue karein aap mental and conceptual models ke difference ko formally define kar sakte hain agar ek line mein batana ho bilkul ek do lines mein ki yeh yeh difference hai. So ek line mein yeh bol sakte hain ki mental model hai jo user soch le kar aa raha hai yaani ki client side yeh isko ek language mein aur main ek line mein agar conclude karoon toh hamara mental model hai user side ka jo soch hai jo expectation hai aur hamara conceptual model jo hai jo designer jo ya software team hai us woh mental model ki jo expectation hai users ki usko kaise match up kar rahi hai ki uska kya architecture hoga toh hum aur bhi isko ek line mein aise bol rahe hain ki architect jo hamara conceptual model hai software ya development site ka part hai and mental model hamara client ke user site ka part hai. Ab agar hum isko dekhein ki hum isko badhte kaise hain aage banane ke liye. Toh sabse pehla role aa jaata hai ismein jaise ki hamara persona, empathy mapping mein tha hamara continuous research and feedback. Ab jab hum ismein research karenge toh hum pehle mental model mein user se hum jo hamare personas aur empathy mapping hai hum usmein se kuch jo hamare pain points hain ya jo important key points hain unko le sakte hain. And then unhi key points pe hum aur surveys ya interviews ko aage badha sakte hain. Ke for example agar humne mental model mein hum bana rahe hain aur uske andar hamara jo flow hoga woh kis type ka hoga. Maybe hum isko aise samajh sakte hain ki humne koi cheez observe kari ki users ko yeh problem aati hai. Usko aisi cheez chahiye but jab humne surveys ke andar dekha toh usmein different cheez aa rahi thi. Toh hum jo apna jo jo hamara conceptual architecture hai woh ek kind of meet up karna chahiye hamare mental model se. And mental model hum jo hamare jaise maine bataya ki persona and empathy mapping ke key points leke unhi pe continuous aage hum aur research karke feedback le sakte hain ya us pe general population ka observation ke base pe ke ya traditional approaches ke saath bhi hum kai baar aage badh sakte hain ki jo agar ek hum ek shopping ka app bana rahe hain toh hum generally wahi use kar sakte hain ki cart ka icon use kar liya. Uske andar hum changes yeh kar sakte hain ki cart ka icon mein agar hum for example ke liye medicine se related kuch bana rahe hain ya for example kuch ecological cheezein hum kuch plants bech rahe hain. For example toh hum cart ke icon ko green color ka kar denge. But ek generally jo hai woh same rehna chahiye architecture jo model jo user expect kar raha hai. Jaise ismein aur ek example mujhko yaad aa raha hai. Jaise for example Myntra hai woh clothing ki shopping website hai. Toh unhone Myntra ke bag de rakha hai option mein. So woh kind of matlab woh shopping jo traditional carts hoti hai usse differ hai but phir bhi woh usse match kar raha hai ki user ko matlab toh samajh aa raha hai aur yeh thoda naya bhi ho gaya unke liye thoda

