Instituto Tecnológico de Culiacán

Carrera: Ingeniería en Sistemas Computacionales

Materia: Temas Selectos de Bases de Datos

Alumnos:

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Cesar Alfredo Astorga Ochoa

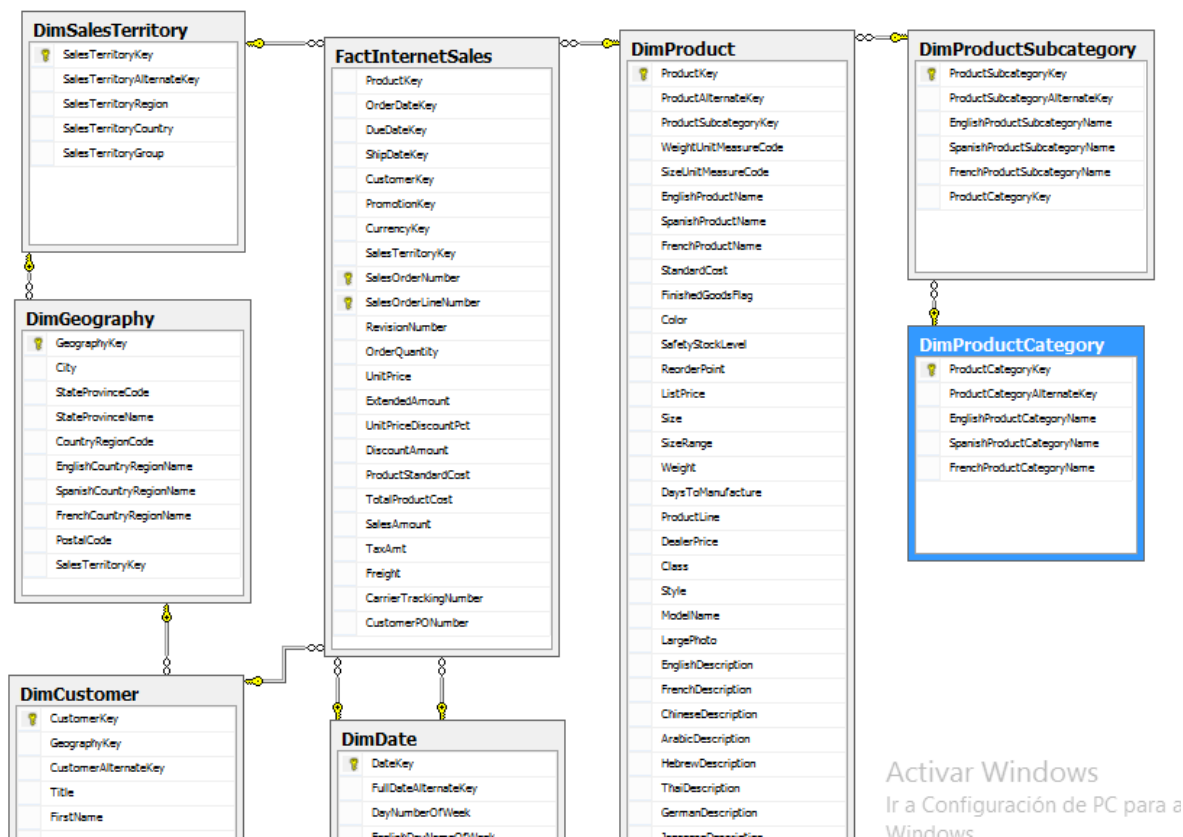## Trabajo: U2 T5 Bussiness Intelligence

Fecha: 28-Marzo-2022

Horario de clase: 05:00 – 06:00 pm
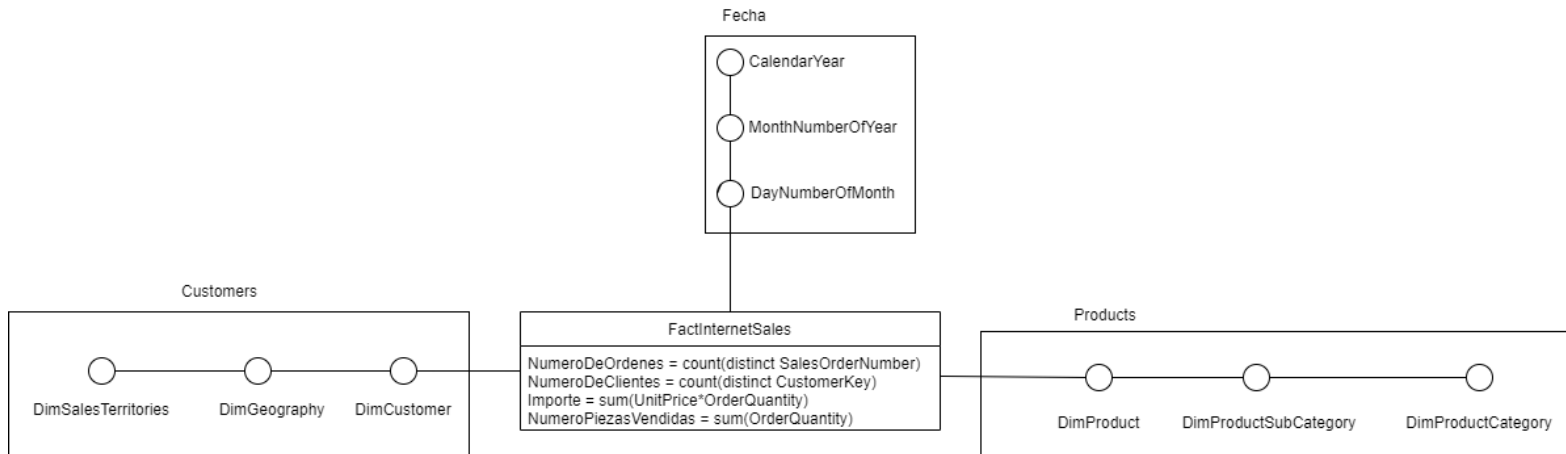
Profesor: Daniel Esparza Soto

Tarea 4: Implementar el modelo multidimensional de la tarea 3 (ADVENTUREWORKDW2008R) en la herramienta BI.

Descargar el archivo y acoplar el archivo de datos y el archivo del registro de transacciones.

