heet Name	Description	
xecutive Summary	Synoptic view of raw data, extracted data and related processes, as well as the derivatives and pertinence of conversion and retention rates. Further explanations detailed for all related phases of this project.	
conversion Funnel	A product funnel was created based on 'event_type' detailed in 'raw_user_data. The three phases were stated as 'view', 'shopping_cart', and 'purchase' to label a user's action with the website. Formulas were constructed to measure engagement across phases and from the origin phase ('total_conversion' and 'conversion_rate_next_step'.	
ourchase Activity	A blank sheet was created who's data was drawn from 'raw_user_data' where the 'event_type' was filtered to solely 'purchase'. This new sheet of data provides insight to all purchase activity from users engaging with the website.	
First Purchase	A pivot table was created from the data in the 'Purchase Activity' sheet to isolate a user's first purchase date, using formulas written to yield the minimum purchase date for a user.	
Cohort Analysis	The 'first_purchase_date' identified in the preceeding pivot table was used as the basis for determining the age of a user's purchase cohort. Cohorts were divided into four groups over a six month timeline, where participation was measured as a count of the unique user id's in across the months in focus.	
Retention Rates	Retention Rates were calculated as a ratio of the change in participation across cohort ages.	
Raw User Activity	Origin data. Each line of data represents one session of a user's interaction with the company website.	
_egend		
Summaries		
nalysis		
Calculations		
Raw Data		

