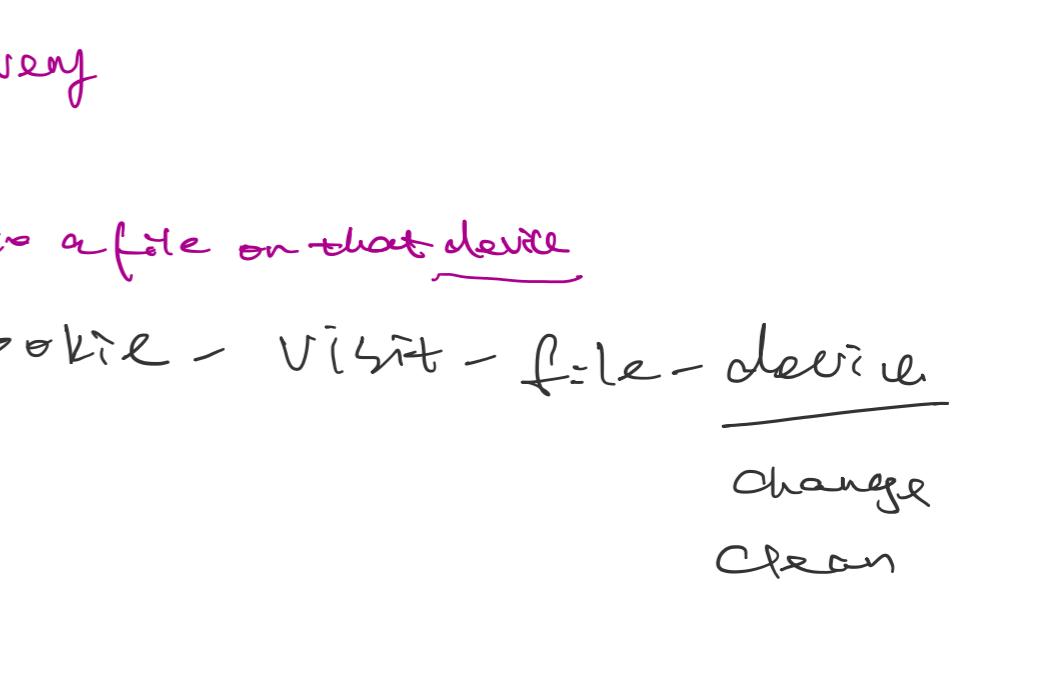


L4.1

2020年4月27日 星期一 下午5:35

subject:	control	design people	login	multiple login (consumer account)	cookies - assigned to a particular browser in device
assign event → experiment		person - login			
to: every page view					
user visible change - reload ✓	x - ?				
unit of diversion - how define individual subject					
commonly used					
① user id - login-create on websites & apps: username/email have 2 good proxy for user - table, unchanged v - user - experiment x now user 2 group app on phone - experiment x now user 2 group visit website - desktop) - consistent experience					
② personality/identification = email / username → account recovery					



0 anonymous id (cookies)					
user visit website - write a cookie - anonymous random identifier to a file on that device					
specific to browser/device					
- changes when you switch browser or device					
Clean cookie - next time visit website - assign a new one					
preference - close - clean cookie auto.					
easier: user clean/change cookie → account (EX: user identifier)					
app on mobile devices = cookie mechanism					

events:					
single event - decide event (experiment control)					
- No consistent experience - user					
v: user visible changes					
fix ranked list - change list order - category, user v notice					

less common					
device id					
- only available for mobile					
- tie to specific device					
- unchangeable by user					
identifiable - immutable - <u>cross device/platform consistency</u>					
user identifier					

IP address					
- change when location change					
unit of diversion example					
experiment - effect of diff. pages					
decide in control/experiment group					
sign in visit class watch video mobile video sign in watch video					
assign to a group (log in) ✓ - change					
before sign in - run experiment ✓ clear cookie? ? ✓ on mobile					
cookie ✓ ✓ clear cookie? ? ✓ ✓ ✓					
over ✓ ✓ ✓ ✓ ✓					
device id device id - non-mobile device - x run experiment ✓					
id ✓					
no address ✓ ? ? ? ? ?					

consideration on selecting unit of diversion					
which unit of diversion will give enough consistency?					
Experiment	event	Cookie	User id		
change reducing text, word	v user probably notice load time fast v/x				
video (load time word)	v notice latency effects				
change button color & size	v (destroying) + button change on reload different look on diff devices of				
change order of search	v user v notice tracking changes				
results					

Add Instructor's Notes					
before quizzes					
users will almost certainly notice cross-device consistency important, watch phone complete - desktop user oriented					
user consistency					
user id - user get consistent experience - change devices align in					

test changes - course displayed - cross devices					
(cross sign in, sign out border) layout of page location of sign in bar					
user visible changes					
v visible change latency change / tracking changes					
(measure learn effect) user adapt to change ✓/x - cookie / user id					

by: latency change, slower → user id less					
user id / cookie - see happen across time					
behavior consideration How do you gather data in each experiment					
user id - identity - gearing & confidential questions					
user consent (IP address)					

which experiments might require additional ethical review					
ask users about newsletter after starting course instead of - user use					
after finishing 1st lesson - no new info being collected					
user id diversion - fine if original data collection was approved					

ask about newsletter when user views course details - website visit behavior					
cookie diversion - depends: Are email addresses stored by cookies?					
- potentially impacts other data collection					
changes course overview page - v user visible change					
cookie diversion - not a problem, and probably already being done assumption: distribution stable					

unit of analysis - click # click # page					
v notice latency effects					
every time visit homepage					
anonymous random identifier - file - device consistent on file					

cross devices - user use sign in, sign out border - website consistent result user visible change x learning effect					
user visible change					
learning effect					
cross devices - user use sign in, sign out border - website consistent result user visible change x learning effect					

unit of analysis - user id					
v user id					
independent assumption v					
diverting groups of events - correlate together					

unit of analysis - unit of diversion					
measure variability of a metric					
unit of diversion: query / cookie					
query - search engine					
metric: coverage % of queries - ad shown = # queries with ad					