http://desarrollopro.com/tec/AdventureWorksDW2008R2.ZIP

1. Mostrar el modelo multidimensional diseñado en la tarea anterior.

Fecha
- CalendarYear
- MonthNumberOfYear
- DayNumberOfMonth

Customers
- DimSalesTerritories
- DimGeography
- DimCustomer

FactInternetSales
NumeroDeOrdenes = count(distinct SalesOrderNumber)
NumeroDeClientes = count(distinct CustomerKey)
Importe = sum(UnitPrice*OrderQuantity)
NumeroPiezasVendidas = sum(OrderQuantity)

Products
- DimProduct
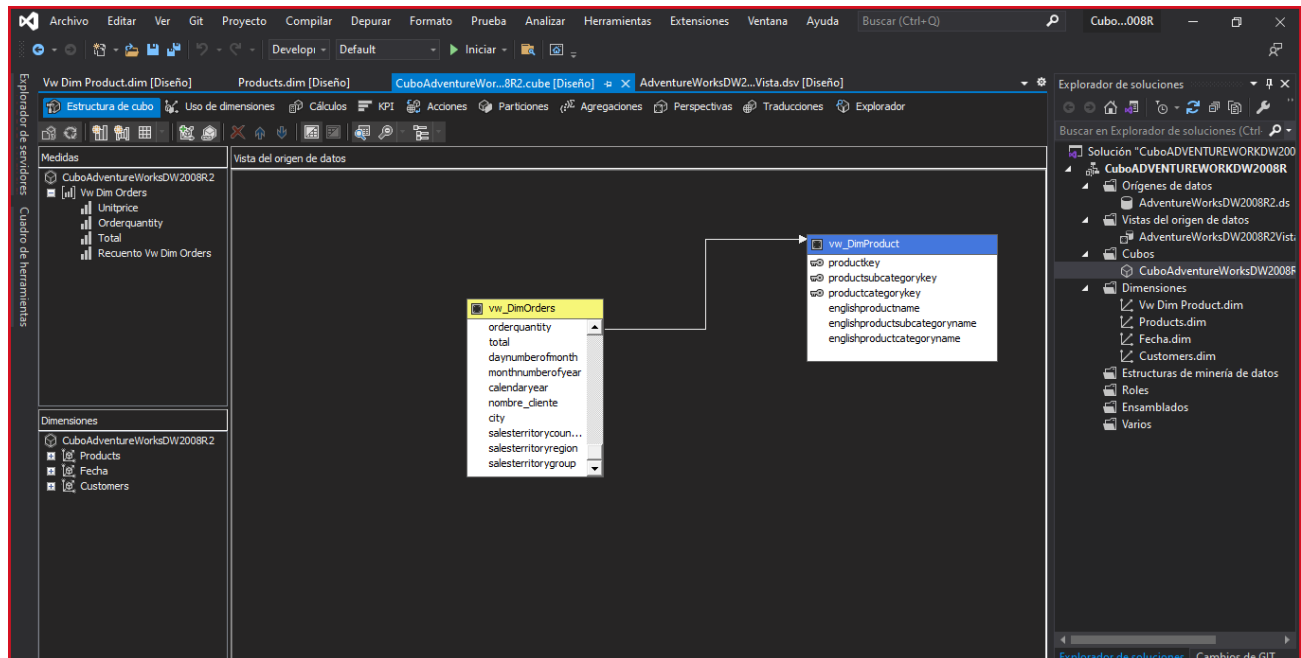- DimProductSubCategory
- DimProductCategory