nmary															
Synopsis															
Total conversion rates and conversion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion funnel was determined to have three action-based phases that include 'view', 'shopping_cart', and jurchase'. The greatest total conversion rate was about 10% found in 'purchase', while the greatest conversion rate to the next step was between 'shopping_cart' and 'purchase' all about 29%.															
Purchase data was isolated to identify minimum purchase data per user. This data was used to determine the age of the cohort. From there, retention rates were calculated as a derivative of current user periticipation and initial user participation mornithy, across a six-month period from September 2020 to February 2021. Formulas were applied in this pivot table that referenced the preceeding conversion furnel. The cohort with the highest reference rates was the initial cohort, with scores ranging form approximately 6.9%-12.2%, followed by retention rates ranging between approximately 3-42.5% in the second cohort.															
Description															
Each row of raw data is representative of one event by a user on the company's website. The event type is detailed as one of three actions: 'view', 'shoppping_cart', or 'purchase'. The event															
The conversion funnel was defined by event type and isolated into three phases: View, "hopping, carf, and purchase". Unique user if's were congregated as the values for each phase. Total conversion measured participation in the initial furnel phase against each following phase. Conversion rates by phase were measured by a ratio of participation in the current and procedure phases. While purchase had the highest total conversion rate, the greatest conversion over phase was from 'shopping, cart' to 'purchase.' In turnous process was form shopping, cart or 'purchase.' It would be of breseed to divide deeper into these transactions for further insight. Were there any sales and prioring stategies that drove this participaty effect, and are lost replicable? Could they stand to be heightened to maximize potential revenue?															
Cohorts were formed based on "event_month", which was extracted from "event_date". Cohorts were tracked over a six month period ranging from September 2020 to February 2021. Reterition rates were calculated from the data harvested in the cohort_analysis pvot table, which assessed user behavior on a month-by-month basis. Reterition rates were calculated for each of the 6 months under review and grouped into 4 age cohorts. The highest reterition rates were found in the first and second cohorts. It is worth investigating what sales, princip, or promotional strategies conditions may have changed or influenced the obselson in the first two cohort groups.															
	Synopsis  Total conversion rates and conversion rates by phase were calculated based on raw transaction data for e-commence company. The conversion funnel was determined to have three calculated based on raw transaction data for e-commence company. The conversion funnel was determined to have three calcion-based phases that include 'wen', vihopping_cart' and 'purchase'. The greatest total conversion rate was about 10% found in purchase, while the greatest conversion rate to the next step was between 'shopping_cart' and 'purchase' at about 29%. Purchase data was used to determine the age of the cohort. From there, referition rates were calculated as a certificate or current user participation and initial user participation monthly, across as six-month period from September 2/20 to February 2021. Formulas were applied in this pivot table that referenced across as incomb period from September 2/20 to February 2021. Formulas were applied in this pivot table that referenced remains and the second sec	Synopsis  Total convention rates and conversion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion turnel was determined to have three action-based phases that include 'vew,' inhopping, card,' and 'purchase.' The greatest total conversion rate was about 10%; found in 'purchase,' while the greatest conversion rate to the next step was between 'shopping, card and 'purchase' at about 29%.  Purchase data was used to determine the age of the cohort. From there, retention rates were calculated as a derivative of current user participation and initial user participation morthly, across a six-month peoff of mos Repriente 2/20 to February 2021. Formulas were applied in the pivot table that referenced was some six and the six of the	Synopsis  Total convention rates and conversion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion furnel was determined to have three action-based phases that include Vew, "shopping, card, and "purchase." The greatest total conversion rate was about 10% found in purchase, while the greatest conversion rate but to the next step was between *hopping, card and purchased at about 29%.  Purchase data was usefulated to identify minimum purchase date be purchase. This data was used to determine the age of the cohort. From there, retention rates were calculated as a derivative of current user participation and initial user participation monthly, across a six-month period from September 2020 to February 2021. Formulas were applied in this phot table that referenced the second	Synopsis  Total convention rates and convension rates by phase were calculated based on raw transaction data for e-commerce company. The conversion funnel was determined to have three action-based phases that include "Vew," whopping, card," and "purchase." The greatest total conversion rate was about 10% (bound in purchase," while the greatest convension rate to the next step was between "shopping, card" and "purchase" at about 29%. Purchase data was isolated to isolarly minimum purchase date per user. The data was used to determine the age of the cohort. From there, retention rates were calculated as a derivative of current user participation and initial user participation monthly, accross a six-month pend for mos Pepterher 2000 to February 2001. Formulas were applied in this pivot table that reterenced the properties of the pending of the properties of the pending of the pendi	Synopsis  Total convention rates and conversion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion funnel was determined to have three action-based phases that Include "Yow," knopping, card," and "purchase". The greatest total conversion rate was about 10% (bound in purchase; while the greatest conversion rate to the next step was between "shopping, card and "purchase" at about 28%. Purchase data was used isolated to isolatiny innimum purchase date per user. This data was used to determine the age of the cohort. From there, retention rates were calculated as a derivative of current user participation and initial user participation monthly, accross a six-month pend from September 2020 to Petunay 2021. Formulas were applied in this pivot table that referenced the properties of the period of the period properties with the properties of the period properties. The period properties of the period properties was the initial cohort, with scores anging from approximately 8 9% 1-25%, followed by retention rates anging between approximately 3-6-25% in the second cohort.  