

Organizing Heterogeneous Scene Collections through Contextual Focal Points

Supplemental material: Additional results on scene retrieval

Kai Xu^{1,2} Rui Ma³ Hao Zhang³ Chenyang Zhu¹
Ariel Shamir⁴ Daniel Cohen-Or⁵ Hui Huang¹

¹Shenzhen VisuCA Key Lab / SIAT

²HPCL, National University of Defense Technology

³Simon Fraser University

⁴The Interdisciplinary Center

⁵Tel Aviv University

Outline

- Multi-query results:
 - [Tsinghua dataset: 5 query sets](#)
 - [Stanford dataset: 3 query sets](#)
- Single query results:
 - [Tsinghua dataset: 10 queries \(4 simple + 6 hybrid\)](#)
 - [Stanford dataset: 10 queries](#)

Multi-query results

Tsinghua dataset

5 multi-query sets

GK = Graph Kernel

FCGK = Focal Centric Graph Kernel

Tsinghua dataset: Multi-query set 1

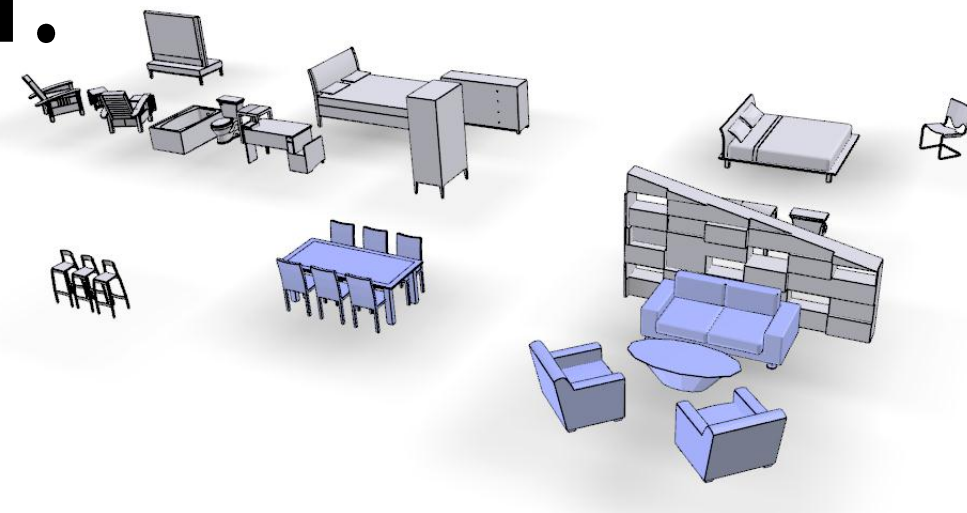
[back](#)

Query set

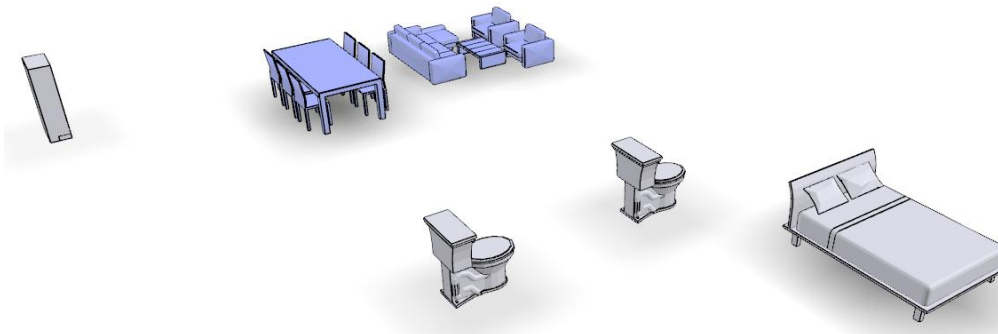
Results

GK

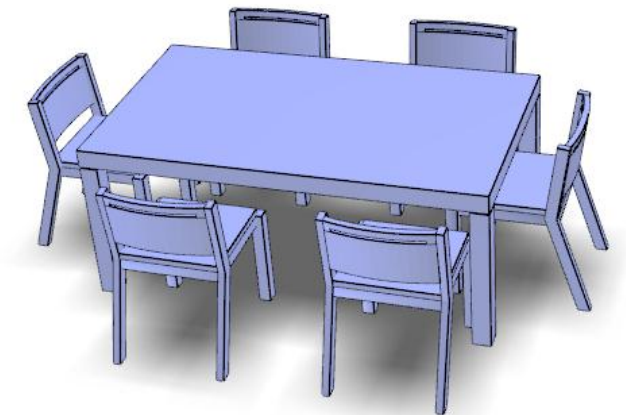
1.



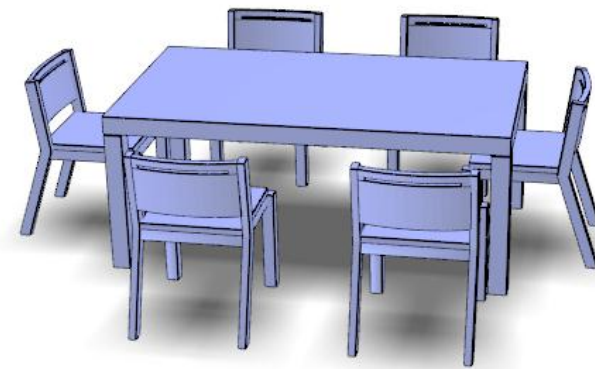
2.



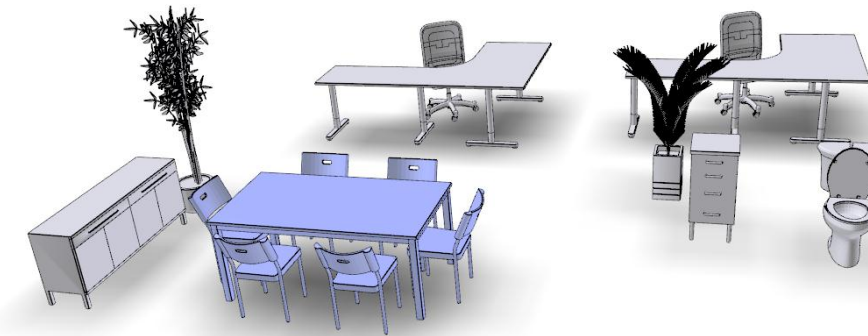
3.



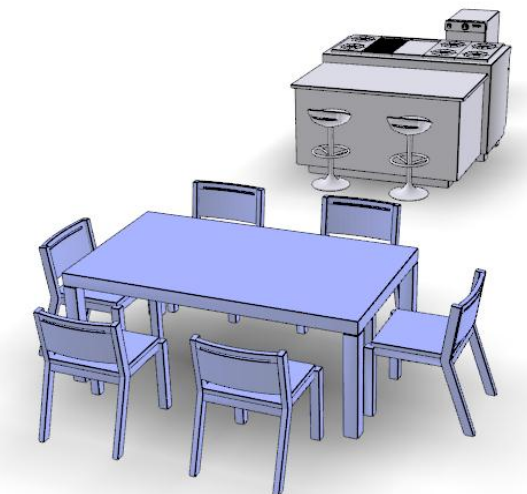
4.



5.

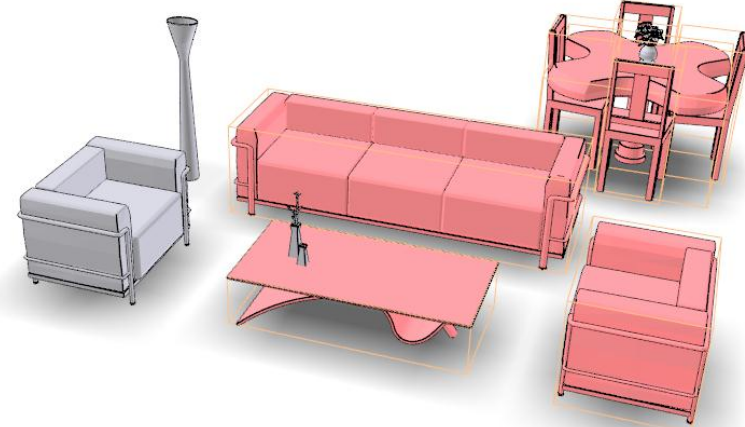


6.

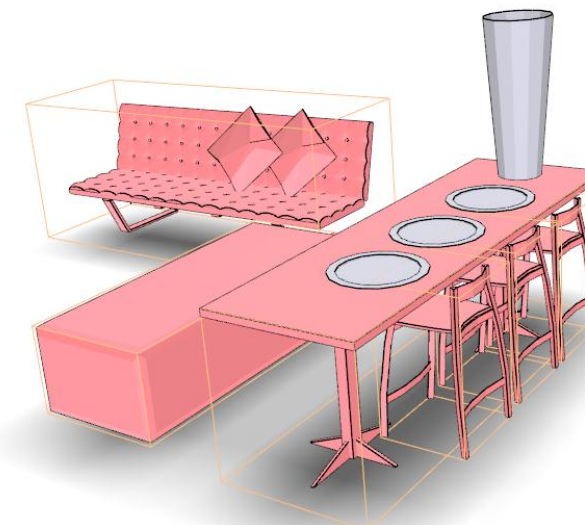


FCGK

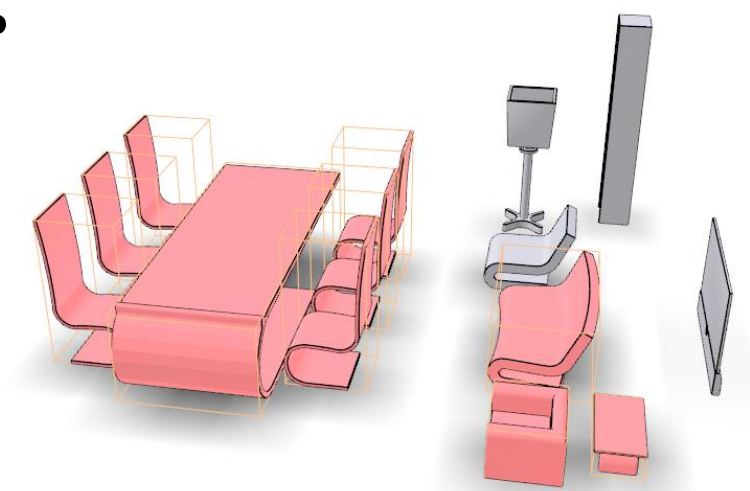
1.



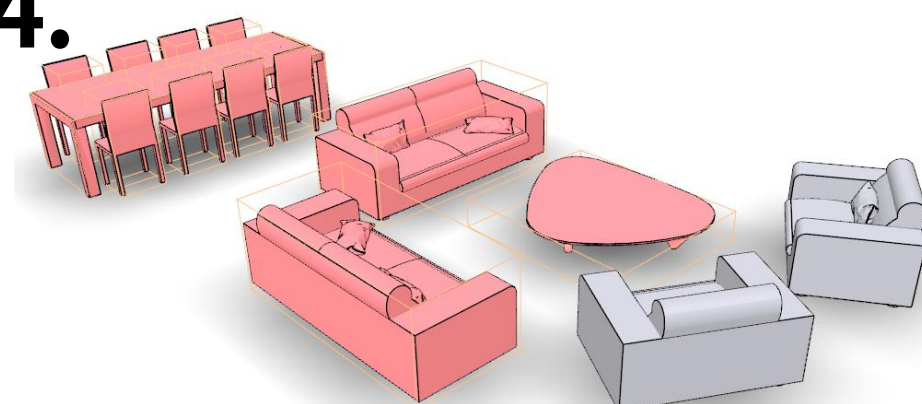
2.



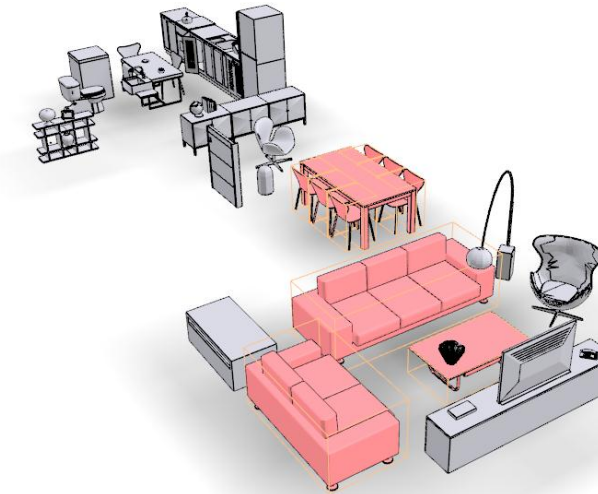
3.



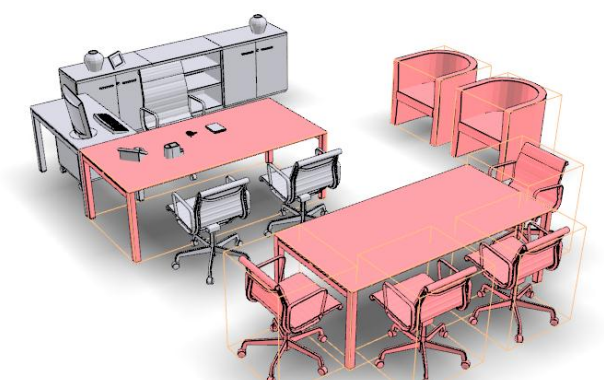
4.



5.



6.



