Human Computer Interaction (Hindi mein)

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User Perspective

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Namaskar main Ritwik Bamba is course Human Computer Interaction ka shikshan sahayak hoon. Aaiye yeh tutorial shuru karte hain. Aaj ka hamara vishay hai User Perspective, upyogkarta paripeksh. Sabse pehle hum yeh dekhenge ki humne isse pehle kya-kya padh liya hai. Toh aaiye shuru karte hain. Sabse pehle humne dekha good design versus bad design yaani ki achha design versus kharab design. Phir humne yeh dekha ki ek design ko achha kya banata hai. Kya-kya aisi cheezein ek design mein aa sakti hain jisse woh ek achha design kehlaye. Uske baad humne inclusivity aur accessibility padhi. Jiske baad hum chale design principles pe. Humne paanch mukhya design principles padhe jo ki hain Visibility, Feedback, Consistency, Constraints aur Affordance. Iske baad hum interaction design process ki ore chal diye. Jahan pe humne iske yeh chaar mukhya kadam pata kare jo ki shuru hote hain. Pata lagana users ko kya dikkat hai. Uske baad un dikkato ka hal karne ke liye hum solution bata sakte hain. Uske baad un designs ke interactive versions jisse users upyogkarta vartalap karke unko test kar sakein aur aakhir mein un designs ko hum evaluate karenge interviews aur questionnaires ke through. Aur phir yeh process chalta rehta hai jab tak hum apne final product design pe aa jaate hain. Uske baad humne yeh double design dekha jahan par hum sabse pehle apne upyogkarta ki dikkato ke baare mein samajhte hain. Jiske baad hum unki ek sabse badi dikkat ko samajhte hain aur usko hum bolte hain problem statement. Iske baad hum us dikkat ko us problem statement ko hal karne ke liye uske hal dhoondna shuru kar dete hain. Jab hum bahut saare solution dhoondhenge aur phir aakhir mein hum ek perfect solution final karenge. Yeh hai hamara final product design jo aakhiri hum design choose karte hain. Aur phir hum is design ko dikhayenge upyogkartaon ko, users ko ki woh kis tarah se isko use kar sakte hain. Yeh design unki dikkato ka hal kaise kar sakta hai. Unki zindagi kaise aasan bana sakta hai aur aakhirkarr ek better behtar user experience unhein de sake. Iske baad hum aate hain aaj ke topic par jo ki hai user perspective yaani ki upyogkarta paripeksh. Sabse pehle hum dekhenge user centered design kya kehlata hai. User centered design mein hum user ko beech mein rakhte hain aur uske chaaron taraf hum jo bhi gatividhiyan hoti hain woh ki jaati hain. Jaise pehle charan mein hum designers ek team mein kaam karte hain aur yeh samajhne ki koshish karte hain ki users ko upyogkartaon ko kya dikkat hai. Uske baad hum yeh samajhte hain aur likhte hain ki aavashyaktaayein kya hain users ki. Phir hum ek design ke charan mein aate hain. Jahan par poori design team alag-alag hal nikalti hai. Unhein design karti hai. Aur aakhirkarr inmein se kisi ek ko hum ek aakhiri hal ke taur par lete

hain aur us pe phir hum ek evaluation karte hain. User se baat karte hain. Upyogkartaon se vartalap karte hain ki unke liye yeh kitna behtar user experience de sakta hai. Uske baad hum aate hain personas pe. User persona kya hote hain? Yeh ek aise hum logon ke baare mein ek kahani likhte hain jo asal mein nahi exist karti, jo asal mein nahi hai. Ek kalpanik kahani likhte hain hum jo har user har upyogkarta ko bata paaye. Har upyogkarta ke baare mein humein jaankari de paaye. Ek ya do page se zyada ka nahi hota yeh. Aur ismein hum likhte kya-kya hain? Hamare upyogkarta ya jo persona hai hamara