Description  Each row of raw data is representative of one event by a user on three actions: Yew's, 'shopping, card', or 'purchase'. The event data is detailed as the full date of the user's engagement with the website, which occured during a six month range from spetiments 2020 to Fedurusy 2021. The perferient data extracted for further analysis included the event month and the event types which were extigated in the creation of the pivot table boversion, Jamea' and the event month and the event types which were extigated in the creation of the pivot table boversion, Jamea' and trade to the data extracted for the properties. The perferient data extracted to the perferience, makes of the properties. The perferient data extracted to the perferience, makes of the p	Synopsis  Total conversion rates and convenion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion funnel was determined to have three action-based phase that include Vew, "Inoping, cart", and purchase." The greatest total conversion rate was about 10% to the next data for the second conversion rate was about 10% to the next data. The provise of the was a located to federily minimum purchase data. Purchase data was included to hereinly minimum purchase data. Provise the save should be a derivative of current use prairicipation and initial use participation roundly, across a six-month period from September 2020 to February 2021. Formulas were applied in this plus table that referenced the preceding conversion human. The cohort with the highest retention rates were applied in this plus table that referenced the preceding conversion human. The cohort with the highest retention rates were applied in this plus table that referenced the preceding conversion human. The cohort with the highest retention rates were applied in this plus table that referenced the preceding conversion human. The cohort with the highest retention rates were she mild cohort, with access ranging them approximately 6.5%-12.5%, followed by retention rates are graph of the province of the company's website. The event dyps is detailed as the full date of the user's engagement with the website, which coursed during as with morth range from September 2020 to February 2021. The event date is detailed as the full date of the user's engagement with the website, which coursed during as with morth range from September 2020 to February 2021. The pertinent date activated for the retention, rates.'  The conversion function and the event type as detailed into three phases: View,' thopping, cart,' and 'purchaset. Unique user in were considered to the phase activate the phase for each phase were measured participation in the united manifest and preceding phases. When 'purchase I this phase total conversion massu	Synopsis  Total conversion rates and conversion rates by phase were calculated based on raw transaction data for e-commerce company. The conversion furner laws determined to have tree company. The conversion furner laws determined to have tree company. The conversion furner laws all about 10% found in furchasel, while the greatest conversion rate was about 10% found in furchasel, while the greatest conversion rate to the next steps was between himping, carl and purchasel at about 20%.  Purchase data was isolated to identify minimum purchase date per user. The data was used to determine the age of the control. From these, retention rates were calculated as a derivative of current user participation and hills all exemptions of the control. From these, retention nates were calculated as a derivative of current users as when the period from disciplination and hills all exemptions and hills are presented and control, with some sample to the preceding conversions furnith. The order with the highest retention rates was the initial cortex, with scores ranging between approximately 3-4 25% in the second cohort.  Description  Description  Description  Description  Description  Description as the initial control, with scores ranging between approximately 3-6 25% in the second cohort.  Description are the second during a six month range from the company's well-bett. The event duties is detailed as the lid dist of the use of the lid dist of the use of Federium 282. The period that excluded is detailed as the lid dist of the use of Federium 282. The period that excluded as detailed as the lid distoner of the user of the period that excluded as a detailed as the lid distoner of the user of the period that excluded as a detailed as the lid distoner of the user of the light and all the light and the light a	Symposis  Total conversion rates and convention rates by phase were company. The conversion there was described for e-commerce company. The conversion funders and described for e-commerce company. The conversion funders are described for e-commerce company. The conversion funders are described for e-commerce company. The conversion funders are described for e-conversion of the post of the conversion funders are described for conversion funders and described for e-conversion funders are described for e-conversion funders and described for e-conversion funders are described for e-conversion funders and e-conversion funders are described for e-conversion funders are described for e-conversion funders are described for e-conversion funders and e-conversion funders are described for e-conversion funders and e-conversion funders are described for	Sympopis  That accereation rates and conversion rates by phase seven coloidated based on any transaction date for economic recompany. The conversion furner laws determined to have three estation-based phases that include view, "stopping, cart" and state of the conversion furner laws determined to have three estation-based phases that include view," stopping, cart and state of the conversion furner laws determined to have three estations and the conversion furner laws determined the properties of the conversion	Synopsis  Total conversion rates and convention rates by phase were calculated based on me transaction date for e-commence concurrency. This convention facilities of him to be an extension of both through concurrency. The convention funds was determined to have from the convention facilities of the convention of the state of the convention facilities and the convention facilities was alloud 10% to the convention of the convention facilities and the convention facilities are predicted and extending facilities. The convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and the convention facilities are predicted for the convention facilities and producted for the convention faciliti	Synopsis  Total comments retained and conversion rates by phase were calculated based on my immacrized and dist for ecomment or common and the state of the common and the common	Sympapsis  The convention rates and convention rates by phase were calculated based on max tribinaction state to economical experiments of the convention of	Synoppis  The conversion rates and conversion rates by please were conjugary. The conversion furned as a determined to have three conjugary. The conversion furned as a determined to have three determined to the rest day as attement being, careful and conversion rate to the rest day as attement being, careful and conversion rate to the rest day as attement being, careful and conversion rate to the rest day as attement being, careful and conversion rate to the rest day as attement being on the conversion rate of the rest day as attement being of the place of the side of device of the place of the side of the side of the place of the place of the side of the place of the side of the place of the place of the side of the place of th	Synoppia  It disconvention rate and convention rates by phase were company. The accountable function of the convention function and definition of the convention and the conven	Synoppils  The conversion that and conversion rate by phase were compact. The conversion furnity and price were compact. The conversion furnity and price were designed to the conversion of the set and 17th the conversion of the 17th the 1