2. Vistas creadas

```
create view vw_DimProduct as
select
p.productkey,p.englishproductname,sc.productsubcategorykey,sc.englishproductsubcateg
oryname,c.productcategorykey,c.englishproductcategoryname
from dimproduct p
inner join dimproductsubcategory sc on
sc.productsubcategorykey=p.productsubcategorykey
inner join dimproductcategory c on c.productcategorykey=sc.productcategorykey

go
create view vw_DimOrders as
select
f.salesordernumber,f.productkey,f.salesorderlinenumber,f.unitprice,f.orderquantity,t
otal=(f.unitprice*f.orderquantity),
d.daynumberofmonth,d.monthnumberofyear,d.calendaryear,
'nombre_cliente' =c.firstname+'
'+c.lastname,g.city,t.salesterritorycountry,t.salesterritoryregion,t.salesterritoryg
roup
from factinternetsales f
inner join dimdate d on d.datekey=f.duedatekey
inner join dimcustomer c on c.customerkey=f.customerkey
inner join dimgeography g on g.geographykey=c.geographykey
inner join dimsalesterritory t on t.salesterritorykey=g.salesterritorykey
```

3. Impresión del cubo de datos, con hechos y sus medidas, dimensiones y sus jerarquías

Cubo

Hechos y medidas
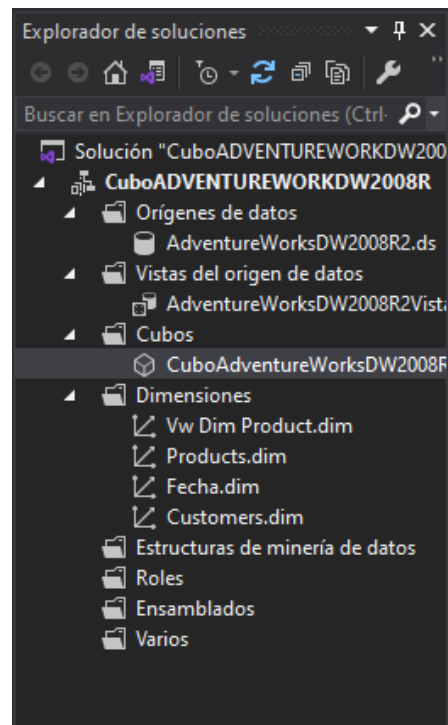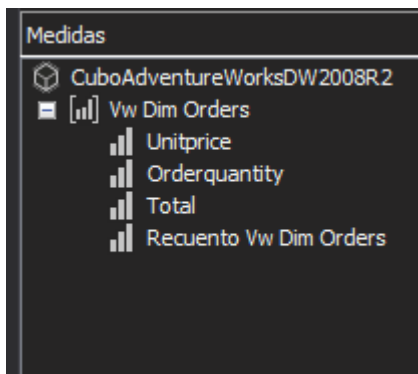
Dimensiones

Jerarquías

-Products:

-Fecha:

-Customers:

Atributos
- Customers
  - City
  - Nombre Cliente
  - Salesordernumber
  - Salesterritorycountry
  - Salesterritorygroup
  - Salesterritoryregion