dekhne mein kyunki baaki sab toh ek shopping cart woh bag use kar rahe hain toh users ko achha lagta hoga aur yeh thoda real life se bhi matlab ho raha hai ki like for example aap agar shopping usmein jaate ho ke super market mein toh wahan par jo traditionally hum cart use karte hain but agar aap as a clothing mein ya kahin jaate khareedne ke liye ya toh usmein hamesha bag hota hai. Generally card nahi hota hai ki toh ek type se woh usse bhi identify kar rahe hain ki jo cheez aap real life mein use kar rahe ho usi ko unhone wahan pe use kar liya. Mera bhi ek question rahega like yeh jo aap conceptual model banate hain woh aap kaise ensure karte hain? Kaise maante hain ki yahi jo conceptual model hai yeh bahut effectively aap use kar paaye apne poore design process mein. Aisa toh nahi keh sakte ki jo ek baar conceptual model ban gaya woh wahi rahega. Woh continuous change hota rehta hai ki like for example maine conceptual model banaya is particular flow ka. Jaise Amazon hai. Usne pehle shopping cart ke liye banaya tha shopping ke liye. Ab unhone apni Prime Video aur bhi features add on kare. Toh unhein phir se ek type se conceptual model ko apne karna padega ki user unke jo app hai us pe woh kis cheez ke liye aa raha hai ki ab like Amazon aur payment services bhi provide kar raha hai. Toh user aa raha hai woh payment ke liye aa raha hai. Apne bills pay karne ke liye aa raha hai ki shopping ke liye aa raha hai ki videos ke liye aa raha hai. Par hum kya test bhi kar sakte hain is effectiveness ko? Haan. Toh iske liye hum continuous iterative loop use karte hain. Jaise ki hum personas ke andar empathy mapping mein ki jaise-jaise hamara product increase hota jaa raha hai ya uska jo hum bol sakte hain daayra badhte ja raha hai users ka toh hum different users se unka feedback le rahe hain. Unka unke baare mein jaan rahe hain. Unke pain points jaan rahe hain ki maybe unke pain points pehle kuch aur rahe honge. Ab cheez aur aa gayi toh ab kaise differ kar rahe hain unke? Ya jo market mein nayi competitiveness apps aa gayi hain ya jo for example koi nayi cheez aayi. Ab jo side by side market mein aur cheezein bhi aa rahi hain. Users ab unse bhi expose hai. Woh kuch naye features de rahe hain. Toh aap woh bhi dekhiye kya users jo hai un cheezon se kuch unko match karta hai. Unki jo ek mental model hai ya unka jo ek idea hai mind mein ki woh un doosre competitive apps ke saath kaise match up kar raha hai. Agar unke andar unko koi problem aa rahi hai toh aap woh problems repeat na karo. Toh idea is again ke continuous feedback. I think testing, prototype testing jisko hum haan yeh achha point hai ki hum jisko hum bolte hain AB testing ki ek aapne ek product banaya and then uska feedback liya phir ek doosra banaya dono ko compare karna ki kaun sa better hai ki kaun se points aise hain jo ki A ke andar A product A ke andar better the kaun si problematic cheezein thi B ke andar aisi kya thi phir unko side by side compare karke kuch ek third ek naya prototype banana aur sabse important hai iske andar as a designer ya as a development team ki aap har ek prototype ko poor document karo ki kab kya change kiya, kyun kiya, kis wajah se kiya and then kya results rahe. Like ek type se poori version track hona chahiye. Toh yeh kaafi important part hota hai from the perspective jo hai hamare designer ke kyunki aap maybe aisa ho sakta hai ki aap thode time baad jaakar aapko check karna pade ki point kyun add on kiya tha. Toh I think yeh AB testing and yeh kaafi important part ho jaata hai. Par jaise ki aapne ek aur point bola tha ki jo mental model hota hai woh basically ki jo bhi user side of the hai ki uski kya needs hain ya usko kya-kya chahiye woh aapka dikhata hai. And conceptual model unhi needs ko match karne ka try karta hai. Right?