Tsinghua dataset: Multi-query set 2

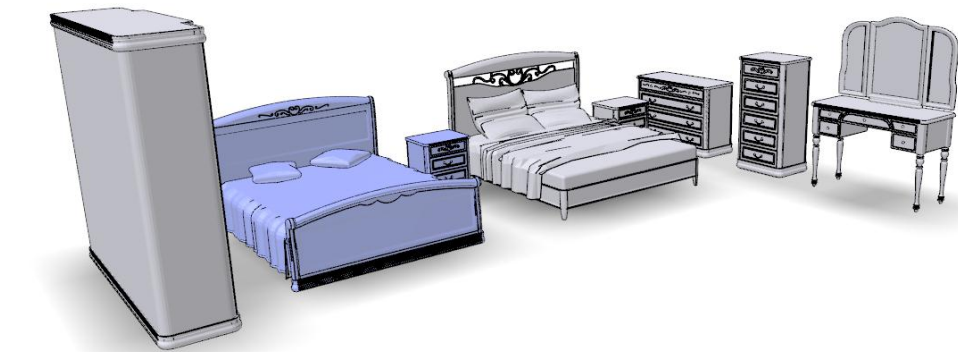
back

Query set

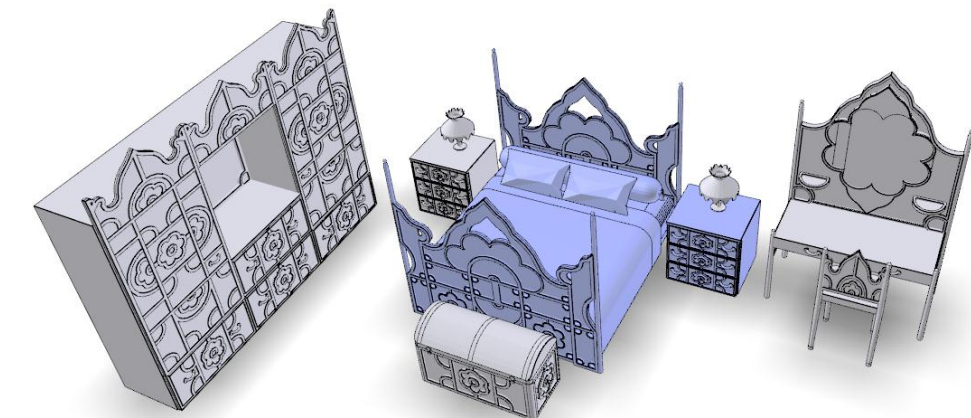
Results

GK

1.



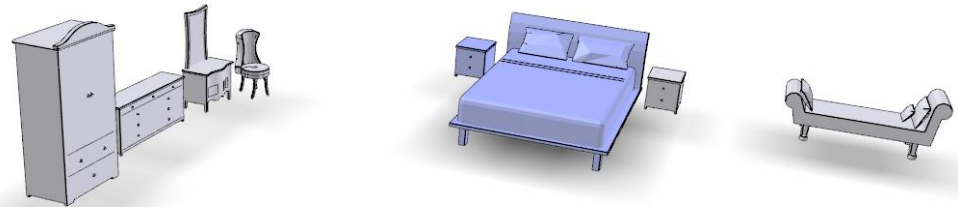
2.



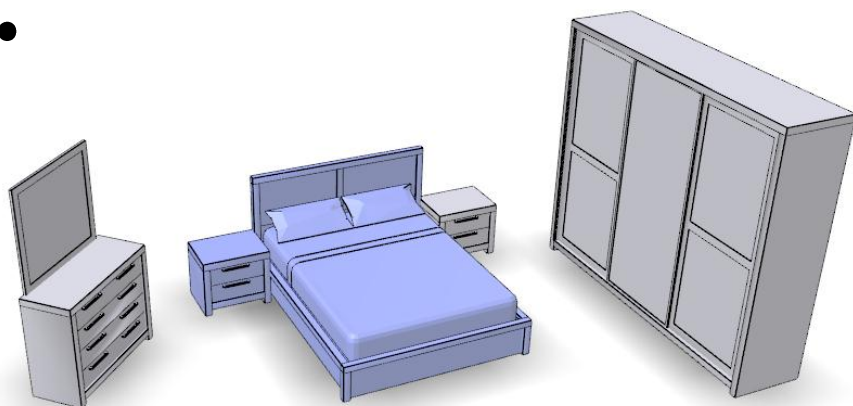
3.



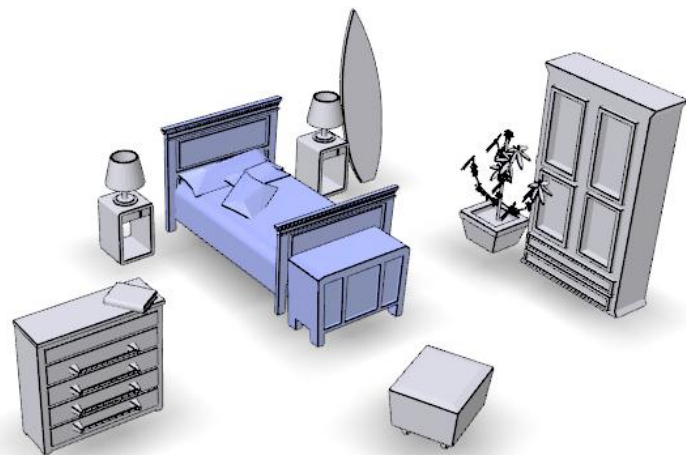
4.



5.

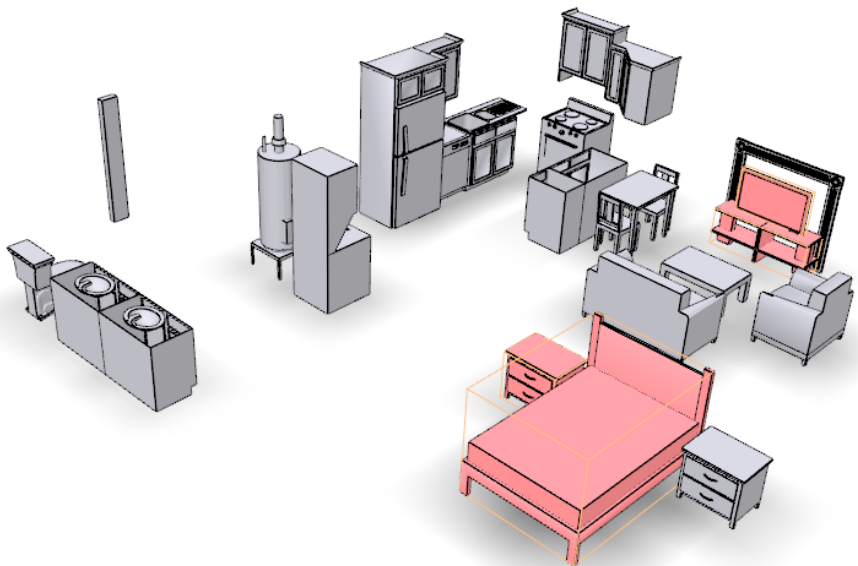


6.

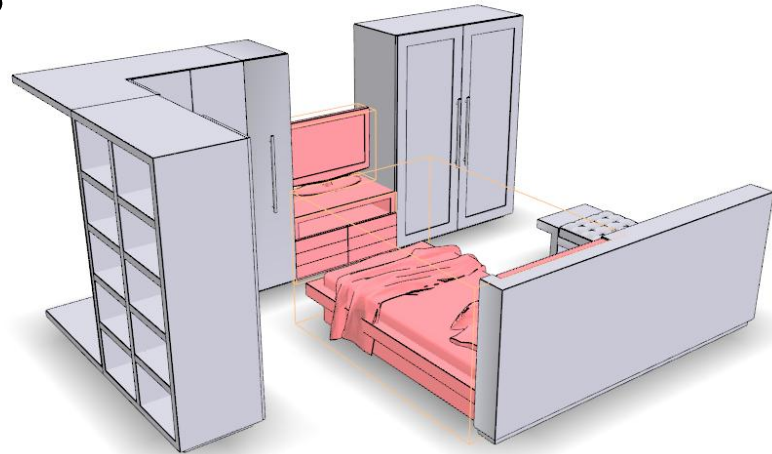


FCGK

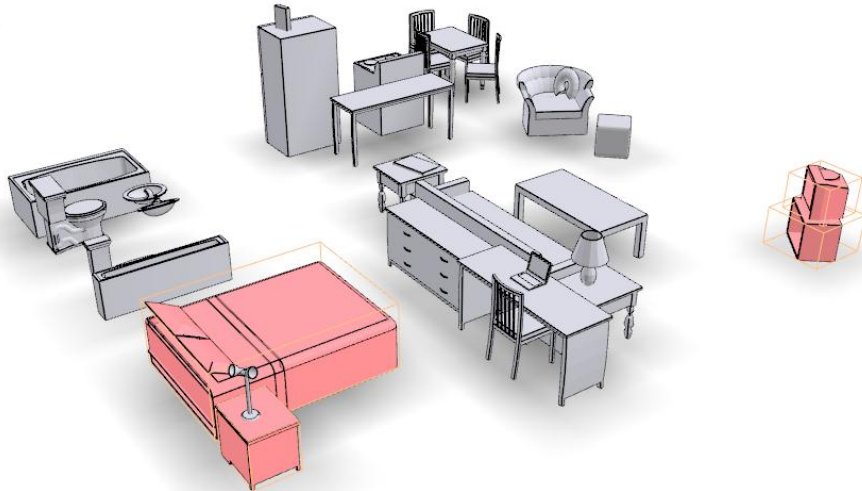
1.



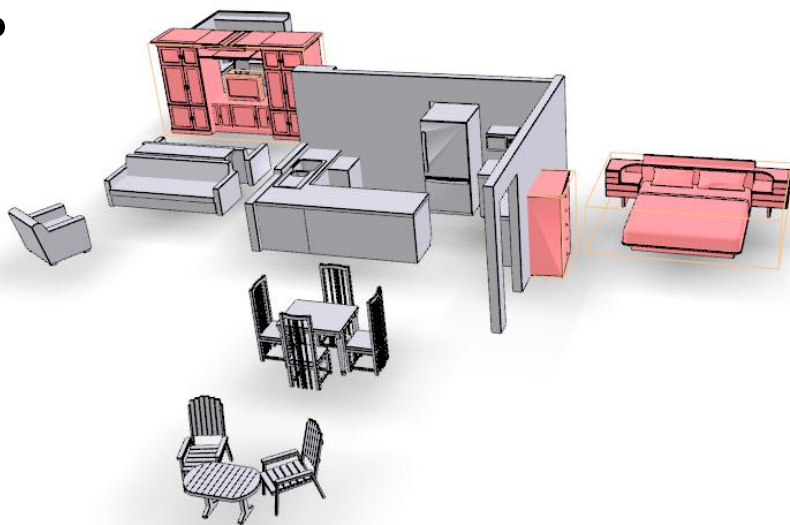
2.



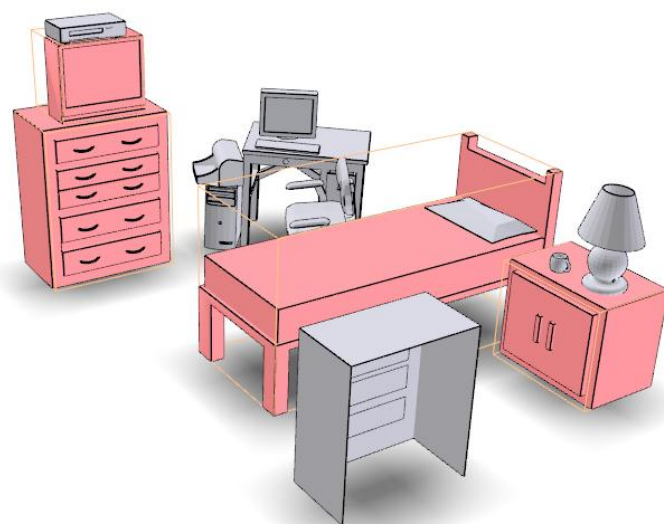
3.



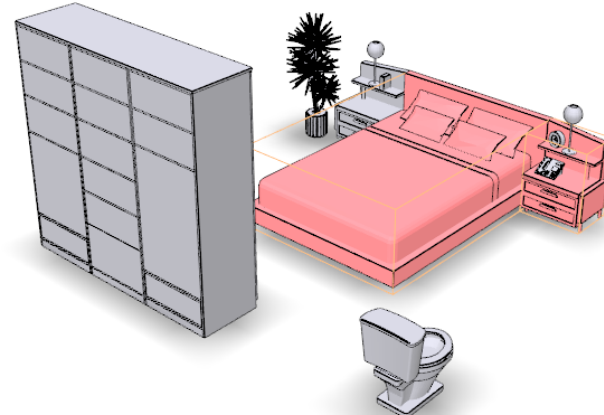
4.



5.



6.