Jerarquías
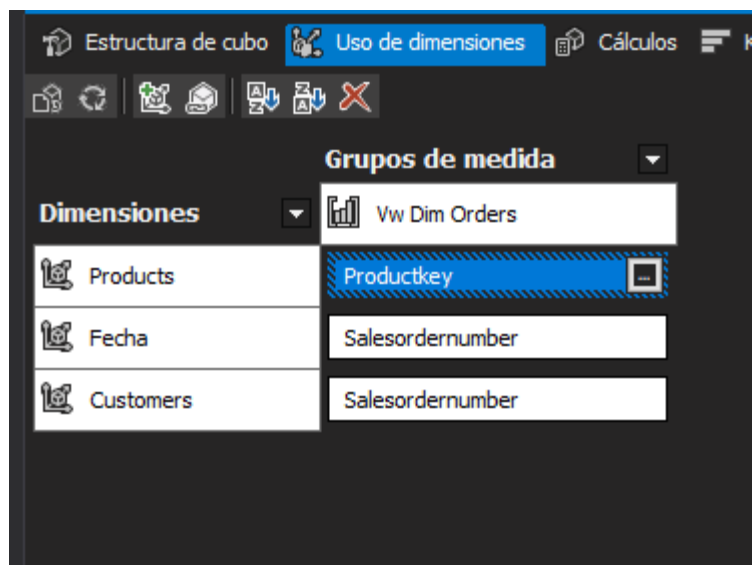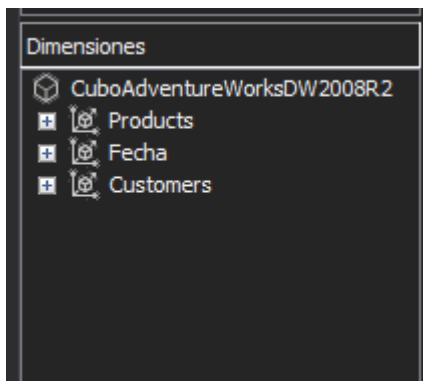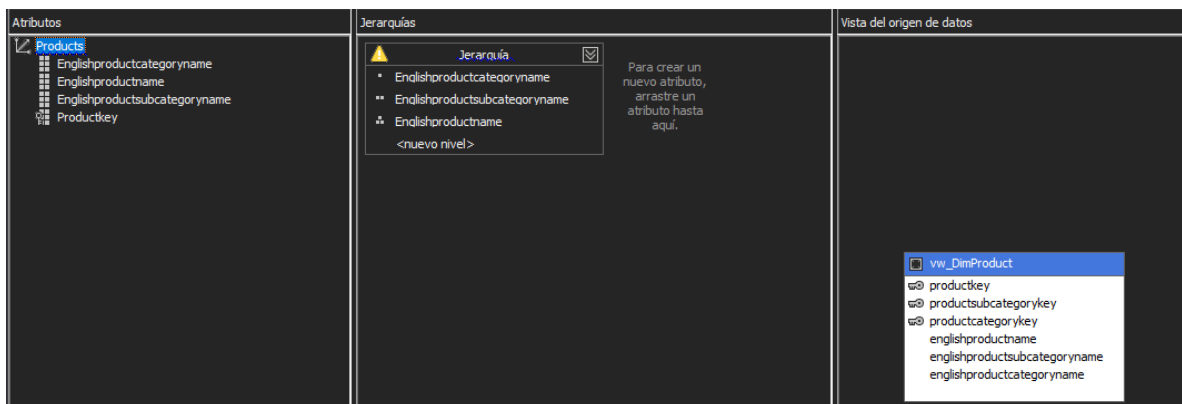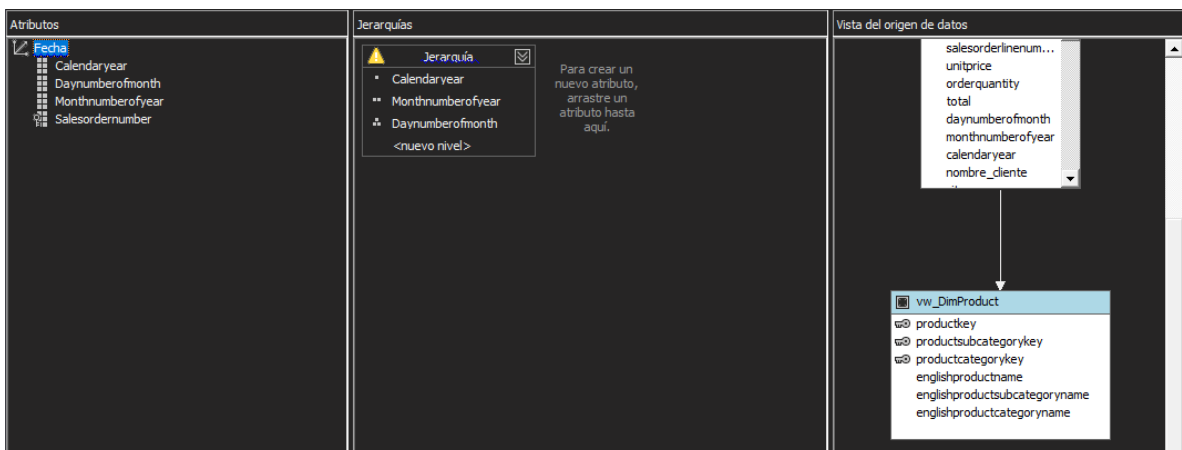- Jerarquía
  - Salesterritoryregion
  - Salesterritorycountry
  - Salesterritorygroup
  - City
  - Nombre Cliente
  - <nuevo nivel>