yahan pe uska naam, uski umra, woh kaise apna jeevan yaapan karta hai aur uski zindagi ke baare mein do se teen vakya. Uske baad hum likhte hain ki us user ki kya zaroratein hain aur uski kya pareshaniyan hain. Uski zaroratein aur pareshaniyan hi hamari sabse badi zaroorat hai. Humein un pe dhyan dena hai. Hum unhi zarooraton ko dhyan mein rakhte hue apna design banate hain. Ismein aur bhi kai cheezein di jaati hain. Jaise kisi ka vyavahar kaisa hai? Unke zindagi ke baare mein aur kuch cheezein jo zaroori ho sakti hain. Yeh sab ek se do pages mein likha diya jaata hai. Iske baad hum kuch aur isi tarah ke personas banate hain taaki hum apna design use karne waale zyada se zyada logon ko bata paayein, samjha paayein ki hamare asal upyogkarta, hamare actual users kaun hain. Ab humein chahiye hi kyun personas? Kya zaroorat hai humein inki? Sabse pehle toh humein yeh samajhna chahiye ki hamare target audience jo hamara upyogkarta ka jo ek group hai usko humein samajhna chahiye ki woh kaun hai, woh kya karta hai, unhein kya chahiye, unhein kya nahi chahiye aur unhein kya pareshaniyan hain, yeh samajhna ki hum kiske liye yeh design bana rahe hain, yeh bahut zaroori hai. Aur persona banana humein madad karta hai ki hum ek aisa upkaran, aisa yantra bana paayein jo unki zaroratein poora karein aur unka user experience behtar karein. Empathize phase mein aate hain. Jahan par hum user ke jo hamare upyogkarta hain hamare unke personas ko hum likhte hain. Hum yeh batane ki koshish karte hain ki kaun honge hamare user. Uske baad hum ek define phase mein aate hain design thinking process ke jahan par hum apni jo user ki dikkatein hain hum woh likhte hain. Kya aisi sabse badi dikkat hai users ko jo unka hal karna sabse zyada zaroori hai. Aaiye ab dekhte hain ki ek persona ko design karne mein kya-kya charan hote hain. Sabse pehla hota hai ki humein yeh dhoondna hai ki asal upyogkarta kaun hone waale hain. Hum bahut zyada anusandhan karte hain. Hum logon se baat karte hain. Janne ki koshish karte hain ki unhein kya-kya chahiye aur kis-kis ko kya-kya chahiye. Yeh jaanna bahut zaroori hai yeh jaanne ke liye ki woh kaun asal mein hai. Uske baad hum yeh dekhte hain ki woh kyun maayne rakhta hai. Kis maayne mein humein yeh dekha jaa raha hai. Logon se baat karne ke baad hum saboot dhoondne ki koshish karte hain ki jo humne dhoondha kya woh asal mein sahi hai? Aur un sabooton ki madad se hum kuch isi tarah ke pattern dhoond sakte hain. Humein is tarah ke kuch hint mil sakte hain ki jo hum kar rahe hain kya woh sahi hai ya galat hai. Aur aakhirkarr hum persona banate hain aur kisi bhi stereotype ko avoid karte hain. Aaiye yahan hum dekh sakte hain ki sabse pehle hamara persona aata hai jo batata hai ki yeh jo kahani hai jo kalpanik kahani banayi gayi hai yeh kiske baare mein hai uske baad wahan pe kya scenario hai, yeh kya chal raha hai, aaspaas ka vatavaran kya hai aur uske baad iska kya goal hai, aakhir yeh kiya hi kyun jaa raha hai. Toh ab hamare paas nimnlikhit kuch cheezein hain jo ek persona mein honi bahut zaroori hain. Jinmein aate hain persona mein jo hamara kirdaar hai uska