Toh aisa bhi kabhi hua hai. Matlab is line se yeh pata ho jaata hai pata chalta hai humein ki dono kahin na kahin ek common ground mein milte honge. Tabhi woh user ki needs bhi fulfill karega aur woh service app ya jo bhi hai woh actual mein apna kaam bhi kare impactful bhi hai. Toh aisa bhi kabhi ho sakta hai kya ki woh jo aapne conceptual model banaya woh mental model ke saath align na kare user ke. I think jaise jo starting mein Amazon ka hi maine ek baar padha tha toh usmein Amazon ka jab starting mein Amazon aaya tha toh unhone sirf unko laga like jaise jo unki designer team thi unko laga ki user aayega search karega aur purchasing mein chala jayega. Toh unhein search bar diya. Toh but generally phir kya hua ki jab search mein unhone like for example ke liye unhone koi search kiya for example ke liye camera toh unhein camera hua toh aage badh gaya user. But jo user tha jab mental model user ka dekha gaya toh yeh user se baad mein baat karke unse feedbacks liye gaye toh samajh aaya ki user jo hai sirf type karke ek keyword daal ke aur user pe direct aage nahi badhta. Woh explore karna chahta hai ki agar woh simple bhi aa raha hai usne ek keyword type ke camera toh multiple uske paas woh explore karna chahta hai. Woh direct ek jagah nahi jaana chahta. Toh Amazon ne phir side by side exploration ka bhi option diya ki jo Amazon ke andar koi bhi customer aa raha hai toh use search karke na ja paaye. Woh simple unki website pe scroll karke unhone categories de rakhi hain ki fashion, sports ya toh agar woh koi fashion mein jaata hai, sports mein jaata hai, electronics mein jaata hai toh electronics mein explore kar sakte hain ki abhi currently market mein kya aa raha hai ya jo uske agar electronics mein andar cameras specific search kiya toh kitne type ke cameras hain. Toh like jo mental model tha user jo expect kar raha tha woh chah raha tha ki main explore kar sakoon. Isiliye like jaise shopping jo super markets hote hain yeh isiliye success hote hain ki aap user ko ekdam se bahut saari choices de dete ho ki hamare paas yeh bhi hai yeh bhi aap ismein se select karo aur ek psychologically kahin na kahin yeh user ko achha lagta hai ki mujhe choice de di gayi hai jo cheezein hain woh mere according chal rahi hai. Agar us user ko usmein se kuch nahi bhi lena hoga. Par woh yeh jaan ke khush reh jaata hai ki like mere paas choices toh itni saari hai. Main chun sakta hoon inmein se mere ko yeh chahiye yeh chahiye. Toh I think woh power to choose bhi wahi ek psychologically human psychology hoti hai ki jab humko aisa lagta hai humein ki yeh mere paas power hai isko choose karne ki toh woh ek better ek feeling aati hai. Toh yahi ek achha example tha ki jismein phir conceptual model ko ya jo Amazon ki architect team thi unhone is cheez ko identify kiya and then isko change kiya and then jo user ka jo unki expectation thi usko match karke kahin na kahin common ground par aaye. Par hum user ke expectations ko designers ki creativity ke saath balance kaise karenge? What if designers ke mann mein koi aisa idea aaye jo users expect hi nahi karte. So I think iske andar ho sakta hai ki hum pehle unko initial features dikhao jo ki traditional the and gradually increase karo ki pehle like bahut common features dikhaye. And jaise agar user uske andar usko explore kar raha hai. Iska matlab user us app ke andar uske paas time hai ya woh utna tech savvy hai. Hum bol sakte hain ki woh usko dekhna chahta hai aage. Toh gradually advance features ki taraf jao. Yaani starting ke andar aap Amazon kholte ho toh bahut basic sa version aana chahiye ki usko traditional look dekhna chahiye ki search bar hai yeh sab hai. But agar woh uske andar aur explore karta hai toh usko dekhna chahiye. Ismein filters bhi hain. Ismein pricing range bhi hai.