Para crear un nuevo atributo, arrastre un atributo hasta aquí.

Vista del origen de datos

vw_DimOrders
- salesordernumber
- productkey
- salesorderlinenum…
- unitprice
- orderquantity
- total
- daynumberofmonth
- monthnumberofyear
- calendaryear
- nombre_cliente
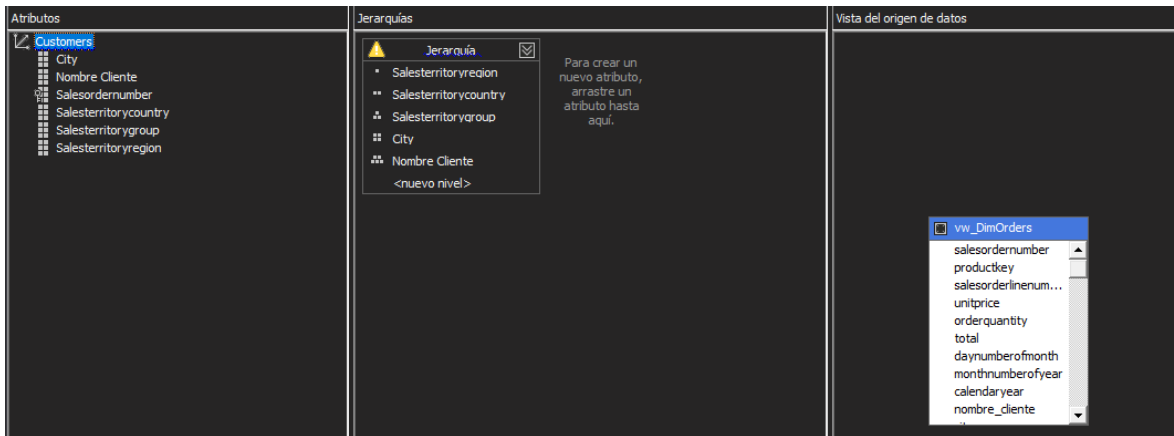
4. **Impresión de 10 reportes propuestos con Business Intelligence Development Studio de SQL Server.**

1 – Numero de ordenes por año de todas las regiones

Orderquantity	Año				
Region	2005	2006	2007	2008	Total general
Australia	367	846	5024	7108	13345
Canada	42	222	2835	4521	7620
Central			8	12	20
France	55	222	2095	3186	5558
Germany	68	230	2075	3252	5625
Northeast			8	19	27
Northwest	113	349	3249	5282	8993
Southeast		1	8	30	39
Southwest	188	527	4551	6999	12265
United Kingdom	90	253	2743	3820	6906
Total general	923	2650	22596	34229	60398