kya naam hai? Ek koi hum uska chitra chipka sakte hain. Phir uske baad uske baare mein aur kuch chhoti-chhoti cheezein jaise uska naam, umra, kya uska rehen-sehen hai? Woh kahan rehta hai? Shadishuda hai ya nahi? Parivar mein kaun-kaun hai? Uske baad uski kya zarooratein hain? Kya dikkatein hain uske zindagi mein? Kya frustration hai? Uske baad vyavahar ke baare mein thoda bahut aur thoda bahut aur aisi cheezein jo uske baare mein, kirdaar ke baare mein bahut zaroori hain. Yeh sab cheezein hain hamare paas ek achha user persona banane ke liye. Aur hum ismein kuch aur bhi do-teen sawaal daal sakte hain jo hamare apne design ko lekar sahi ho. Jaise agar koi email company banana chah raha hai toh uske liye yeh do sawaal kaafi zaroori ho sakte hain ki woh kitna zyada email kholte hain, kitni zyada email dekhte hain. Yeh behad zaroori ho jaate hain. Yeh ek udaharan ke taur pe humne persona diya hua hai. Yeh inka naam hai. Yahan pe inka chitra diya gaya hai. Inki umra. Inhone kya padhai ki hai? Kya zindagi mein karte hain yeh log? Kahan rehte hain? Kis tarah se yeh technology ke baare mein padhe hue hain? Do chaar chhoti-chhoti panktiyan inke baare mein. Kya zarooratein hain inki? Kya dikkatein hain? Kya-kya karte hain? Yeh kya pasand hai karna? Aur kuch-kuch chhoti-chhoti cheezein jisse hum apne kirdaar ko aur achhi tarah samajh sakte hain. Aaiye ab hum dekhte hain empathy kya hoti hai. Empathy ka saral shabdon mein matlab hai samanubhuti. Toh agar hum designers ko kuch banana hai jo ki logon ki madad karega. Toh samanubhuti ek bahut hi zaroori cheez ban jaati hai. Humein dhyan rakhni chahiye jiska. Aur jaise persona humein yeh madad karte hain ki hum kaise samajh paayein apne jo designers, woh kaise samajh paayein ki unhein kya banana hai. Samanubhuti humein upyogkartaon ko achhe se samajhne mein madad karti hai. Hum user ki jagah khud ko daalkar sochein agar toh hum persona aur achhe tarike se bana payenge. Aur hum yeh samajh payenge ki alag-alag logon ki alag-alag zarooratein hoti hain. Uske baad hum yeh dhoondne ki koshish karte hain ki kiske liye banaya jaa raha hai yeh. Jitne zyada designers user personas ko dekhenge, unhein padhne ki koshish karenge, samajhne ki koshish karenge aur unhein ek asli insaan ke roop mein, ek asli upyogkarta ke roop mein dekhenge. Woh utna hi zyada unke baare mein sochenge, design karte hue aur unke liye aur achha product bana payenge. Empathy se related hi hamare paas ek empathy map hai jismein humein yeh chaturbhuj mein chaar cheezein di gayi hain jiske ekdam beech mein hamare paas hamara user yaani upyog karta hai. Sabse pehla hamare paas hai says yaani ki bolna, thinks yaani ki sochna, feels yaani ki mehsoos karna aur does yaani ki karna. Ismein hamara jo upyogkarta hai uske chaar mukhya karya diye gaye hain. Woh kya-kya karta hai? Kya-kya kar sakta hai? Apne jo anusandhan ke charan mein kya user ne bola, kya usne kiya, kya usne socha aur kya usne mehsoos kiya? Bolne mein woh sab cheezein aayengi jo user ne asal mein interview mein ya phir aur kisi tarike se designers ko bataya. Zyadatar ismein user ki seedha boli gayi linein hi hoti hain ya phir unhi se liye gaye kuch matlab. Feels mein hamare paas aata hai ki user kya mehsoos karta hai jo kabhi-kabhi hum pata kar sakte hain use dekhkar, uske shaaririk bhasha ko dekhkar aur kya user ko pareshan karta hai aur kya uska interest badhata hai. Phir hamare paas ek think karke hai quadrant jo humein batata hai ki user ke dimaag mein kya chal raha hai? Woh kya soch raha hai? Jaise-jaise woh yeh anubhav kar raha hai. Uske dimaag mein kya hai? Uske uske liye zaroori kya hai? Ho sakta hai ki jo bolna ka hai aur jo sochne ka hai woh zaroori ho sakte hain. Par humein