Tsinghua dataset: Multi-query set 3

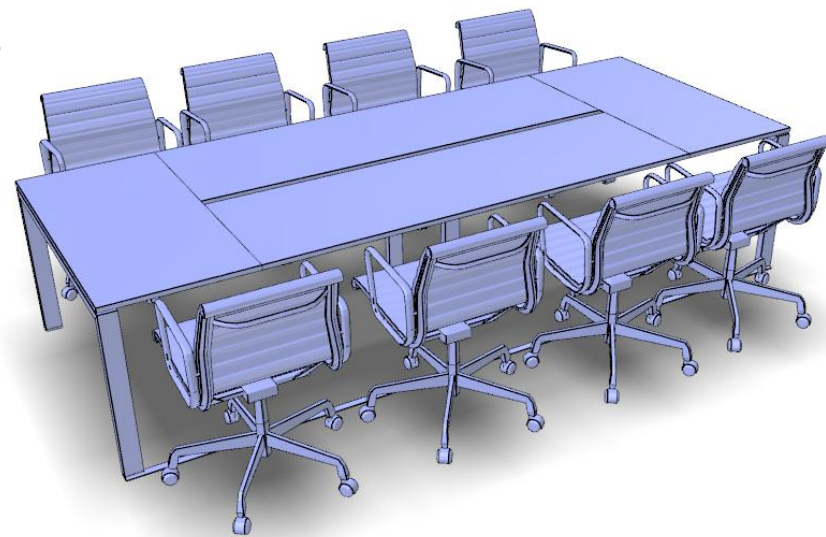
[back](#)

Query set

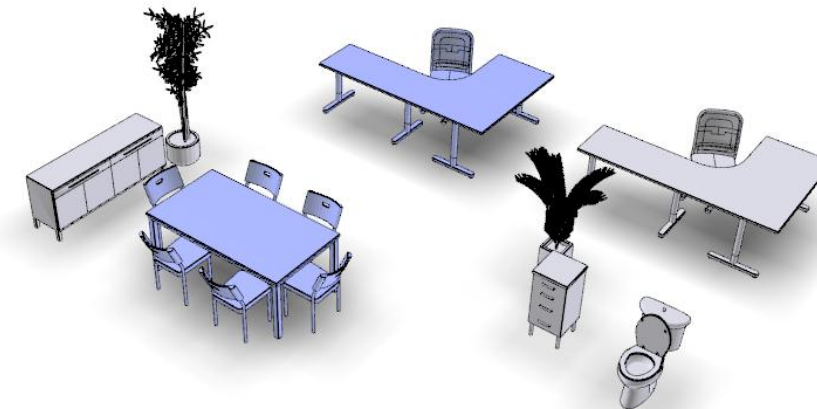
Results

GK

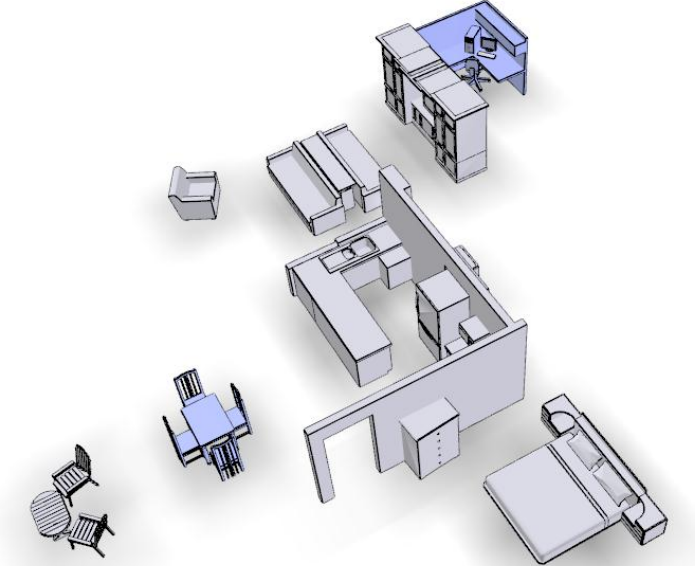
1.



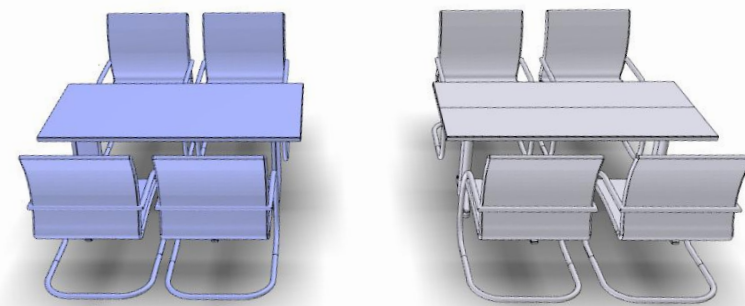
2.



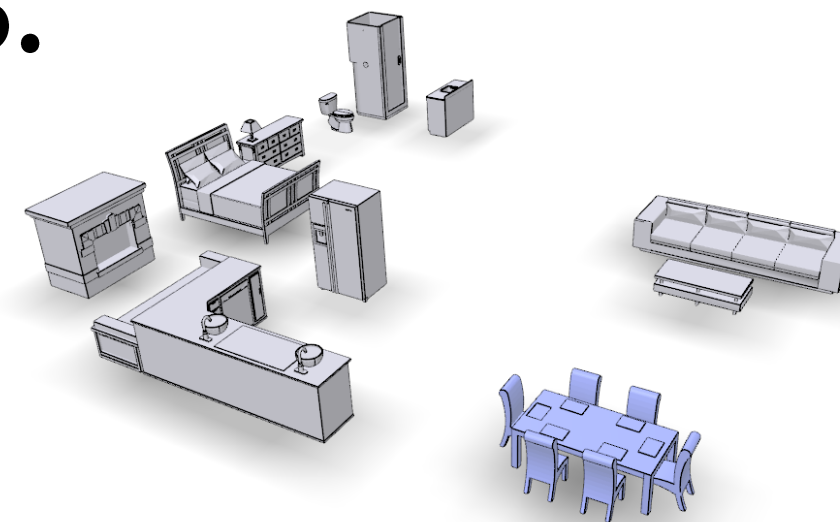
3.



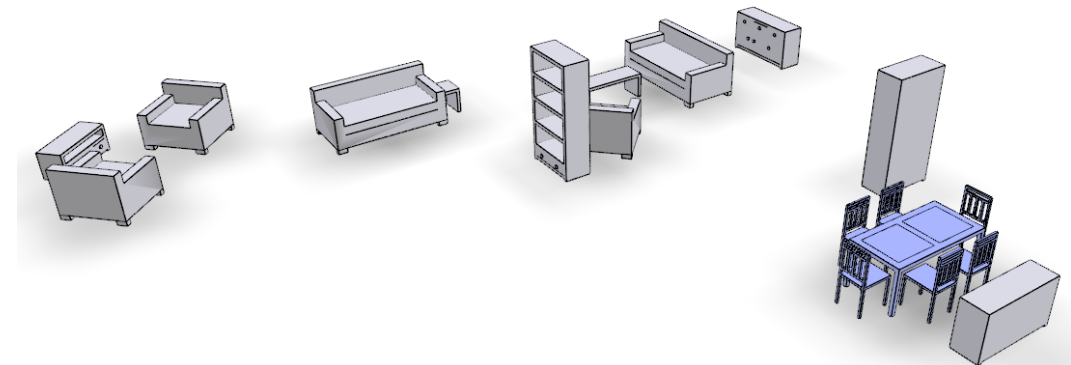
4.



5.

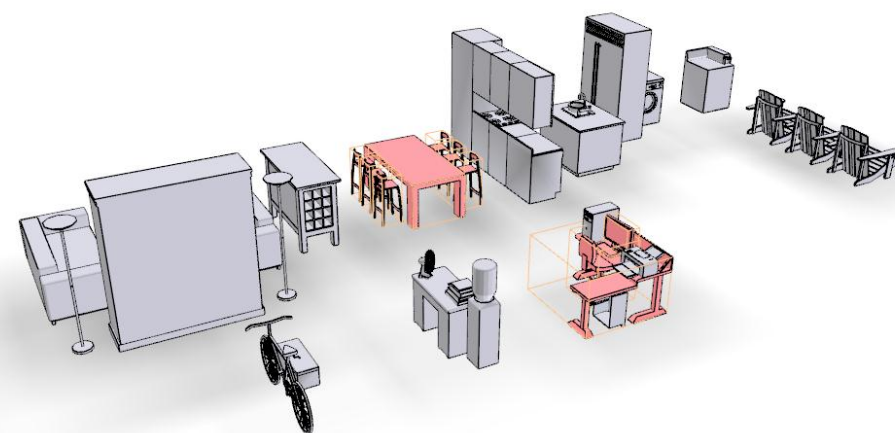


6.

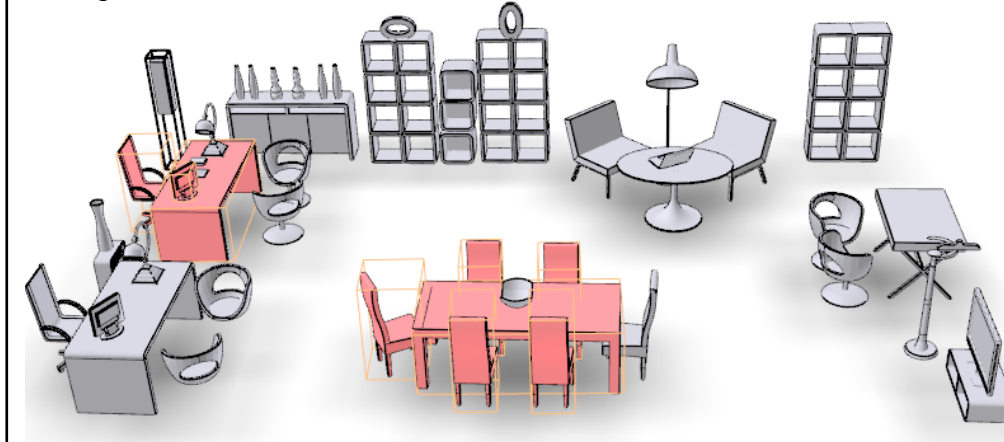


FCGK

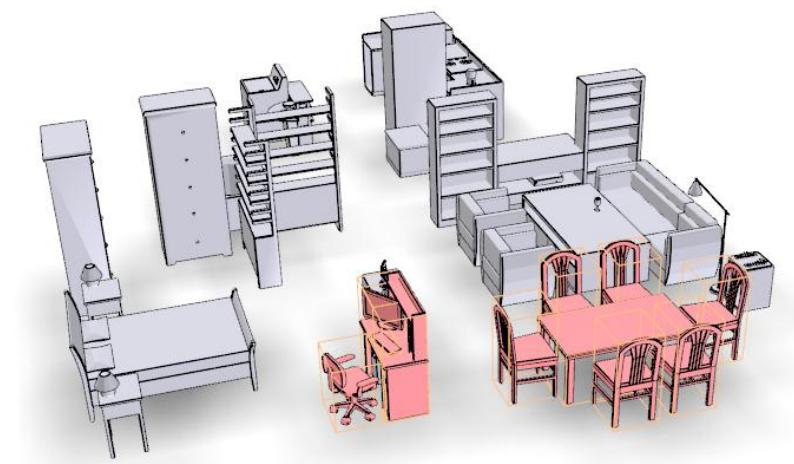
1.



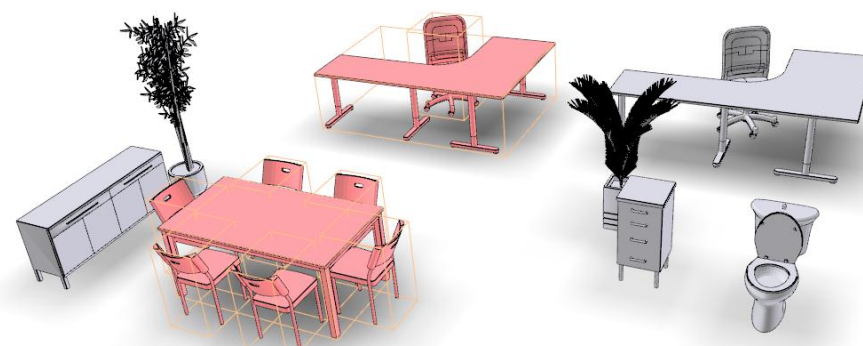
2.



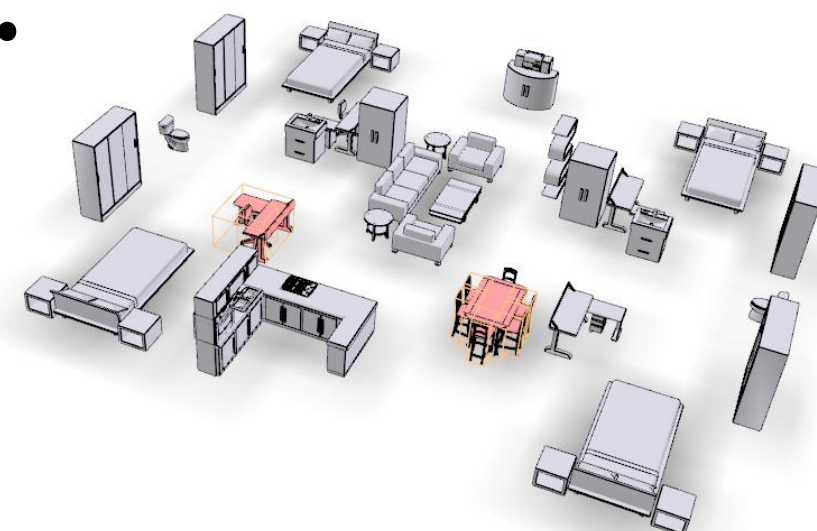
3.



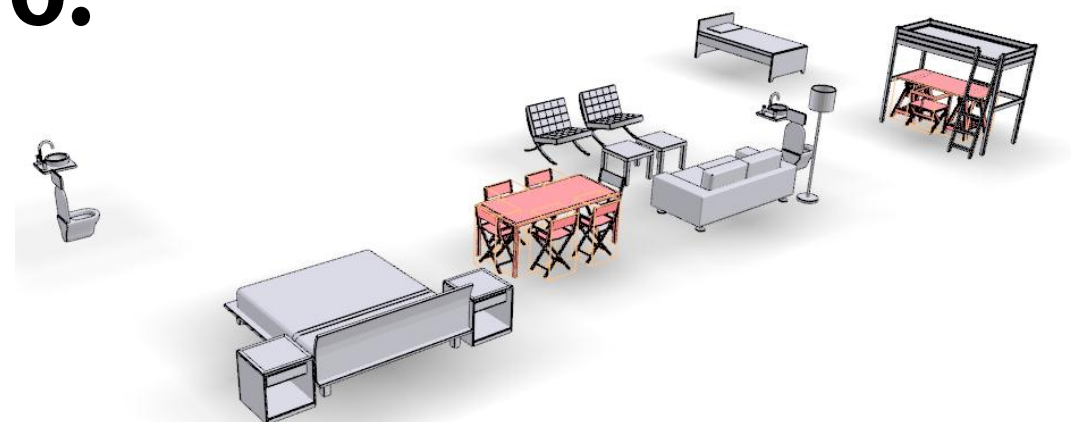
4.



5.