Α	В	С	D	E	F	G	Н	I	J	
event_type	COUNTUNIQUE of use	total_conversion	conversion_rate_next_step							
view	10453	99.94%	100%							
shopping_cart	3036	29.03%	29.04%							
purchase	1081	10.34%	35.61%							
Grand Total	10459									

user_id	event_type	category_code	brand	price	event_date	first_purchase_date	event_month	first_purchase_month	cohort_age
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625358482476	purchase	computers.components.tv_tuner	perfeo	19.49	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519463641	purchase	stationery.cartrige	hp	71.02	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519463641	purchase	stationery.cartrige	hp	71.02	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519463641	purchase	stationery.cartrige	hp	71.02	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625503751892	purchase	appliances.environment.vacuum	topon	35.87	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625519463641	purchase	stationery.cartrige	hp	71.02	2020-09-24	2020-09-24	2020-09	2020-09	0
a1515915625385888878	purchase	stationery.cartrige	cactus	24.73	2020-09-25	2020-09-25	2020-09	2020-09	0
a1515915625385888878	purchase	stationery.cartrige	cactus	24.73	2020-09-25	2020-09-25	2020-09	2020-09	0
a1515915625519762021	purchase		kitfort	140.63	2020-09-25	2020-09-25	2020-09	2020-09	0
a1515915625519762021	purchase		kitfort	140.63	2020-09-25	2020-09-25	2020-09	2020-09	0
a1515915625520029989	purchase	stationery.cartrige	hp	29.57	2020-09-26	2020-09-26	2020-09	2020-09	0
a1515915625520049345	purchase	auto.accessories.player	kenwood	104.86	2020-09-26	2020-09-26	2020-09	2020-09	0
a1515915625520070184	purchase	computers.peripherals.printer	epson	647.29	2020-09-26	2020-09-26	2020-09	2020-09	0
a1515915625520070184	purchase	computers.peripherals.printer	epson	647.29	2020-09-26	2020-09-26	2020-09	2020-09	0
a1515915625520070184	purchase	computers.peripherals.printer	epson	647.29	2020-09-26	2020-09-26	2020-09	2020-09	0
a1515915625520227072	purchase	computers.peripherals.wifi	ubiquiti	155.43	2020-09-27	2020-09-27	2020-09	2020-09	0
a1515915625520227072	purchase	computers.peripherals.wifi	ubiquiti	130.73	2020-09-27	2020-09-27	2020-09	2020-09	0
a1515915625520227072	purchase	computers.peripherals.wifi	ubiquiti	155.43	2020-09-28	2020-09-27	2020-09	2020-09	0
a1515915625371158307	purchase	stationery.cartrige	cactus	20.14	2020-09-28	2020-09-28	2020-09	2020-09	0
a1515915625371158307	purchase	stationery.cartrige	cactus	20.14	2020-09-28	2020-09-28	2020-09	2020-09	0
a1515915625371158307	purchase	stationery.cartrige	cactus	20.14	2020-09-28	2020-09-28	2020-09	2020-09	0
a1515915625371158307	purchase	computers.peripherals.printer	canon	192.86	2020-09-28	2020-09-28	2020-09	2020-09	0