dhyan se dekhne ki zaroorat hai ki kya user soch rahe hain aur bolne ko taiyar nahi hai. Aur aakhir mein hamare paas hai does yaani ki karta hai. Ismein hum asal mein dekhte hain ki user ne kya-kya kiya. Kya kadam uthaye user ne aur asal mein asal zindagi mein user kya karta hai. Zaroorat hi kya hai par humein in empathy maps ki? Sabse zaroori aur sabse aasan matlab toh hai iska. Isse hum apne upyogkartaon ke saath samanubhuti ki ek bhavna ko utpann kar sakte hain. Jab hum asli data ko combine karte hain apne baaki other alag tarikon se jisse hum samajh sakein users ko. Isse hum ek behtar product bana payenge apne upyogkartaon ke liye, apne users ke liye. Yeh hamare product mein se bias hata sakta hai. Jisse hamara product sirf ek kism ke logon ke liye, ek samuday ke logon ke liye hi zaroorat na ho. Yeh har kisi ke liye ek achhe design ke roop mein upyog mein aaye. Isse hum apni research mein, apne anusandhan mein jo kamiyaan hain unko bhi dhoond sakte hain, pata kar sakte hain. Aur isse hum kuch aisi bhi user ki zarooraton ko pata laga sakte hain jo woh khud bhi unke baare mein unhein na socha ho. Unhone. Aur aakhirkarr hum yeh samajh sakte hain ki jo hamare upyogkarta hain, jo user hain, unke vyavahar ko kya influence karta hai. Kya badlaav hota hai uske vyavahar se. Aakhirkarr in sab ka istemal karte hue hum ek achhi efficient innovation ki taraf badh sakte hain. Ek udaharan ke taur par yeh ek empathy map diya gaya hai jismein Jaimie naam ka ek shakhs hai jo ek TV khareedne jaa raha hai ya jaa rahi hai. Hum yeh dekhenge ki woh kya bolta hai ya bolti hai. Kitna bada TV chahiye unhein. Kis brand ka chahiye? Kahan dhoondna chahiye? Kuch aisa chahiye jo lamba chale. Yeh kuch aisi cheezein ho sakti hain jo user asal mein bolein. Ab kya woh soch sakta hai? Woh hai TV dhoondna itna mushkil kyun hai? Kya main ismein itna bahut samay kyun laga raha hoon? Mere liye sabse achha kya hai? Aur yeh mujhe bahut kuch achhi cheez leni hai apne liye. Teesre kone mein hamare paas mehsoos karne ke liye hai. Jaimie bahut hi uttejit ho sakta hai. Excited ho sakta hai ki usko ek TV milne waala hai. Woh pareshan ho sakta hai ki use kya lena chahiye. Woh dara hua hai ki kahin uske paise na doob jaayein. Aur aakhirkarr woh kya asal mein karta hai? Woh apne doston se poochta hai. Woh alag-alag TVs ko dekhta hai ki kaun sa zyada achha hai. Woh website par check karta hai. Online e-commerce sites par dekhta hai. Aur TV ke fayde nuksan saath mein likhta hai. Aakhirkarr empathy maps yaani samanubhuti maps jo hain hamare, woh hamari poori anusandhan ko chhoti form mein likhne mein madad kar sakte hain. Kaise hum unhein ek sankshep tarike se likhkar bata sakte hain. Aur hamara ek empathy map ek persona ko bhi explain karne mein hamari madad kar sakta hai. Jaise-jaise humein ek persona ke baare mein zyada cheezein pata lagti hain. Hum apne empathy maps mein bhi woh cheezein add kar sakte hain. Hum kuch cheezein usmein update kar sakte hain. Badlaav kar sakte hain. Kuch nayi cheezein likh sakte hain. Kuch purani cheezein hata sakte hain. Aadi. Aakhirkarr phir hum empathy maps ko kisi bhi user experience process mein use kar sakte hain taaki hum poori team ke beech mein ek hi cheez par aa sakein aur yeh samajh sakein ki users ko kya chahiye aur unki kya zarooratein hain aur un zarooraton ko sabse upar rakhte hue apne design ko sambhalein. Empathy maps sabse achha tab kaam karte hain jab woh design process mein jaldi-jaldi use kar liye jaayein aur jaise-jaise hum aage badhte jayenge us process mein hum isko update karte jayenge. Iske baad hum dekhenge ek mental model kya hota hai? Dekhiye mental model ek aisi cheez hai jo ek user sochta hai. Ek upyogkarta sochta hai