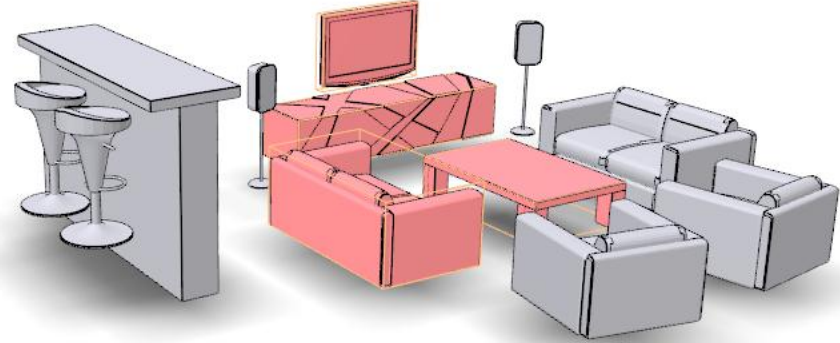
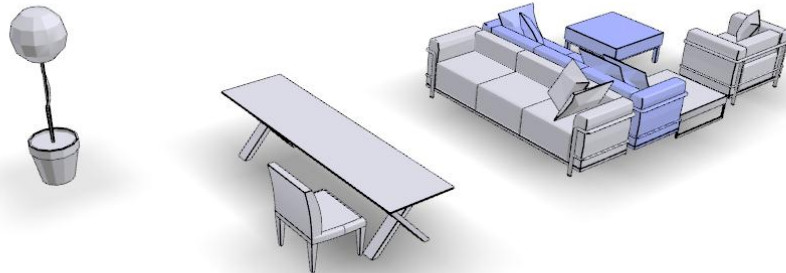
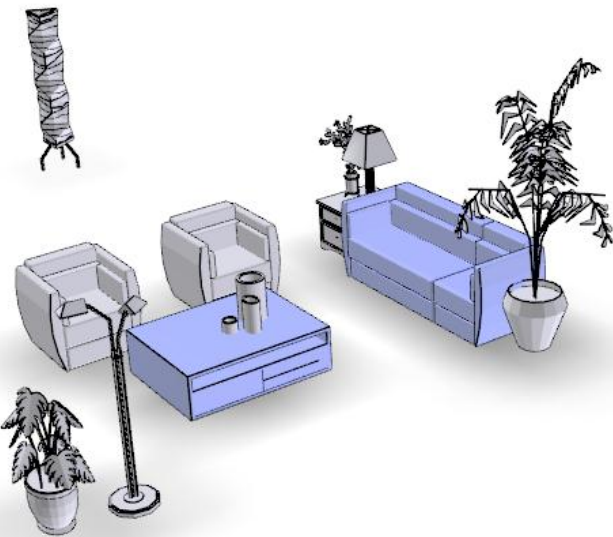
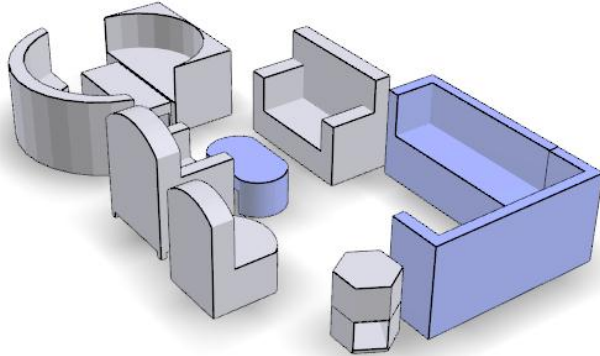

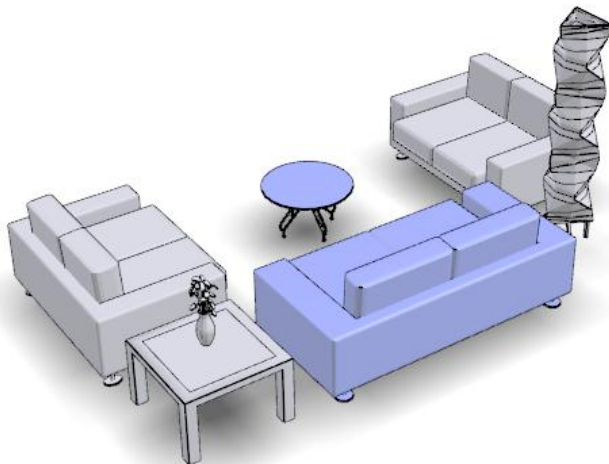
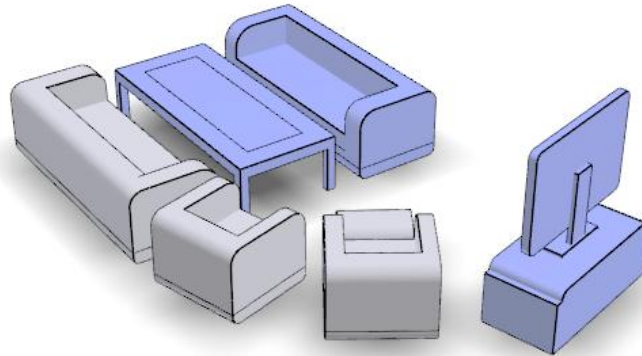
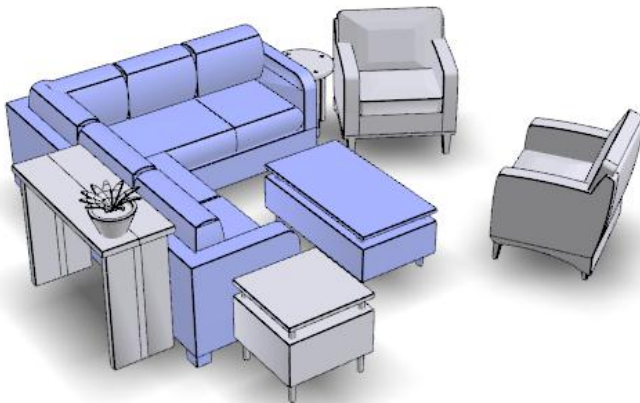
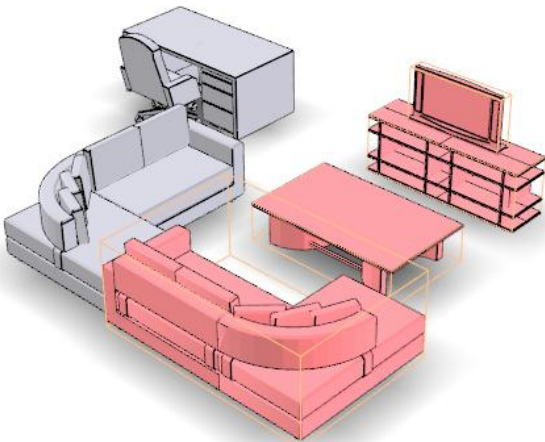
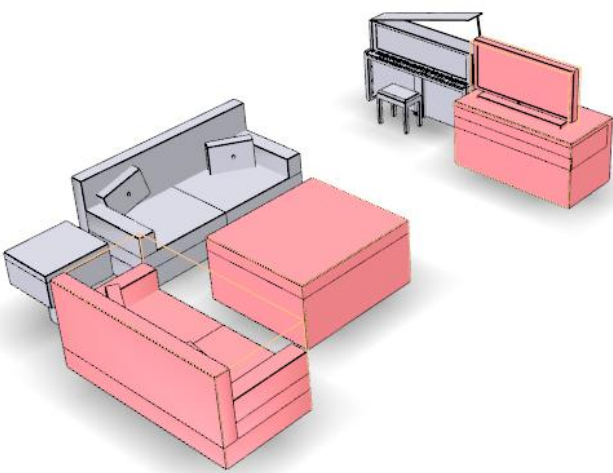
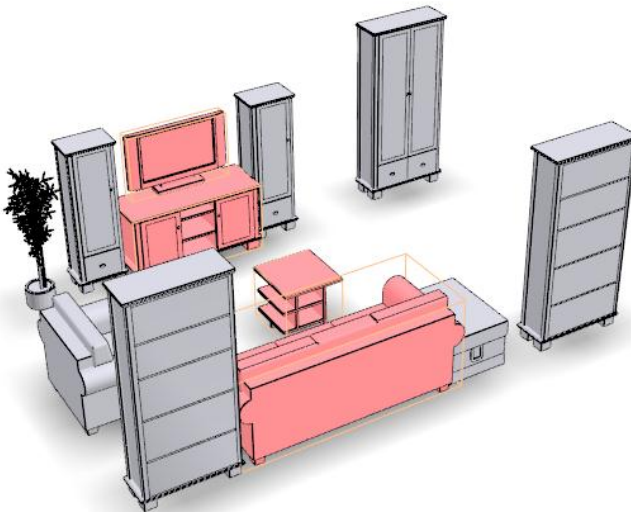
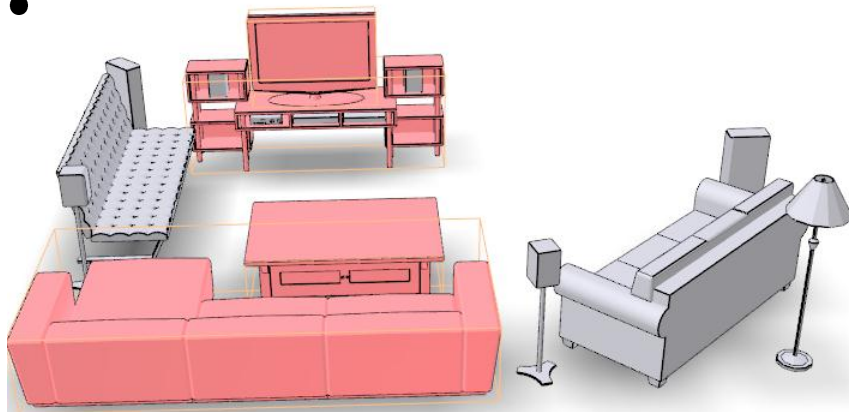
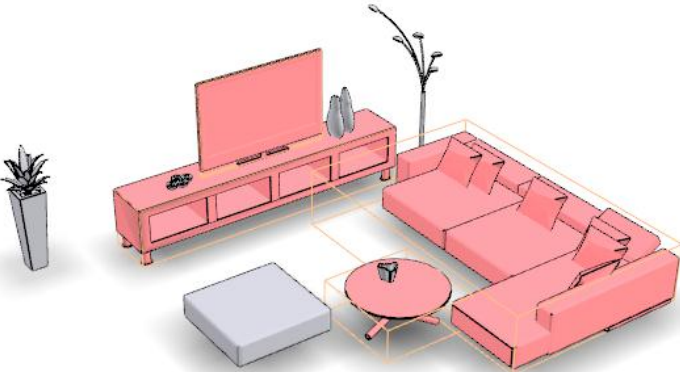

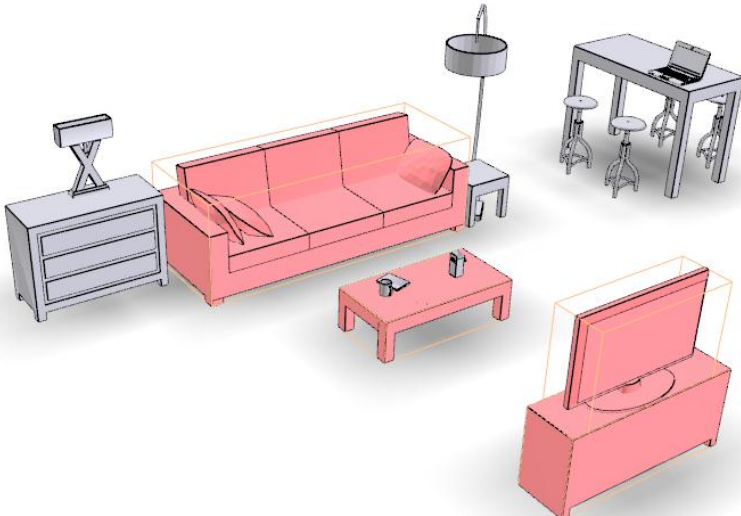
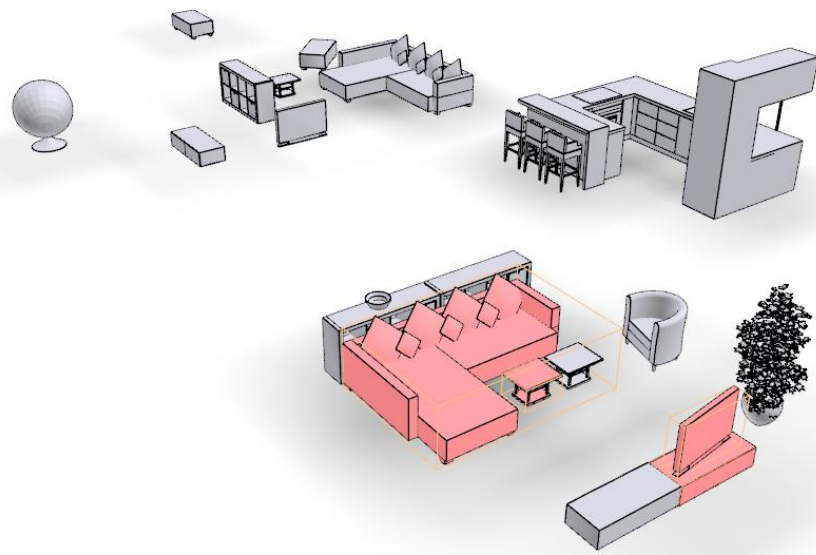


6.