2 – Numero de ordenes por año y mes de todas las regiones

Orderq		2005						2006										2007										2008										Total general
Region	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	
Australia	33	70	57	66	65	76		68	54	65	65	77	63	65	71	70	86	70	32	100	102	114	103	104	113	266	571	815	874	883	367	344	392	1024	398	1143	1151	700	150	13345
Canada	2	9	7	4	7	13		15	31	26	17	18	11	26	31	11	11	12	13	14	11	10	13	12	11	44	426	532	575	524	663	703	608	559	592	722	619	523	189	7620
Central																									1				4	3	2	1	1		2	6				20
France	4	11	8	9	8	15		11	11	14	14	17	11	21	18	30	18	20	37	27	24	34	23	41	43	108	283	363	313	330	488	439	439	457	463	518	472	330	62	5558
Germany	6	10	10	12	16	14		9	13	18	19	20	16	23	19	19	18	25	31	23	25	36	35	32	39	133	256	344	332	315	445	433	416	483	451	527	572	300	70	5625
Northeast																						1				2				5	4	2			5	3	5		27
Northwest	12	13	14	18	25	31		34	27	22	22	20	31	45	39	31	23	16	33	25	26	23	35	38	32	107	399	552	632	610	770	752	655	712	771	803	827	607	155	8993
Southeast															1							1				2		2	2		4	2	10	9		3	2		39
Southwest	14	32	30	40	31	41		44	24	38	45	72	45	58	53	35	33	28	52	40	28	37	27	40	58	177	614	782	838	846	1064	827	904	936	974	1237	1078	712	171	12265
United Kingdom	8	12	21	22	12	15		23	18	8	10	10	11	17	26	40	29	24	37	42	23	41	30	36	37	123	364	424	517	441	653	544	482	545	549	606	621	412	61	6906
Total general	79	157	147	171	164	205		204	178	191	192	##	188	255	258	##	218	195	301	272	245	295	278	##	335	##	2917	3818	4149	3961	5058	4748	4503	4779	4814	5578	5349	3598	##	60398

3 – Total de ventas por región

	Region										
	Australia	Canada	Central	France	Germany	Northeast	Northwest	Southeast	Southwest	United Kingdom	Total general
Total	9061000.584	1977844.862	3000.8296	2644017.714	2894312.338	6532.4682	3649866.551	12238.8496	5718150.812	3391712.211	29358677.22

4 – Total de ventas por año de los continentes

Total	Año				
Continente	2005	2006	2007	2008	Total general
Europe	657436.5888	1603142.205	3232405.53	3437057.94	8930042.263
North America	1104395.258	2837251.28	3152866.125	4273121.71	11367634.37
Pacific	1225145.275	2161723.675	2961056.785	2713074.85	9061000.584
Total general	2986977.122	6602117.159	9346328.44	10423254.5	29358677.22

5 – Numero de ordenes por año de todos los continentes, países y zonas

Orderquantity	Año				
Continente	2005	2006	2007	2008	Total general
⊟ Europe					
⊟ France					
France	55	222	2095	3186	5558
⊟ Germany					
Germany	68	230	2075	3252	5625
⊟ United Kingdom					
United Kingdom	90	253	2743	3820	6906
⊟ North America					
⊟ Canada					
Canada	42	222	2835	4521	7620
⊟ United States					
Central			8	12	20
Northeast			8	19	27
Northwest	113	349	3249	5282	8993
Southeast		1	8	30	39
Southwest	188	527	4551	6999	12265
⊟ Pacific					
⊟ Australia					
Australia	367	846	5024	7108	13345
Total general	923	2650	22596	34229	60398

6 –Numero de ordenes por año y mes de todos los continentes y países, con sus respectivas categorías

