Assignment 2
Group 14

Concepts :

Sno.	Concept	Description
1	Shop	Names of the shop in the mall e.g.{Samsung , Apple , Reliance Trends}
2	Category_type	Type of shop e.g.{ Electronics , Gaming , Clothing}
3	Restaurant	Name of Restaurant e.g.{KFC , Dominos}
4	Cuisine	Name of the cuisines e.g.{pizza , burger}
5	Person	Represents a person
6	owner_name	Owner of the vehicle
7	employee	Person who is working the shop
8	Floor	Represents the floor number
9	multiplex	A place where more than equal 1 movie
10	movie	Represents a movie name
11	Vehicle	{2_wheeler , 4_wheeler , 8_wheeler }
12	Veg_restaurant	A restaurant where only veg cuisines are present
13	Product	
14	2_wheeler	A vehicle which has two wheels
15	NonVeg_restaurant	Restaurant which has
16	Address	Atomic Concept
17	Game	Set of games in gameZone
18	Food	Represents a eatable item
19	EntronicItem	Set of electronic Item. {TV, Mobile,Laptop}
20	JwelleryItem	Represents a set of items in jewelry
21	GarmentItem	Item in garments

22	ElectronicShop	Represents a electronic Shop
23	JweleryShop	Represents a jwelery Shop
24	GarmentShop	Represents a garment Shop
25	shopOwner	Owner of the shop in mall
26	VehicleOwner	Owner of the vehicle
27	ElectronicShopFloorNumber	Floor number of the electronic Shop
28	FirstFloorShop	Shops that present on first floor
29	PopularGame	Game which is at least played by 10 person
30	Large Restaurant	Restaurant which has at least 5 cuisines
31	QualityProduct	Product which has warranty
32	Warranty	Set of years represents the years of warranty
33	PublicVehicle	Vehicles Owned by government or not private
34	PrivateVehicle	Vehicles that are not public
35	ShopEmployee	Person who works in A shop not the employee
36	FirstFloorElectronicShop	Electronic Shops which are present on first floor
37	BestSeller	Something which is purchased by people more than some number
38	Show	Something to be shown by multiplex
39	ClothingBrand	Shop which manufactures clothes itself
40	Clothes	Atomic concept represents clothes
41	FoodCourtFloor	Floor on which more than 5 restaurants are available
42	ClearanaceShop	Shop with less than 100 sales a day
43	Number	Set of number from 1 to 10000

Roles:

Sno	RoleName	RoleDescription
1	soldby	(Product,Shop) : product is sold by shop
2	servedBy	(Food,Restaurant) : that food is served by restaurant
3	ownsVehicle	(Person, vehicle) Person who owns a vehicle
4	hasProduct	(Shop,Product) Shop that has product
5	hasCategory	(Shop,Category) shop has a category
6	hasPlayed	(Game,Person) game played by someone who is person
7	hasDishes	(Restaurant,Dishes) restaurant which has dishes
8	hasWarranty	(Product,Warranty) product which comes with a warranty
9	worksOn	(person, shop) person who works on shop
10	hasFirstFloor	(shop, floor) shop which is present on first floor
11	floorHasShop	(floor, shop)
12	hasParked	Something/somewhere where vehicles are present
13	SalesLessThan	Represents shop sales less than some number
15	hasRestaurants	Floor that has restaurants
16	manufactures	Cloths that manufactures something
17	hasScreened	Something which is screened in Multiplex
18	purchasedBy	Book that is purchased by

TBox:

$Product \sqsubseteq \exists soldby.Shop$

$VehicleOwner \equiv Person \sqcap \exists ownsVehicle.Vehicle$

$Cuisine \equiv Food \sqcap \exists servedBy.Restuarant$

$Shop \equiv \exists hasProduct.Product$

$ElectronicShop \equiv Shop \sqcap \exists hasCategory.ElectronicItem$

$JwelleryShop \equiv Shop \sqcap \exists hasCategory.JwelleryItem$

$GarmentShop \equiv Shop \sqcap \exists hasCategory.Garmenttem)$

$Product \sqsubseteq \exists soldby(shop)$

$ElectronicShopFloorNumber \equiv Floor \sqcap \exists floorHasShop.ElectronicShop$

$FirstFloorShop \equiv \exists hasFirstFloor.Floor \sqcap Shop$

$FirstFloorElectronicShop \sqsubseteq ElectronicShop \sqcap FirstFloorShop$

$ShopEmployee \equiv \exists workOn.Shop \sqcap Person$

$Parking \equiv \exists hasParked.Vehicle$

$PublicVehicle \equiv \exists hasPublicVehicle.VehicleDetail$

$PrivateVehicle \equiv Vehicle \sqcap \sim PublicVehicle$

$QualityProduct \sqsubseteq Product \sqcap \exists hasWarrenty.Warrenty$

$LargeRestuarant \sqsubseteq Restuarant \sqcap \geq 5hasDishes.Cuisines$

$PopularGame \sqsubseteq Game \sqcap \geq 10hasPlayed.Person$

$Floor \sqsubseteq \sim Shop$

$Floor \sqsubseteq \sim Category$

$Store \sqsubseteq \sim Category$

$BestSeller \equiv Product \sqcap \geq 100purchasedBy.Person$

$Show \equiv hasScreened.Multiplex$

$ClothingBrand \equiv shop \sqcap manufactures.Clothes$

$FoodCourtFloor \equiv floor \sqcap \geq 5hasRestaurants.Restaurants$

$ClearanceShop \equiv Shop \sqcap \leq 100SalesLessThan.Number$