ki use kya chahiye. Jo bhi dikkat uske dimaag mein chal rahi hai, uska koi na koi hal uske dimaag mein zaroor ho sakta hai. Aur yahi uske dimaag mein jo hal hai, woh hai hamara mental model. Ek user kya sochta hai ki uske mann mein soche gaye jo hal mein kya-kya hona chahiye. Yeh sab milke banata hai ek mental model. Aur yeh kaise ban sakta hai? Iska yeh bahut hi bada asar pad sakta hai hamare mental model pe ki jo user hai woh pehle se kya karta hai aise aise hi upkaranon ke saath, uska pehle kaisa anubhav reh chuka hai aur woh kya-kya assumptions bana chuka hai? Kya usne pehle se hi socha hua hai apne dimaag mein yeh dekhkar ki woh kaisa hota hai? Kaisa dikh raha hai woh, yeh dekhkar woh soch sakta hai. Mental model banana bhi koi aasan kaam nahi hai. Ismein humein jo users hain hamare upyogkarta, unko humein bahut hi gehan tarike se unke baare mein jaanch karni padti hai. Unke baare mein sochna padta hai aur yeh samajhna padta hai ki woh kis tarah se apne dikkat ka hal kar sakte hain aur yeh sab hamare jo product hai, usse swatantra chalta hai. Humein yeh jaanna bahut zaroori hai ki hamare jo users hain unka emotional state kya hai aur yeh poornatah hamare jo product hai usse swatantra. Ab hamara agla vishay hai Conceptual Model. Ab jaise user ke mann mein ek mental model hota hai. Usi tarike se ek designer ke mann mein ek conceptual model hota hai. Ismein yeh likha hota hai ki hamara jo solution hai, jo hal hai hamara, woh kis tarah se dikkato ko solve kar raha hai. Kis tarah se unka hal kar raha hai. Yeh also ek hamara jo sawaal hai ki kis tarike se humein jo cheezein hain woh karni chahiye, yeh bhi batata hai. Bahut alag-alag cheezein aati hain ismein jo milke poora system banati hain aur aakhirkarr yeh interface mein hi dikhayi jaati hain jinmein jisse user baat karta hai. Zyadatar jo hamara conceptual model hai woh design process ki shuruwat mein hi use bana liya jaata hai aur taaki hum woh dekhkar baar-baar apne jo design hai usko aur behtar kar paayein. Ab aap conceptual model aur mental model mein confuse bhi ho sakte hain ki yeh dono same same si cheezein hain. Par ismein jo sabse bada antar hai woh yeh hai ki jo conceptual model hai woh ek designer ke mann mein hai aur jo mental model hai woh ek user ke mann mein hai. Jo designer hai woh ek design banayega. User use samjhega aur phir uske baare mein batayega ki use kaisa laga yeh. Aur jaise-jaise research hoti hai aur jaise-jaise anusandhan hota hai, research hoti hai, usi tarah user ka jo mental model hai, woh ek designer ke conceptual model se match karna shuru kar deta hai. Jaise hi dono conceptual model aur mental model match ho jaayein, wahan par aap samajh lijiye ki aapka product bankar taiyar hai. Aapka product apne upyogkartaon ki soch se mel khata hai. Ab humein yeh dekhne ki zaroorat hai ki conceptual modeling karni hi kyun chahiye. Sabse pehle toh humein yeh koshish karni chahiye ki hamara jo upkaran hai, jo yantra hai, woh hamare upyogkartaon ke mental model se match karein. Isse hamara jo solution hai, jo design hai hamara, woh istemal karne mein aur aasan ho jaata hai aur use ek behtar user experience dene mein aasani hoti hai. Isse hum yeh bhi dekh sakte hain ki kab hamara jo mental model hai woh match nahi kar raha hamare conceptual model se. Aur isse hum yeh sochne par majboor ho jaate hain ki hum apna conceptual model change karein ya hum user ke mann mein hi unka mental model change kar dein. Ab hum kuch chhoti-chhoti cheezein aisi dekhenge jo milke conceptual model bana sakti hain. Koi aisa bana hua tarika nahi hai ki conceptual model kya hota hai? Toh hum kuch aisi chhoti-chhoti cheezein de sakte hain. Jaise ki ek Information Architecture. Ismein hum yeh batate hain ki kaise alag-alag