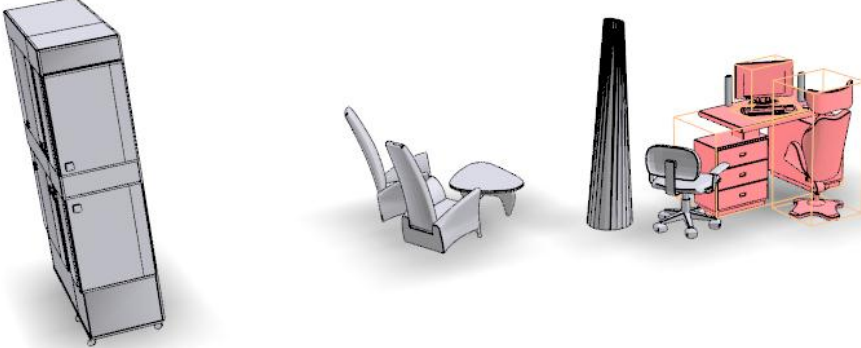

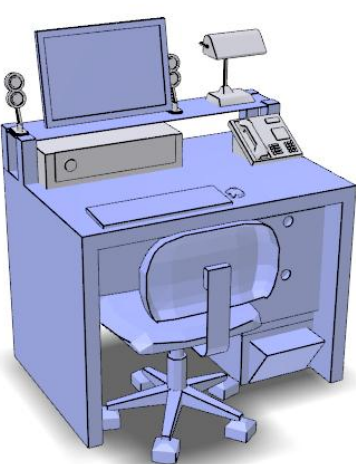
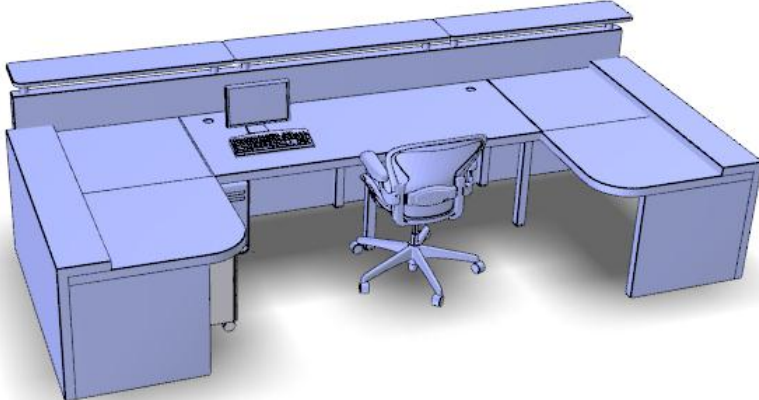
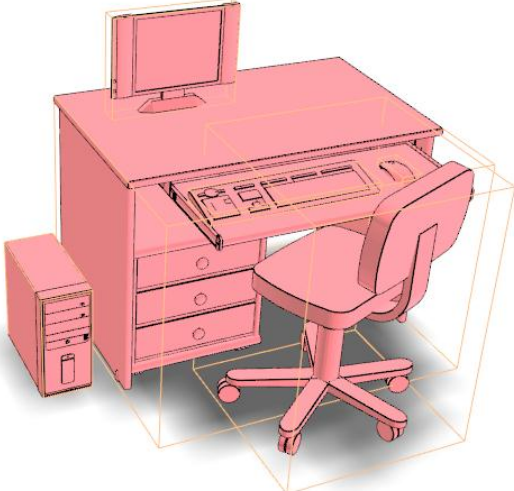
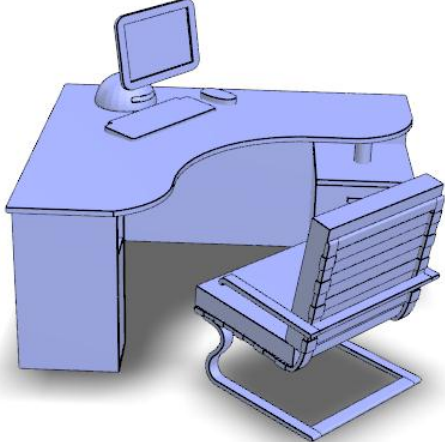
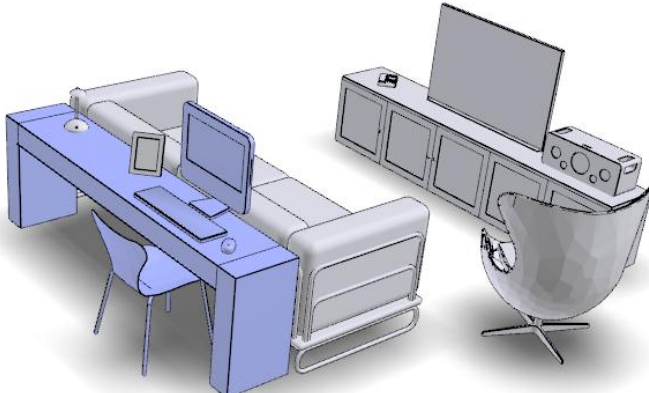



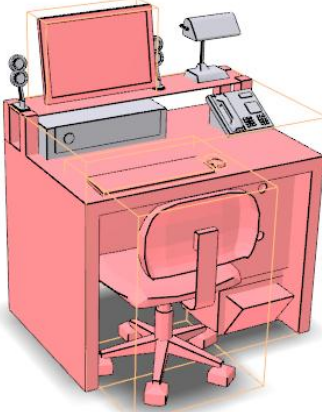
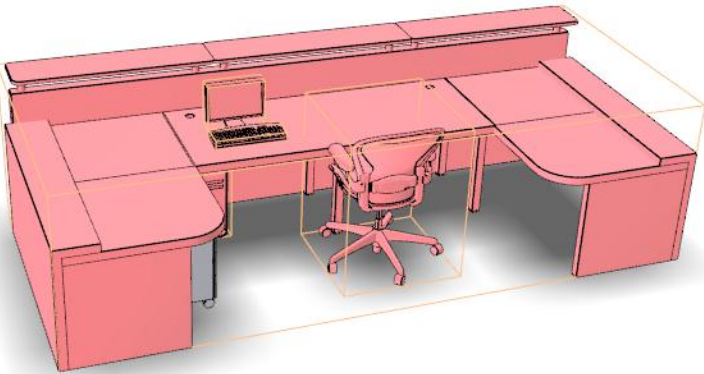
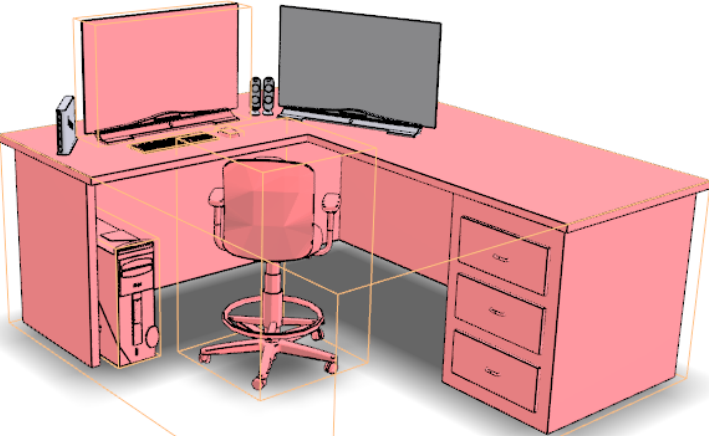

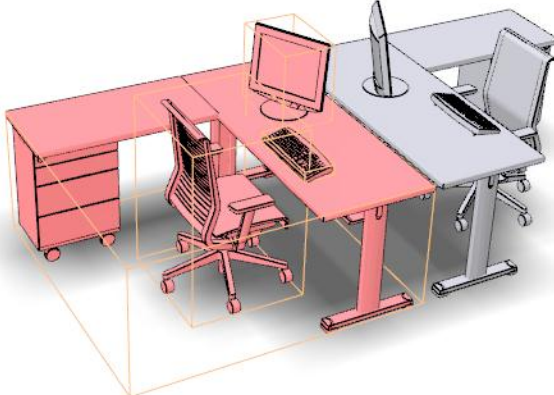
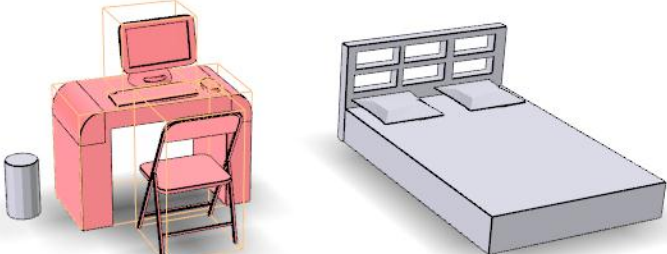
Tsinghua dataset: Multi-query set 4

back

Query set		Results		
	GK	1. 	2. 	3. 
		4. 	5. 	6. 
	FCGK	1. 	2. 	3. 
		4. 	5. 	6. 

Tsinghua dataset: Multi-query set 5

back

Query set		Results		
	GK	1. 	2. 	3. 
		4. 	5. 	6. 
	FCGK	1. 	2. 	3. 
		4. 	5. 	6. 

Multi-query results

Stanford dataset

3 multi-query sets

GK = Graph Kernel

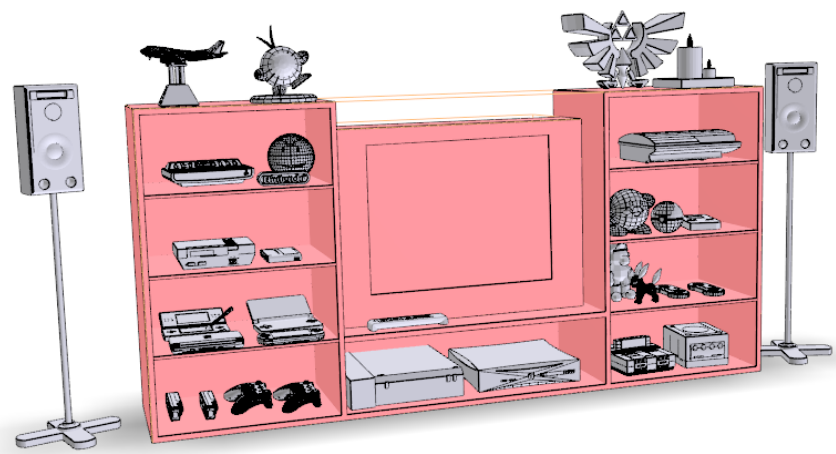
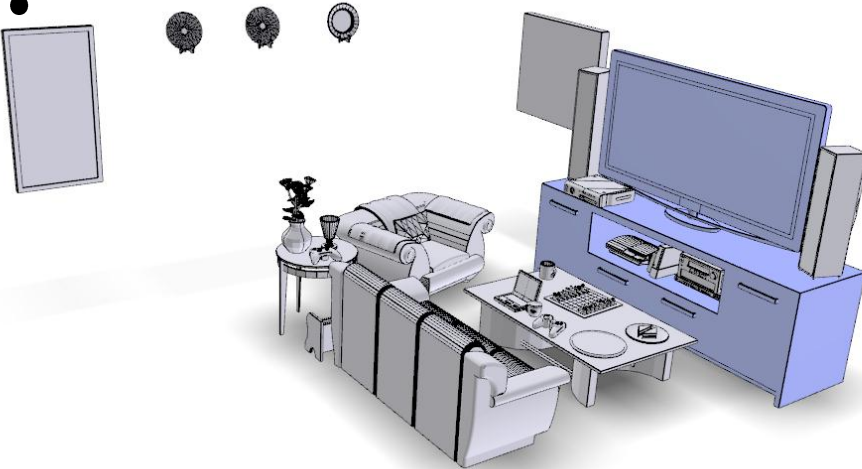
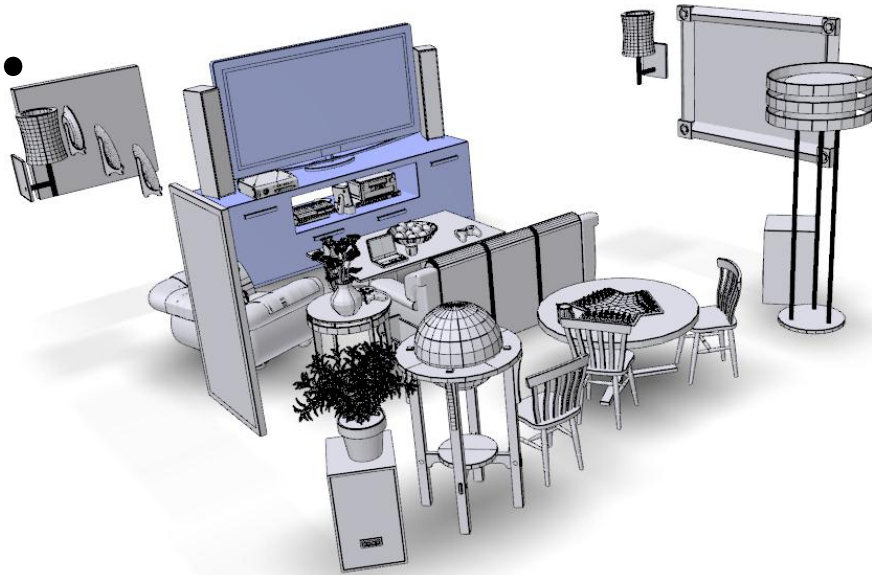
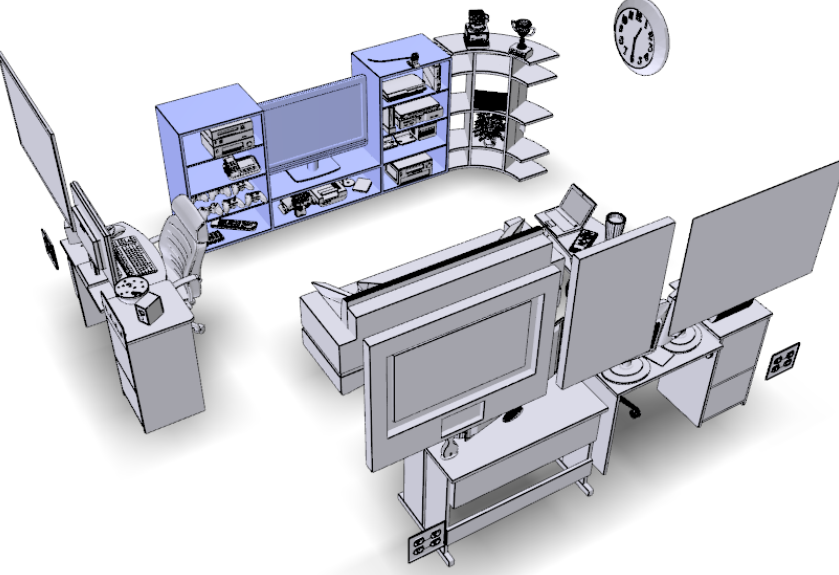
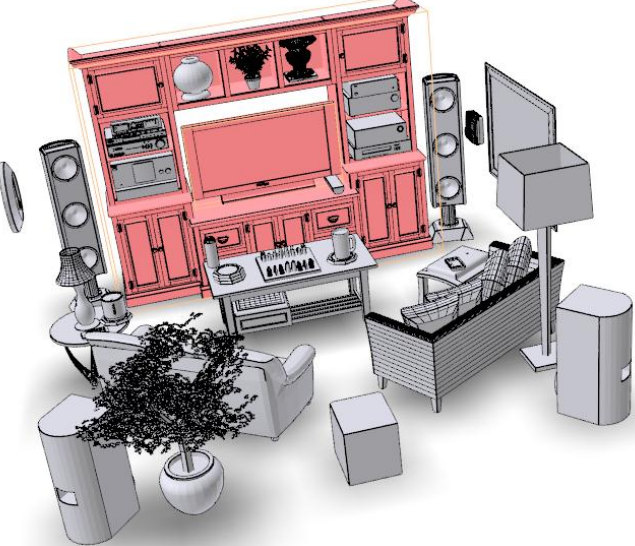
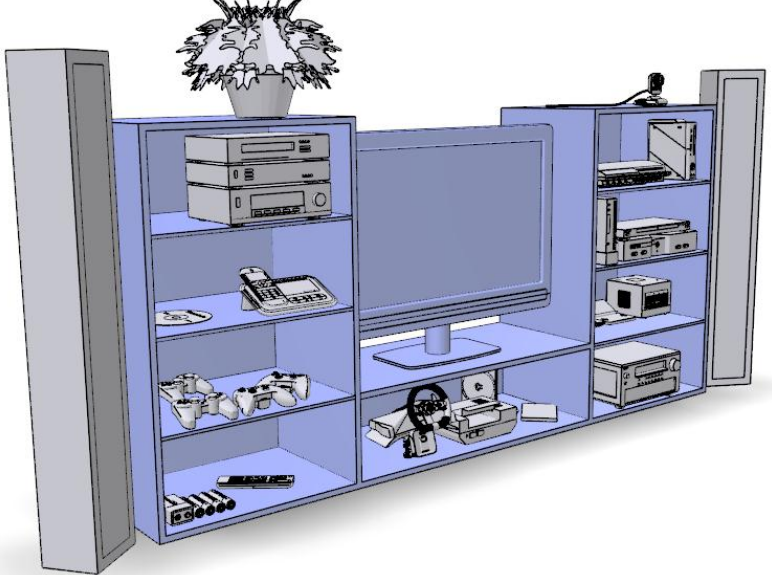
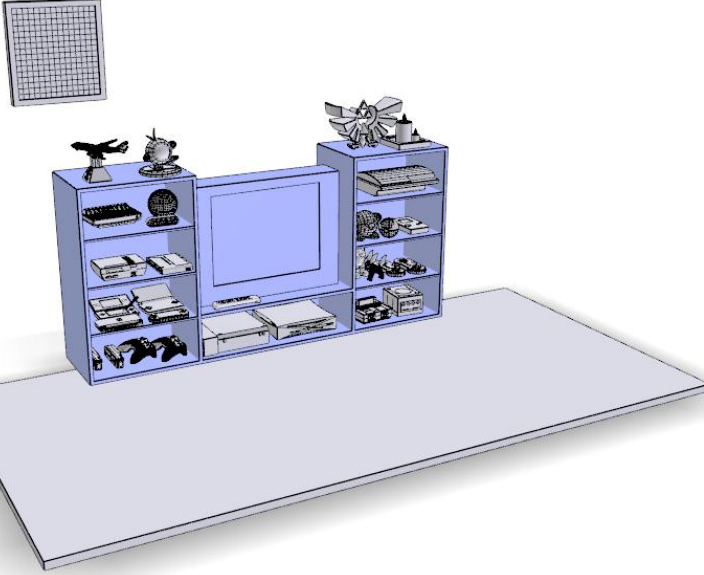