Orderquantity Continente	2005/7	2005/8	2005/9	2005/10	2005/11	2005/12	2006/1	2006/2	2006/3	2006/4	2006/5	2006/6	2006/7	2006/8	2006/9	2006/10	2006/11	2006/12	2007/1	2007/2	2007/3	2007/4	2007/5	2007/6	2007/7	2007/8	2007/9	2007/10	2007/11	2007/12	2008/1	2008/2	2008/3	2008/4	2008/5	2008/6	2008/7	2008/8	Total general
Europe																																							
France																																							
Accessories																									47	172	248	224	217	320	289	283	318	308	343	292	229	54	3344
Bikes	4	11	8	9	8	15	11	11	14	14	17	11	21	18	30	18	20	37	27	24	34	29	41	43	51	58	60	44	57	95	79	90	79	91	107	109	49		1444
Clothing																									10	53	61	51	56	73	71	66	60	70	68	71	52	8	770
Germany																																							
Accessories																									63	159	235	267	206	290	270	272	302	267	329	339	216	58	3273
Bikes	6	10	10	12	16	14	9	13	18	19	20	16	23	19	19	18	25	31	23	25	36	35	32	39	52	56	61	69	60	98	96	82	114	109	130	138	47		1600
Clothing																									18	41	48	56	49	57	67	62	67	75	68	95	37	12	752
United Kingdom																																							
Accessories																									59	223	288	352	286	402	346	307	346	350	383	394	275	46	4057
Bikes	8	12	21	22	12	15	23	18	8	10	10	11	17	26	40	29	24	37	42	29	41	30	36	37	54	88	67	87	78	148	103	106	117	109	139	137	67		1858
Clothing																									16	53	69	78	77	103	95	69	82	90	84	90	70	15	991
North America																																							
Canada																																							
Accessories																									17	321	409	432	395	500	508	435	415	449	512	432	390	150	5365
Bikes	2	9	7	4	7	13	15	31	26	17	18	11	26	31	11	11	12	13	14	11	10	13	12	11	19	27	25	42	37	60	69	46	39	49	72	76	28		924
Clothing																									8	78	98	101	92	103	126	127	105	94	138	111	111	39	1331
United States																																							
Accessories																									130	683	903	1023	1012	1207	1116	1043	1126	1133	1316	1183	922	252	13049
Bikes	26	45	44	58	56	72	78	51	60	67	92	76	103	93	66	56	44	91	66	54	60	62	79	92	122	168	188	195	211	332	283	262	301	306	383	400	165		4907
Clothing																									32	166	243	254	239	303	286	261	284	316	357	331	240	76	3388
Pacific																																							
Australia																																							
Accessories																									113	381	517	524	579	565	556	596	603	617	700	672	467	114	7004
Bikes	33	70	57	66	65	76	68	54	65	65	77	63	65	71	70	86	70	92	100	102	114	109	104	113	130	113	151	191	174	238	223	236	237	229	290	288	117		4472
Clothing																									23	77	147	159	136	164	165	160	184	152	159	191	116	36	1869
Total general	79	157	147	171	164	205	204	178	191	192	234	188	255	258	236	218	195	301	272	245	295	278	304	335	964	2917	3818	4149	3961	5058	4748	4503	4779	4814	5578	5349	3598	860	60398

7 – Total de ventas por continente con categorías y subcategorías

Continente	Bike Racks	Bike Stands	Bottles and Cages	Caps	Cleaners	Fenders	Gloves	Helmets	Hydration Packs	Jerseys	Mountain Bikes	Road Bikes	Shorts	Socks	Tires and Tubes	Touring Bikes	Vests	Total general
Europe																		
Accessories	9360	10653	16985.27		1534.35	8945.86		75508.42	8633.43						70649.08			202269.41
Bikes											3066041.976	4290493.437				1288397.31		8644932.723
Clothing				7587.56			7983.74			50330.24			7768.89	1168.7			8001	82840.13
North America																		
Accessories	24000	18603	28567.65		3975	30530.22		104865.03	21171.15						128087.87			359799.92
Bikes											4032898.139	5225542.184				1562721.6		10821161.92
Clothing				8288.78			19273.63			82959.92			52772.46	2930.74			20447	186672.53
Pacific																		
Accessories	6000	10335	11245.27		1709.25	7143.5		44962.15	10503.09						46792.37			138690.63
Bikes											2853819.449	5004548.416				993682.14		8852050.004
Clothing				3811.76			7763.33			39660.52			10778.46	1006.88			7239	70259.95
Total general	39360	39591	56798.19	19688.1	7218.6	46619.58	35020.7	225335.6	40307.67	172950.68	9952759.564	14520584.04	71319.81	5106.32	245529.32	3844801.05	35687	29358677.22