Uske andar aap bills bhi pay kar sakte ho. Usmein videos ke options bhi hain. And then uske andar options bhi hai ki agar kuch problem ho jaaye toh call us ka option bhi hai. Agar toh matlab generally hum kya hota hai ki customer support hai. Amazon ne iske liye call us ya automatic bots add kare. Toh yeh feature aap direct mat dikhao ki agar jaise jo creative team thi jo architect team thi unhone socha hum ismein bot bhi denge. Aap direct bot de doge toh maybe user confuse ho jaaye ki yeh kis liye hai ki main toh yahan par shopping ke liye aaya tha. Mujhe bot ka option kyun dikh raha hai? But agar user explore kar raha hai aapko toh aap dheere-dheere aap dikha sakte ho ya as a pop up ki form mein dikha sakte ho ki we also now this matlab ki hamare paas ab yeh service bhi hai. Aise hi aapka ek aur example hai mere paas jaise Swiggy ho gaya. Waise normal aapki food delivery apps mein aap dekhte hain ki aap app kholte ho toh aapko seedha restaurants aa jaate hain see like neeche-neeche. And bahut randomize hota hai woh sab. Ise ekdam jaisa user ko chahiye user specific nahi hota. But Swiggy ne kya kiya? Jaise-jaise aapne orders place karne shuru kiye, unhone saath mein apne jo bhi users hain unko read kiya ki woh kaisi cheezein deliver karwaate hain ghar pe, kahan se karwaate hain. Price range kya rehta hai. Toh ab as agar main ek user hoon toh main apna Swiggy ka app kholti hoon. Agar maine kuch time se use kar rahi hoon. Toh udhar sabse pehle aapke paas aate hain options ki offers bhi itne pe offer hain, itne pe offer hain alag-alag ya discounts aa jaate hain alag-alag ya phir already koi kam woh go buy one get one chal raha hai toh uska alag ek column aa jaata hai. Toh mere ko lagta hai ki itne zyada woh na wahi user ko woh feeling de deta hai ki ab main itne sab mein se explore kar sakta hoon. Aur itna achha interface lagta hai ki jo mental model agar mera hai ki mere ko toh aaj 300 ke andar kuch khana hai ya 200 ke andar toh main seedha ek button dabaungi and mere paas saare options aa jayenge mere location ke paas-paas jo mere ko utne price range mein khana deliver kar rahe hain. Main chahti hoon ki main specific koi type ka khana khana chahti hoon. North Indian ya Chinese kuch bhi ho. Toh phir woh mere ko seedha wahi dikhayega. Like agar main sirf search bhi kar loon ya phir main ek button bhi press kar doon choices mein se apne toh I think Amazon ho gaya, Swiggy ho gaya. Aise bahut saare apps hain jo kaafi achhe se mental model read kar paaye hain. Apne specific users ka apne personas read kar paaye hain. Apne empathy mapping read kar paaye hain. Taaki unhein dikhe ki ab agar main app use karna chahti hoon. Mere ko bhookh lagi hai. Mere ko khana jaldi se order karna hai. Toh main yeh nahi chahti ki main ghoom jaaun us app ke andar ki mere ko kahan kahan se kya karna hai. Maine do din pehle jo order kiya mere ko wahi karna hai. Toh mere paas saamne-saamne aa jayega ki recently aapne jo order kiya ab wapas se reorder kar lo. Mere ko reorder pe dabana hai bas aur mera khana aa jayega. Toh I think aise kuch features rehte hain jo kaafi zyada users ko unki needs ko ya expectations ko bahut easily fulfill kar lete hain. Haan ismein wahi aata hai ki jo hamara conceptual model hai jo designer team bana rahi hai toh as a basic jo hamara model hai pehle woh usko match up karne ka try karta hai. And then agar usko lagta hai ki yahan par hum aur features add on kar sakte hain. Kisi ko hum bol sakte hain ki yeh progressive disclosure ki aap ekdam se cheez mat dikhao. Dheere-dheere dikhao. Jo user ko agar agar user ke paas ekdam se jaise aapne bola ki aapko abhi order karna hai toh sabse basic need hai khane ki delivery mein food delivery mein ki sabse pehle aap recent orders dikhao ya search

ko correct bilkul aaspaas ke restaurants dikha do but user ke paas agar time hai toh aur cheezein bhi explore kar sakte hain. Toh I think yahan pe hamari discussion aaj ki khatam hoti hai. Humne teen important topics discuss kiye hain. Personas ko samajhna, empathy mapping ko banana aur teesra tha hamara conceptual model kaise banta hai aur differ kaise karta hai mental model se. Toh yeh teeno humne kaafi deeply padhe, doubts clear kare. Jo bhi important questions hain woh saare discuss kar liye. Toh I hope sabko samajh aaye ho aaj ke topics. And agar koi bhi doubt aata hai toh aap lecture ya tutorial slides mein videos mein dekh sakte hain ek baar wapas jaake. And I'm pretty sure aapke doubts phir clear ho jayenge.