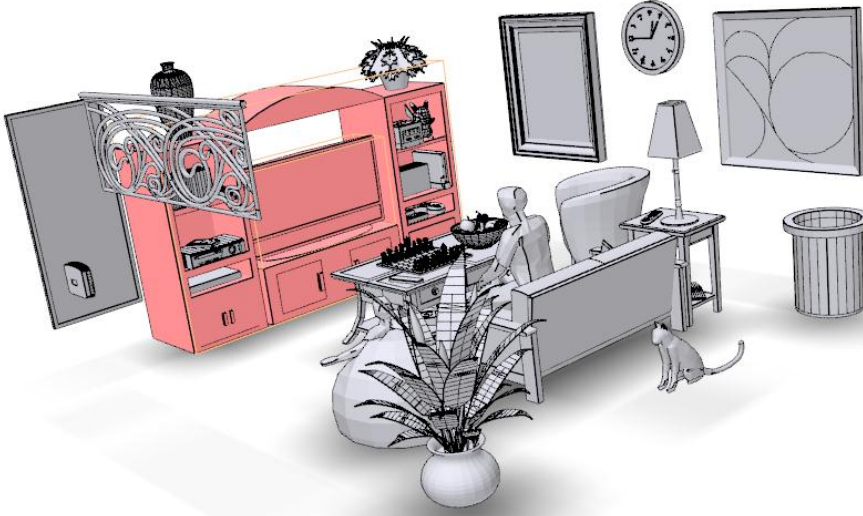
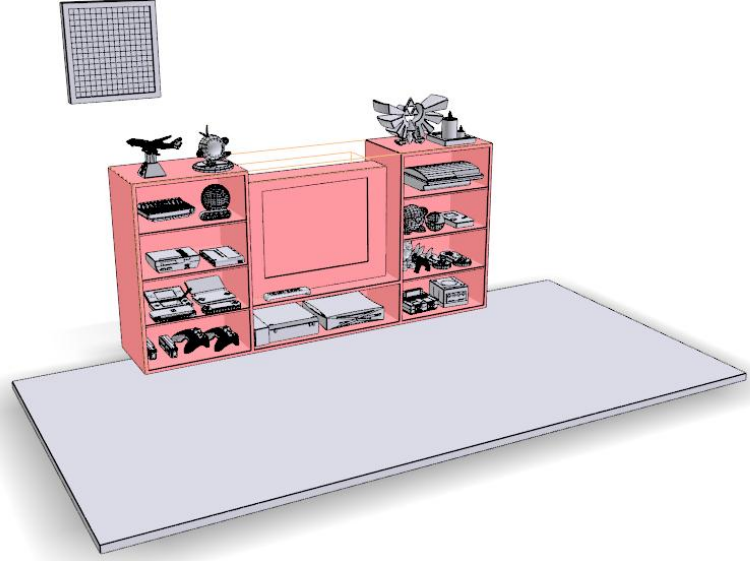
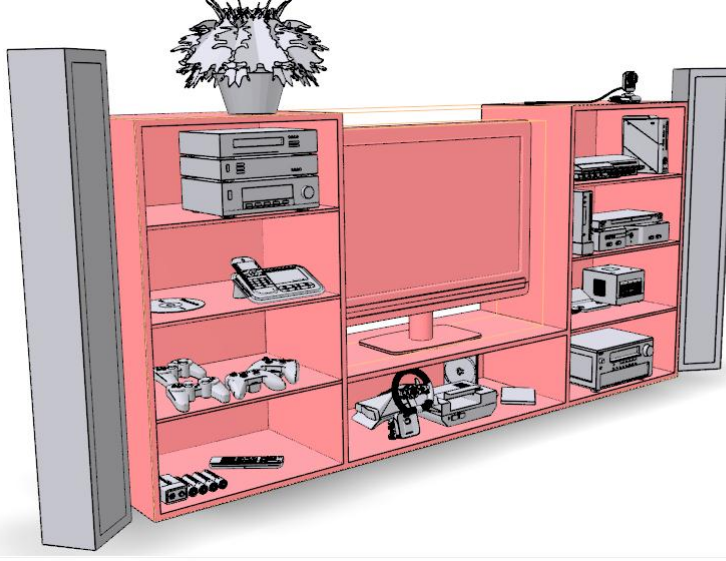
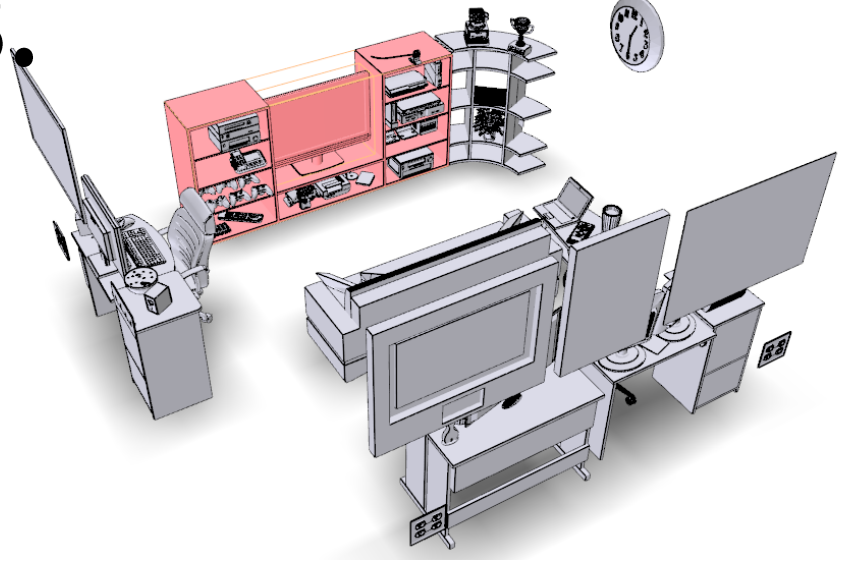
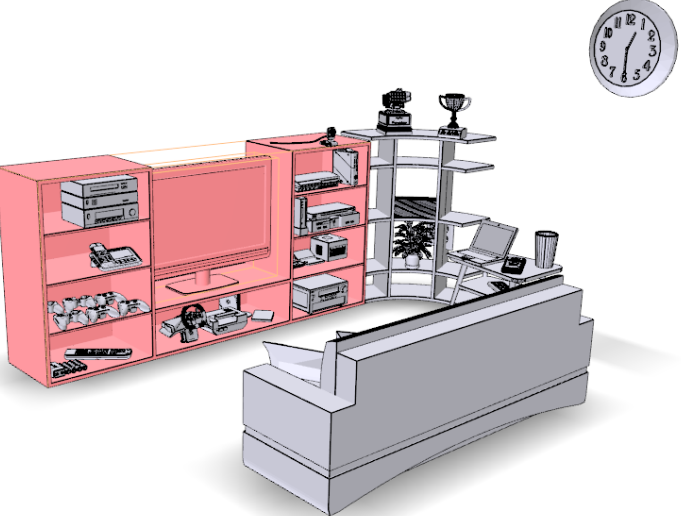
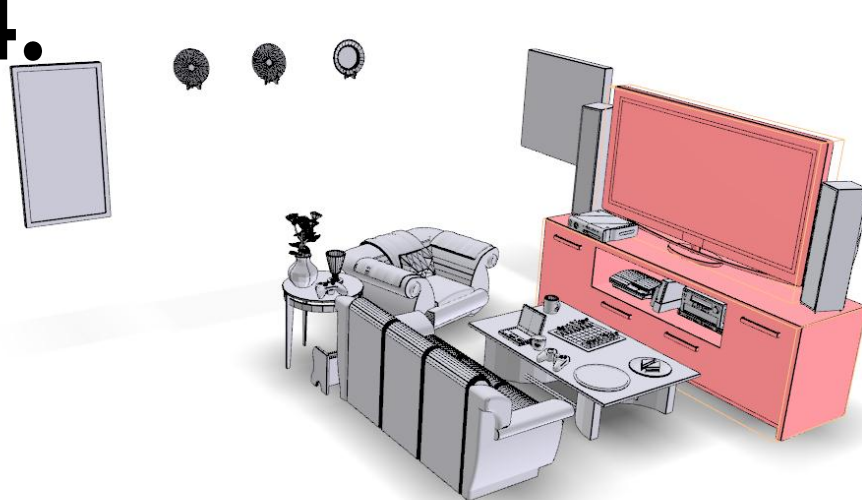
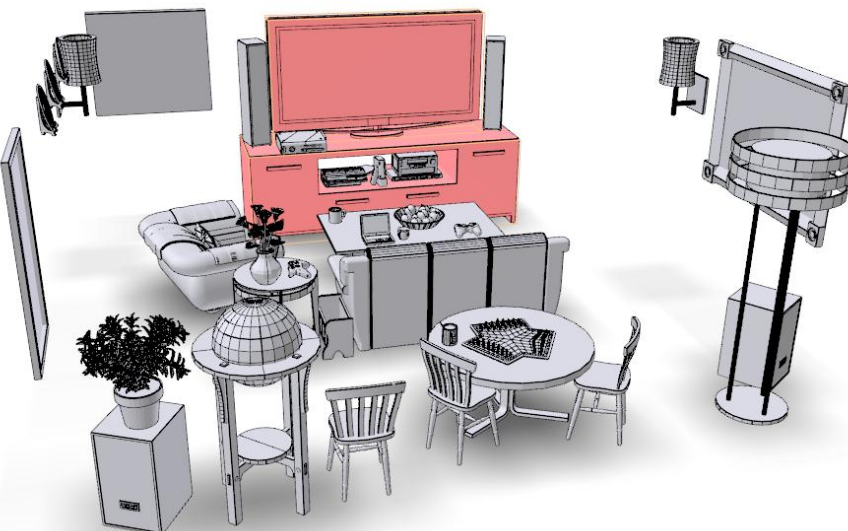
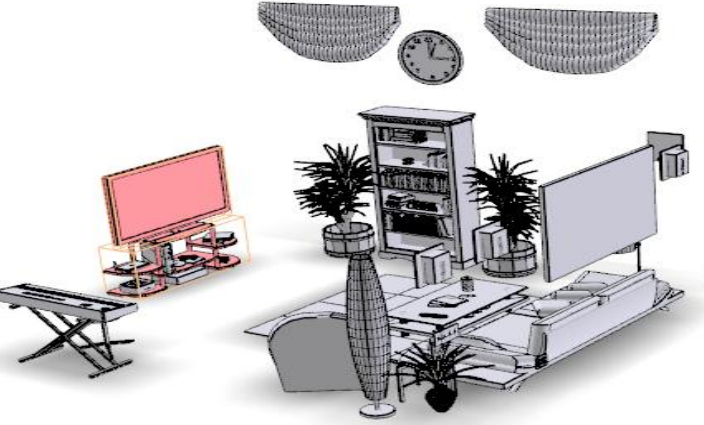
FCGK = Focal Centric Graph Kernel