cheezein ek app mein alag-alag tarike se likhi hui hain. Kahan pe jo hamare upyogkarta hain, woh kahan pe apne liye hal dhoond sakte hain unki dikkato ka, apne product mein. Kya yeh unki mann ki cheez ko match karta hai? Iske yeh teen bahut hi zaroori cheezein hain. Users, content aur context. Users hue hamare upyogkarta, content usmein kya diya gaya hai aur context ki woh kis vishay mein baat ki jaa rahi hai. Yeh ek udaharan ke taur pe hum ek information architecture dekh sakte hain. Ek e-commerce website ka. Yahan par yeh home page hai. Home page par yeh bahut saare alag-alag cheezein di jaa rahi hain. Aur aage phir inko ek achhe se tarike mein diya gaya hai. Kahan pe kya hai user ko. Map dhoondne ke liye sabse pehle location mein jaana padega. Phir find locations, phir map. Isi tarike se yeh ek aur diya gaya hai. Amazon ke home page se hum category page pe jaa sakte hain ya phir seedha shipping cart mein jaa sakte hain. Aur yeh shipping cart se hum seedha pay karke aur hum payment instruction par aa sakte hain. Aur bhi kuch cheezein hain jo hamare conceptual model banane mein madad karti hain. Terminology. Hum kin shabdon ka use kar rahe hain? Kya woh shabd hamare upyogkartaon ki bolchaal se mel khata hai? Kya woh shabd wahi shabd hain jo user use karte hain, jo hamare upyogkarta istemal karte hain. Kya yeh wahi shabd hain? Uske baad aur bhi hum kuch cheezein dhyan mein rakh sakte hain. Jaise ki content strategy jismein hum dekh sakte hain ki kis tarah se alag-alag tarike ka saamaan hamare page pe diya gaya hai. Channel strategy. Kahan-kahan diya jayega. Interaction strategy. Kis-kis naye tarike se hum nayi vartalap shuru kar sakte hain. Aakhirkarr humein ek mazboot aur ek zaroori cheez banani hai jo ki hai hamara mental model. Iske liye humein sabse pehle apne jo upyogkarta hain unke baare mein jaanna bahut zaroori hai. Humein aise shabdon ka use karna hai jo woh apni rozmarra ki zindagi mein istemal karte ho. Kuch is tarah ke humein design banane hain jo unke liye aasan ho samajhne mein, sambhalne mein, unhein aasani ho, yaad karne mein aasani ho aur hum kuch is tarah ke design ko hi use karein jis tarah ka woh already use kar rahe hain. Jaise ki humne ek purane tutorial mein baat ki thi jo peeche jaane ka button hai woh ek website mein ulte haath ko top pe hi hoga. Toh yeh bahut zaroori hai. Aur uske baad test early and iterate. Isse hamara matlab hai ki jaise hi hamara design banke ready ho, hum tabhi ke tabhi users se uske baare mein baat karni shuru kar dein aur jaise-jaise hum baat karte jaayein, jo bhi user keh rahe hain. Unhein dikkatein aa rahi hain, unka hal karte jaayein. Chaliye ab ek aapke liye in-class activity hai jahan pe pehle humein ek persona banana hai jo ek app ke liye chahiye jismein humein uske baare mein basic information jaise naam, umra, rozmarra ki zindagi mein kya karte hain? Woh kya kaam hai unka? Kya chahiye unhein? Kya dikkatein hain? Yeh sab likhna hai humein. Uske baad humein ek samanubhuti mapping, empathy mapping bhi karni hai. Isi persona ke liye jo humne upar banaya. Ismein humein likhna hai ki user kya bolta hai, kya karta hai, kya sochta hai, kya mehsoos karta hai, kya-kya dikkatein hain aur woh kya chahta hai karna. Yeh kuch aapke liye resources diye gaye hain jinmein aap aur padh sakte hain in topics ke baare mein. User perspective, user persona, empathy mapping, mental model, conceptual model. Yeh sab aap in diye gaye topics pe padh sakte hain. Aaj ke tutorial ke liye itna hi. Dhanyavaad.