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ser_id N	/IIN of event_da				
151591562535	2020-11-04				
151591562535	2020-09-29				
151591562535	2020-09-24				
a151591562535	2020-11-20				
a151591562536	2020-11-01				
a151591562537	2020-09-28				
a151591562538	2020-10-01				
151591562538	2020-09-25				
a151591562539	2020-11-03				
a151591562539	2020-10-17				
a151591562540	2020-10-11				
a151591562541	2020-10-09				
151591562541	2020-10-03				
151591562546	2020-10-10				
a151591562546	2020-10-04				
a151591562547	2020-10-10				
151591562548	2020-11-09				
151591562548	2020-10-05				
a151591562550	2020-09-24				
a151591562550	2020-09-29				
a151591562550	2020-11-08				
a151591562550	2020-10-13				
a151591562550	2020-12-20				
a151591562550	2020-10-03				
a151591562551	2020-10-21				

Grand Total	1081	56	22	2	2	1081
2021-02	188					188
2021-01	233	16				233
2020-12	203	9	6			203
2020-11	238	13	7	1		238
2020-10	187	14	7	1	1	187
2020-09	32	4	2		1	32
first_purchase_month			2		4 Grand	d Total
COUNTUNIQUE of user_id	cohort_age					

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Executive Summary 

conversion\_funnel 

purchase\_activity 

first\_purchase 

cohort\_analysis 

retention\_rates 

raw\_user\_activity

retention_rates	cohort_age						
irst_purchase_month	1	2	3	4			
2020-09	12.50%	6.25%	0.00%	3.13%			
2020-10	7.49%	3.74%	0.53%	0.53%			
2020-11	5.46%	2.94%	0.42%	0.00%			
2020-12	4.43%	2.96%	0.00%	0.00%			
2021-01	6.87%	0.00%	0.00%	0.00%			
2021-02	0.00%	0.00%	0.00%	0.00%			

user_id	event_type	category_code	brand	price	event_date	
a1515915625519014356	view	computers.peripherals.printer	pantum	113.81	2020-09-24	
a1515915625519392599	view	stationery.cartrige	lomond	8.35	2020-09-24	
a1515915625369253995	view	construction.tools.welding		250.63	2020-09-24	
a1515915625369253995	view	construction.tools.welding		250.63	2020-09-24	
a1515915625519410002	view	computers.desktop	steelseries	58.49	2020-09-24	
a1515915625519413944	view	appliances.kitchen.microwave	samsung	130.11	2020-09-24	
a1515915625519397646	view	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519397646	shopping_cart	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519397646	view	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519417750	view	computers.network.router	d-link	53.14	2020-09-24	
a1515915625519397646	shopping_cart	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625519397646	purchase	computers.peripherals.camera	logitech	123.35	2020-09-24	
a1515915625358482476	view	computers.components.tv_tuner	perfeo	19.49	2020-09-24	
a1515915625358482476	shopping_cart	computers.components.tv_tuner	perfeo	19.49	2020-09-24	
a1515915625358482476	purchase	computers.components.tv_tuner	perfeo	19.49	2020-09-24	
a1515915625519443407	view	computers.components.motherboard	asrock	77.73	2020-09-24	
a1515915625519443407	shopping_cart	computers.components.motherboard	asrock	77.73	2020-09-24	
a1515915625519443407	view	computers.components.motherboard	asrock	77.73	2020-09-24	
a1515915625519446240	view		formula	35.54	2020-09-24	
a1515915625519452732	view	computers.notebook	hp	27.62	2020-09-24	
a1515915625519460662	view	computers.peripherals.joystick	logitech	162.51	2020-09-24	
a1515915625519460662	shopping_cart	computers.peripherals.joystick	logitech	162.51	2020-09-24	
21515015625510460662	view	computers peripherals joyetick	logitoch	162 51	2020_00_24	

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Executive Summary 

conversion\_funnel 

purchase\_activity 

first\_purchase 

cohort\_analysis 

retention\_rates 

raw\_user\_activity 

raw\_user\_activity