Stanford dataset: Multi-query set 1

back



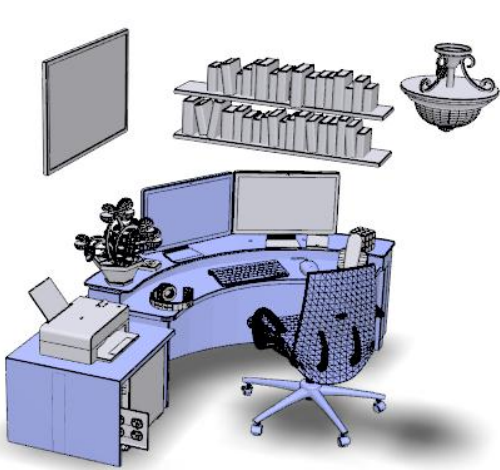

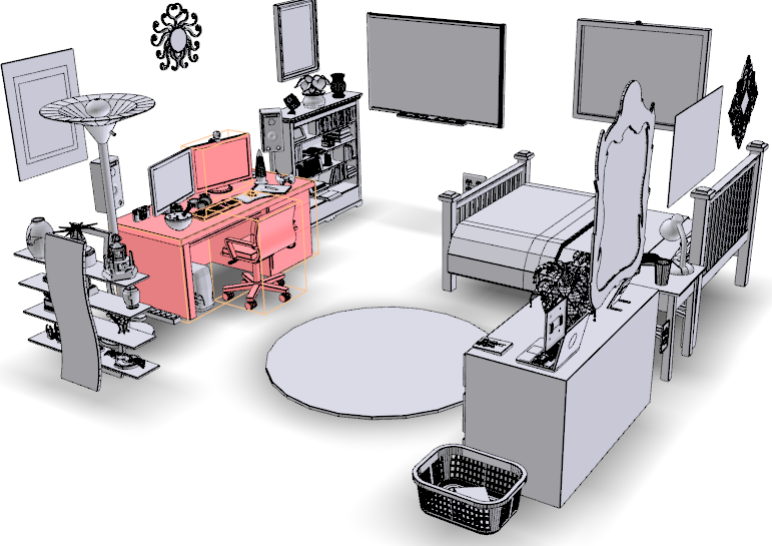

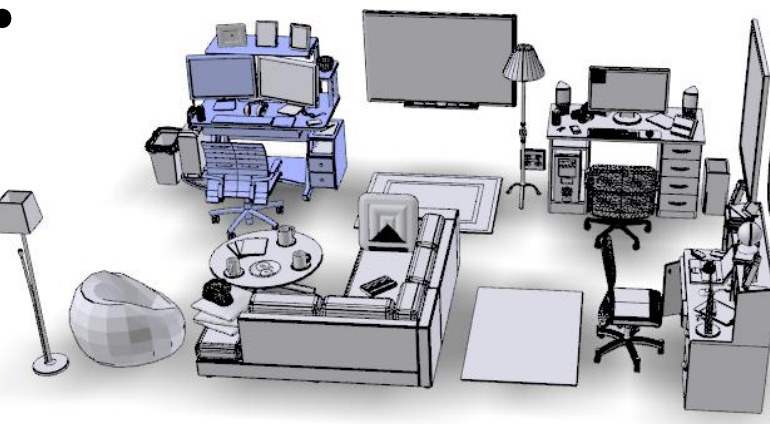

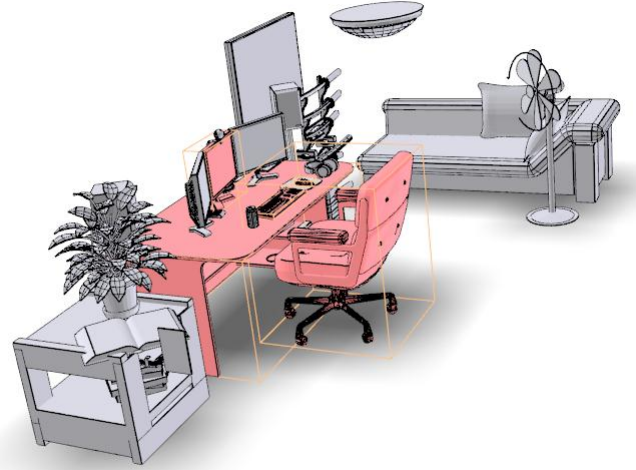
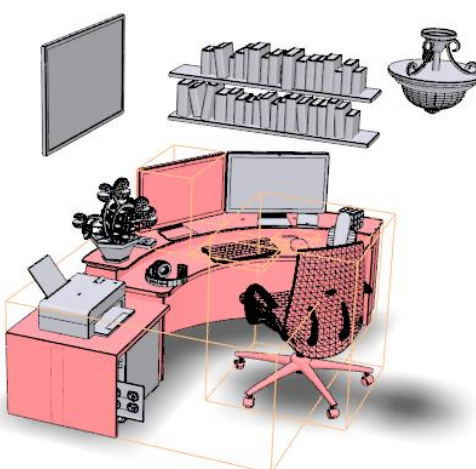

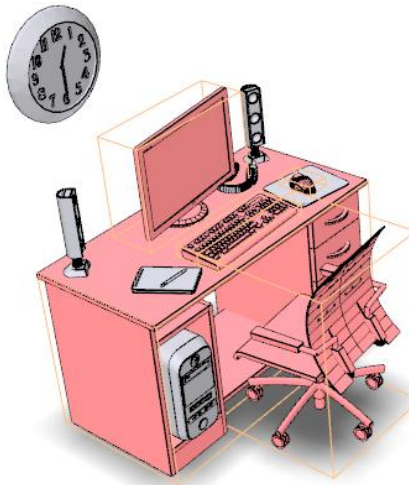
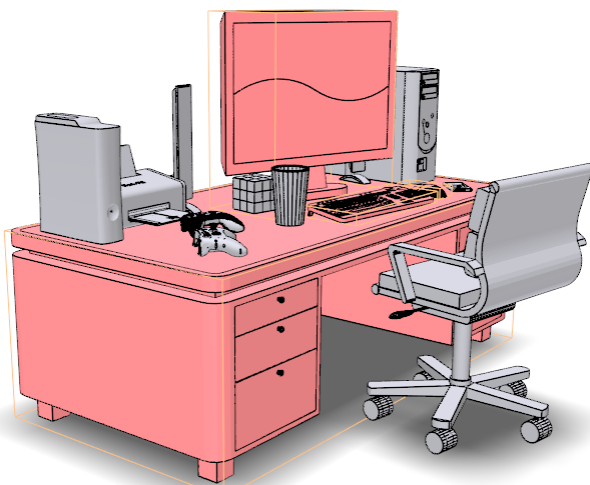
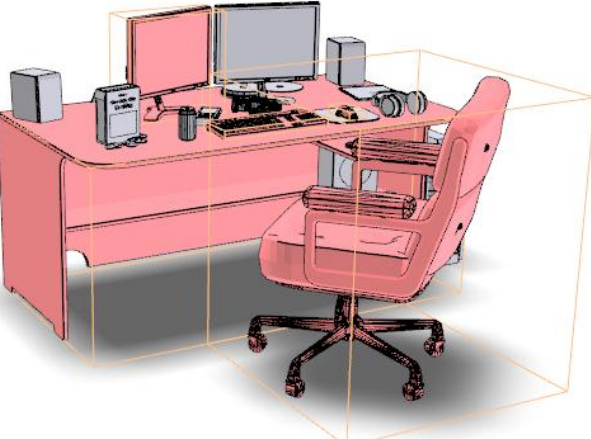
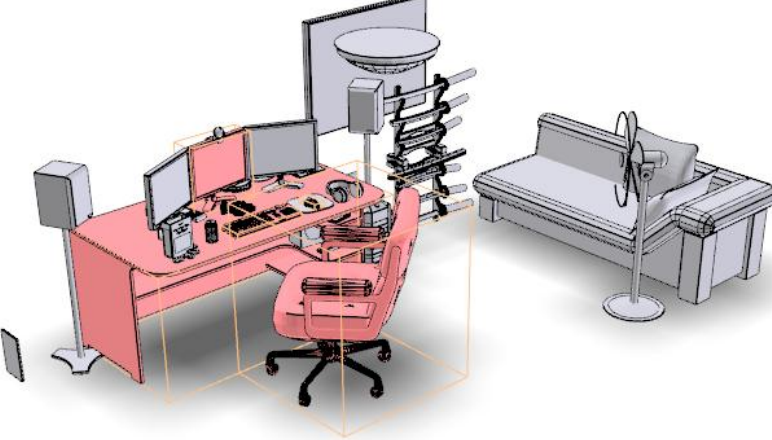

Query set

Results

	GK	1. 	2. 	3. 
		4. 	5. 	6. 
	FCG K	1. 	2. 	3. 
		4. 	5. 	6. 

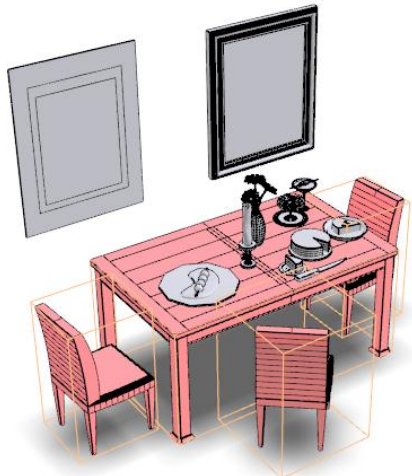

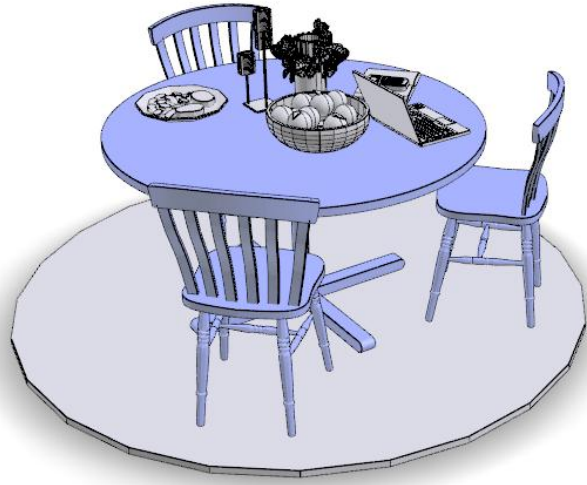
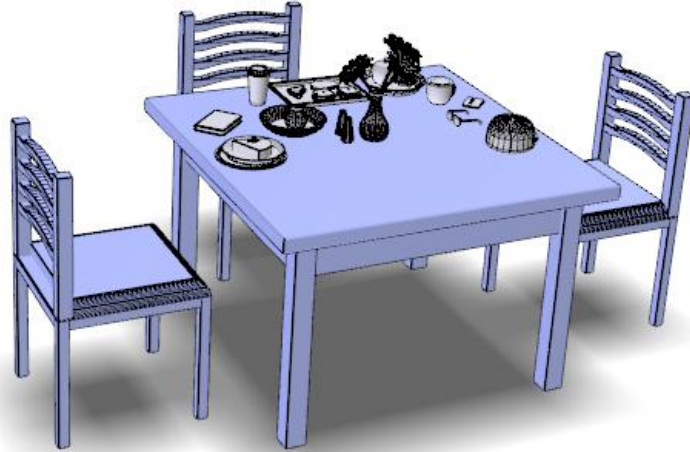
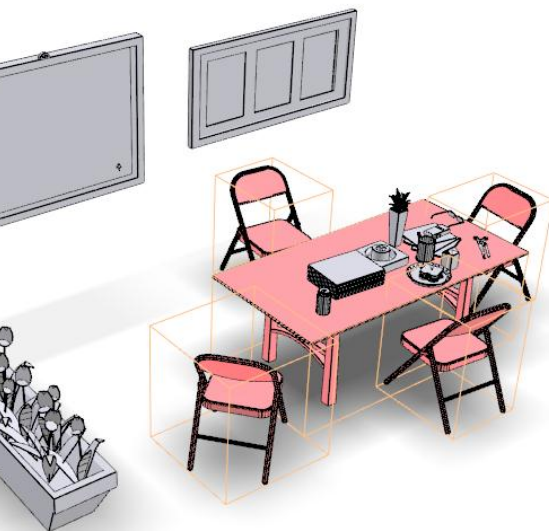