8 – Total de ventas por país de categorías y subcategorías con su Id

País	214 Helmets Accessories	217 Helmets Accessories	222 Helmets Accessories	225 Caps Clothing	228 Jerseys Clothing	231 Jerseys Clothing	234 Jerseys Clothing	237 Jerseys Clothing	310 Road Bikes Bikes	311 Road Bikes Bikes	312 Road Bikes Bikes	313 Road Bikes Bikes	314 Road Bikes Bikes	320 Road Bikes Bikes	321 Road Bikes Bikes	322 Road Bikes Bikes	323 Road Bike Bikes
Australia	15675.52	14415.88	14870.75	3811.76	1999.6	2099.58	2349.53	2599.48	397187.97	318466.03	390031.43	361405.27	382874.89	6990.982	10961.86	2796.3928	5480.
Canada	9622.25	9517.28	8957.44	2175.58	4099.18	3099.38	2699.46	3443.31	107348.1	85878.48	110926.37	114504.64	85878.48	699.0982	2348.97	699.0982	782.
Central			69.98														
France	8537.56	6998	7732.79	2130.63	2349.53	2299.54	2149.57	1949.61	46517.51	82300.21	82300.21	67987.13	46517.51	1398.1964	3914.95	1398.1964	3131.
Germany	8782.49	7662.81	7312.91	2490.23	1999.6	2949.41	2499.5	1749.65	93035.02	100191.56	64408.86	50095.78	82300.21	1398.1964	5480.93	1398.1964	3131.
Northeast	34.99	69.98	34.99	17.98													
Northwest	10147.1	10776.92	12246.5	2490.23	3599.28	3749.25	4149.17	3949.21	171756.96	132395.99	171756.96	146703.07	157443.88	1398.1964	7829.9	2097.2946	4697.
Southeast	69.98	34.99	34.99	8.99	99.98	49.99											782.
Southwest	15045.7	14800.77	13401.17	3596	4649.07	4449.11	5648.87	4499.1	275526.79	229009.28	311309.49	254057.17	214696.2	1398.1964	8612.89	699.0982	5480.
United Kingdom	10112.11	8677.52	9692.23	2966.7	2649.47	3399.32	3099.38	2449.51	110926.37	57252.32	75143.67	85878.48	85878.48	3914.95	2796.3928		4697.
Total general	78027.7	72954.15	74353.75	19688.1	21445.71	22095.58	22595.48	20645.87	1202298.72	1005493.87	1205876.99	1080637.54	1055589.65	13282.8658	43064.45	11884.6694	28187.6

9 – Total de ventas por producto con Id por grupo de territorio

Total				
Products	Europe	North America	Pacific	Total general
⊝ All-Purpose Bike Stand				
486	10653	18603	10335	39591
⊝ AWC Logo Cap				
225	7587.56	8288.78	3811.76	19688.1
⊝ Bike Wash – Dissolver				
484	1534.35	3975	1709.25	7218.6
⊝ Classic Vest, L				
473	2730.5	6858	2794	12382.5
⊝ Classic Vest, M				
472	3111.5	7048.5	2476.5	12636.5
⊝ Classic Vest, S				
471	2159	6540.5	1968.5	10668
⊝ Fender Set – Mountain				
485	8945.86	30530.22	7143.5	46619.58
⊝ Half-Finger Gloves, L				
467	2644.92	6024.54	2179.61	10849.07
⊝ Half-Finger Gloves, M				
465	2669.41	6759.24	2791.86	12220.51
⊝ Half-Finger Gloves, S				
463	2669.41	6489.85	2791.86	11951.12
⊝ Hitch Rack – 4-Bike				
483	9360	24000	6000	39360
⊝ HL Mountain Tire				
537	7595	32865	8400	48860
⊝ HL Road Tire				
540	5607.2	16919.4	5444.2	27970.8
⊝ Hydration Pack – 70 oz.				
487	8633.43	21171.15	10503.09	40307.67
⊝ LL Mountain Tire				
535	5247.9	10995.6	5297.88	21541.38
⊝ LL Road Tire				
538	9691.99	8359.61	4383.96	22435.56
⊝ Long-Sleeve Logo Jersey, L				
234	7748.45	12497.5	2349.53	22595.48
⊝ Long-Sleeve Logo Jersey, M				

10 – Numero de ordenes por producto con su Id, separado por años para todas las Ciudades

Total					
Products	2005	2006	2007	2008	Total general
⊟ **All-Purpose Bike Stand**					
⊟ **486**					
Beaverton				477	477
Bellflower			318	159	477
Bellingham				318	318
Bendigo				318	318
Berkeley			159	159	318
Berlin			159		159
Beverly Hills			159		159
Bonn			159	318	477
Bottrop			159	159	318
Bremerton			159	477	636
Brisbane			159		159
Burbank			159	159	318
Burien			159	159	318
Burlingame				159	159
Caloundra			159	159	318
Cergy			159		159
Chatou			159		159
Cheltenham			159		159
Chula Vista			318	318	636
Cliffside				318	318
Coffs Harbour			159	159	318
Colma			159	159	318
Concord			159	159	318
Coronado			318		318
Cranbourne				159	159
Daly City			159		159
Darlinghurst			318	159	477
Downey				159	159
Duesseldorf			159		159
Dunkerque				318	318
East Brisbane			318	318	636