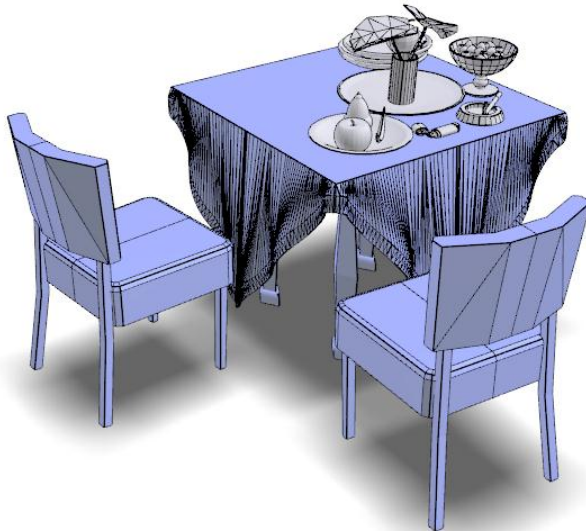


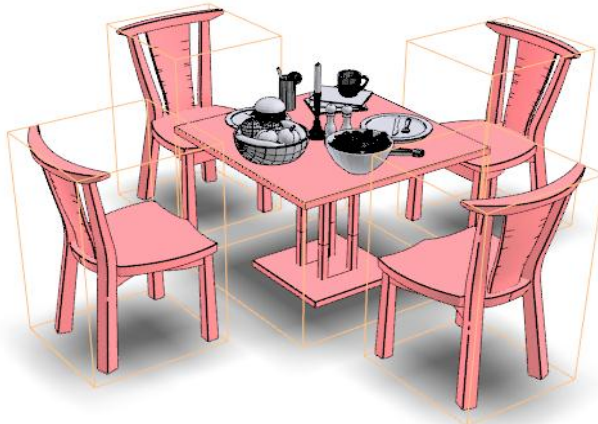
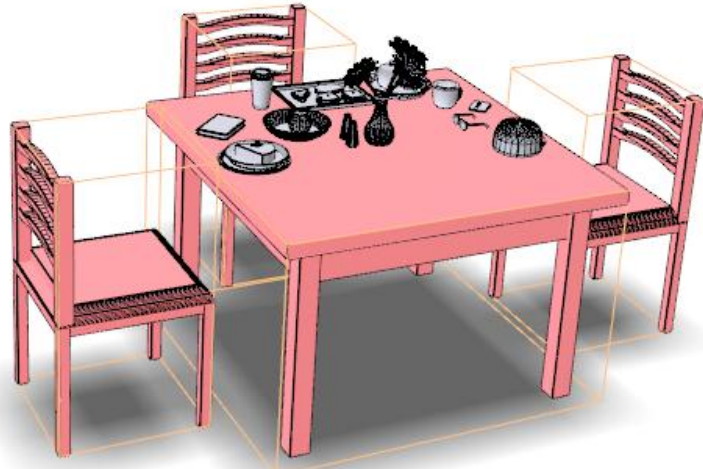
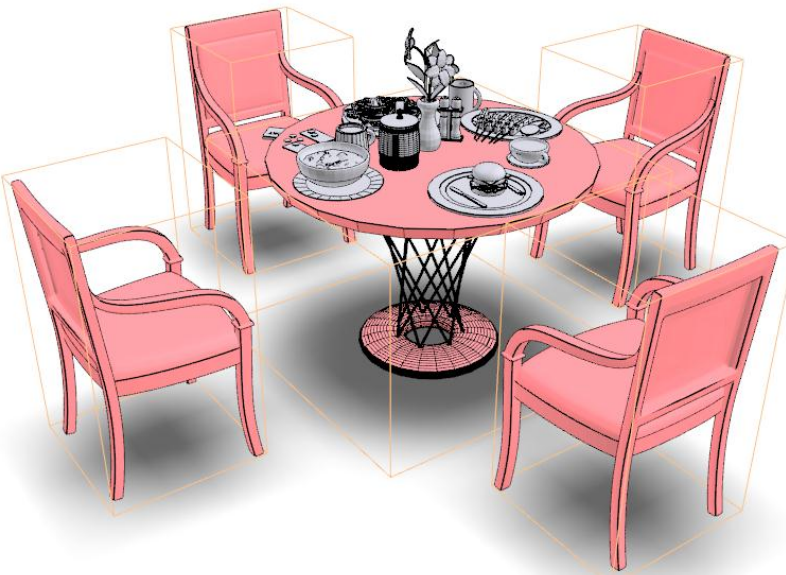
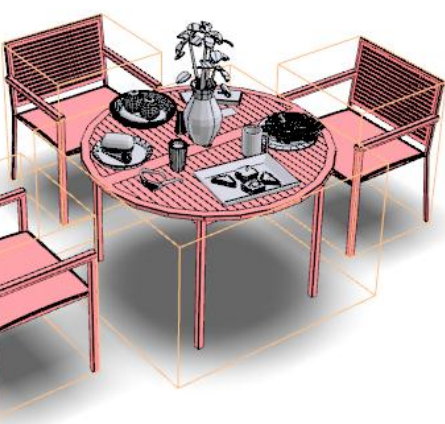
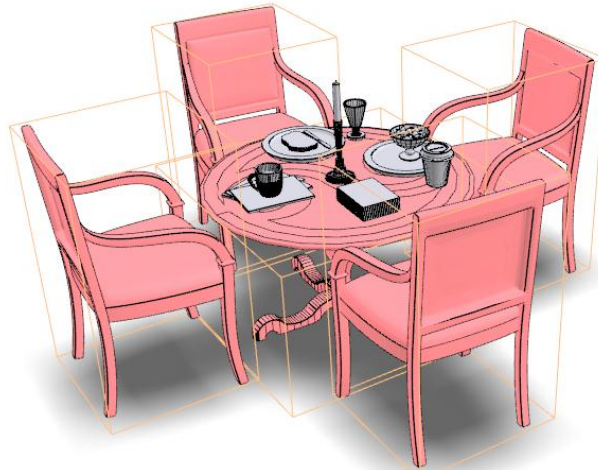
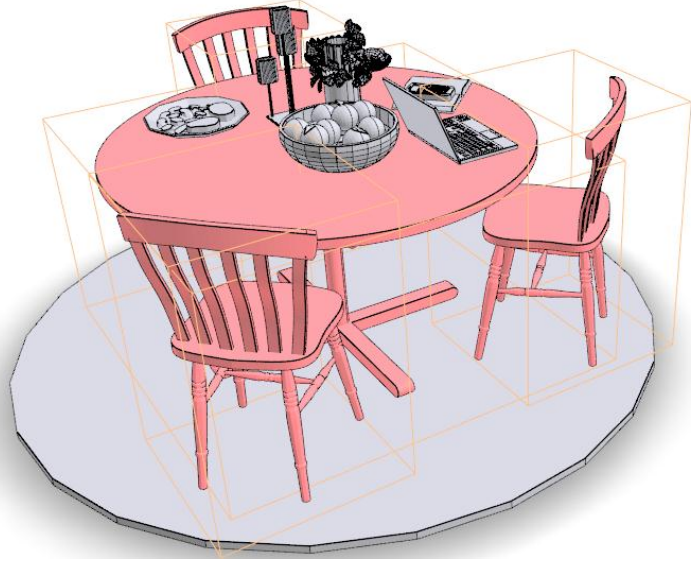
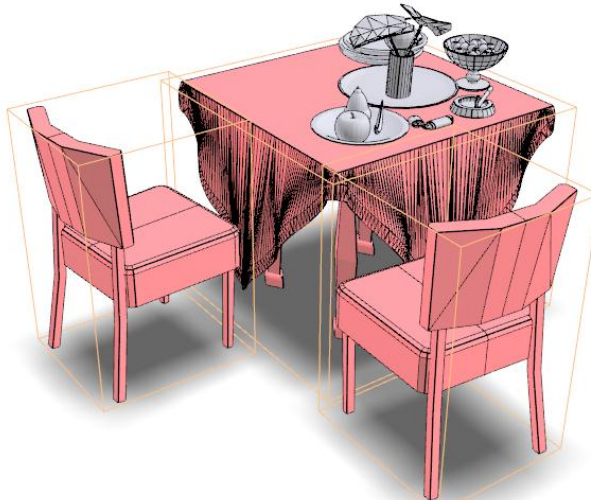
Stanford dataset: Multi-query set 2

back

Query set		Results					
	GK	1. 	2. 	3. 			
		4. 	5. 	6. 			
	FCG K	1. 	2. 	3. 			
		4. 	5. 	6. 			

Stanford dataset: Multi-query set 3

back

Query set		Results		
	GK	1. 	2. 	3. 
		4. 	5. 	6. 
	FCG K	1. 	2. 	3. 
		4. 	5. 	6. 

Single query results

Tsinghua dataset

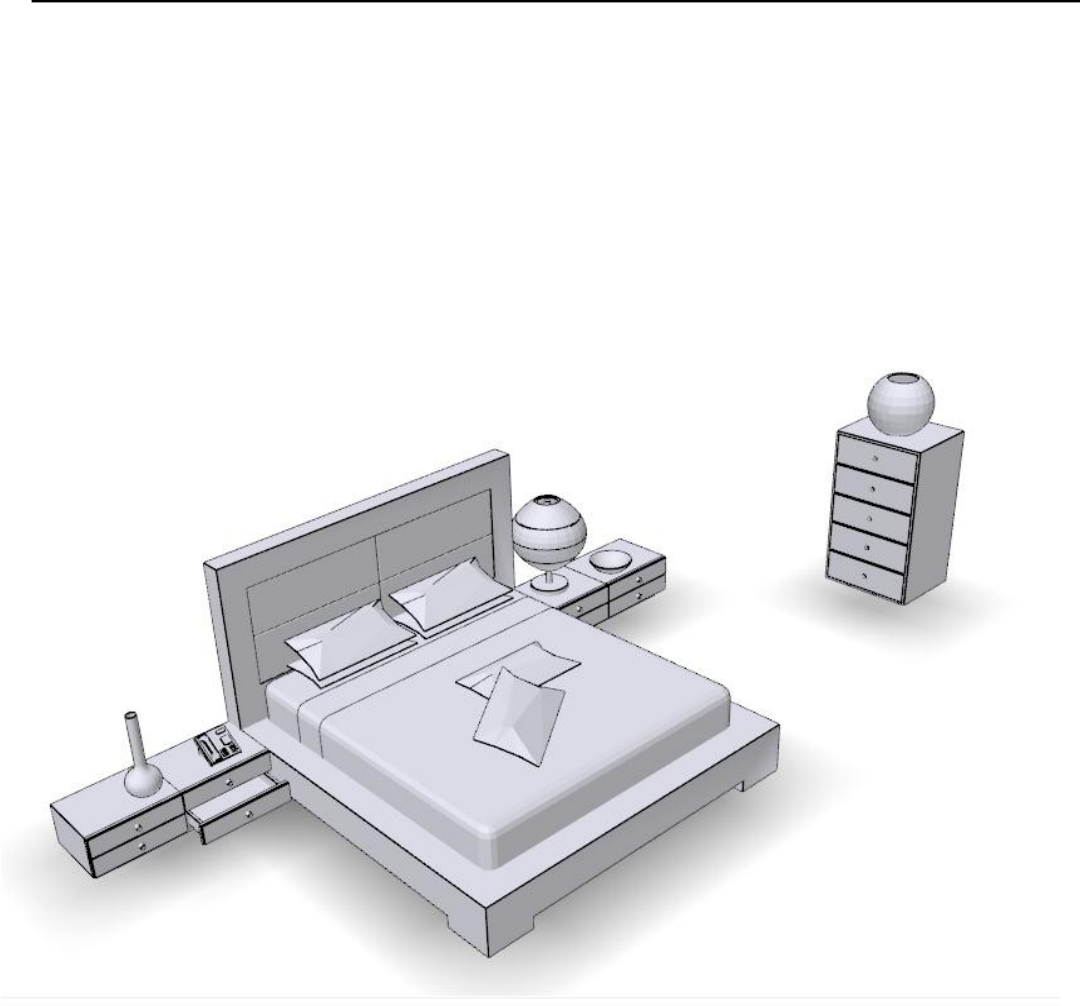
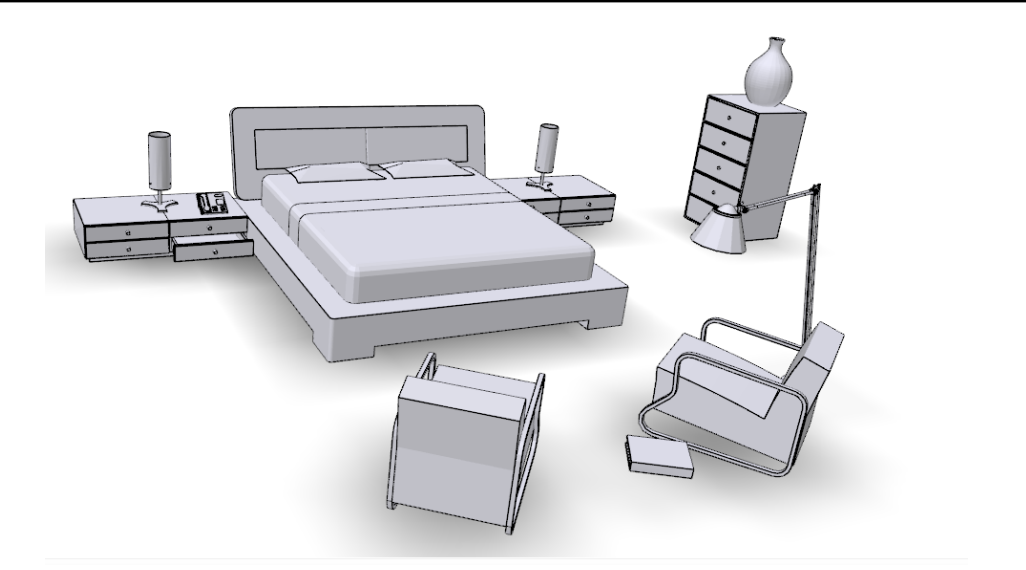
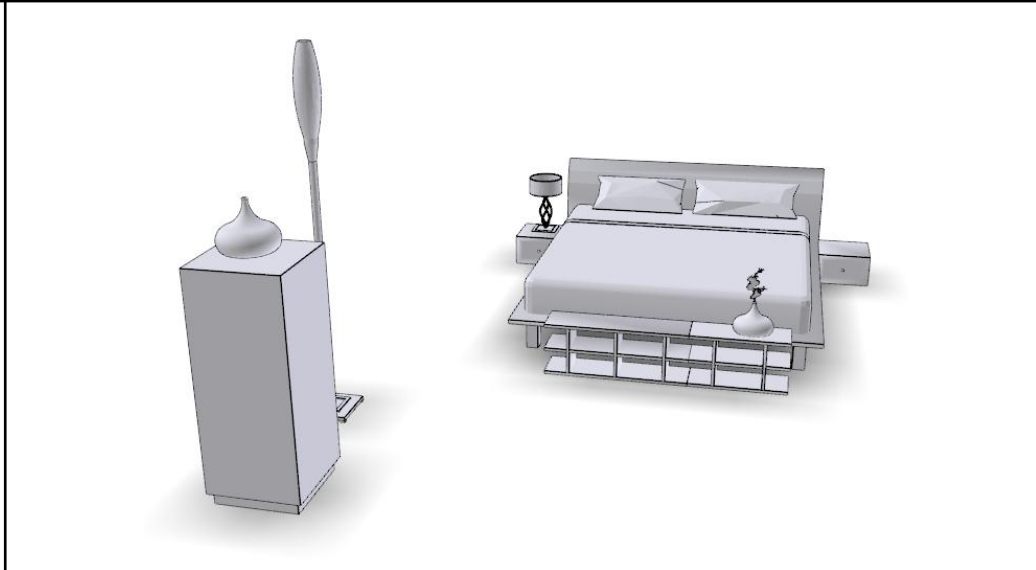

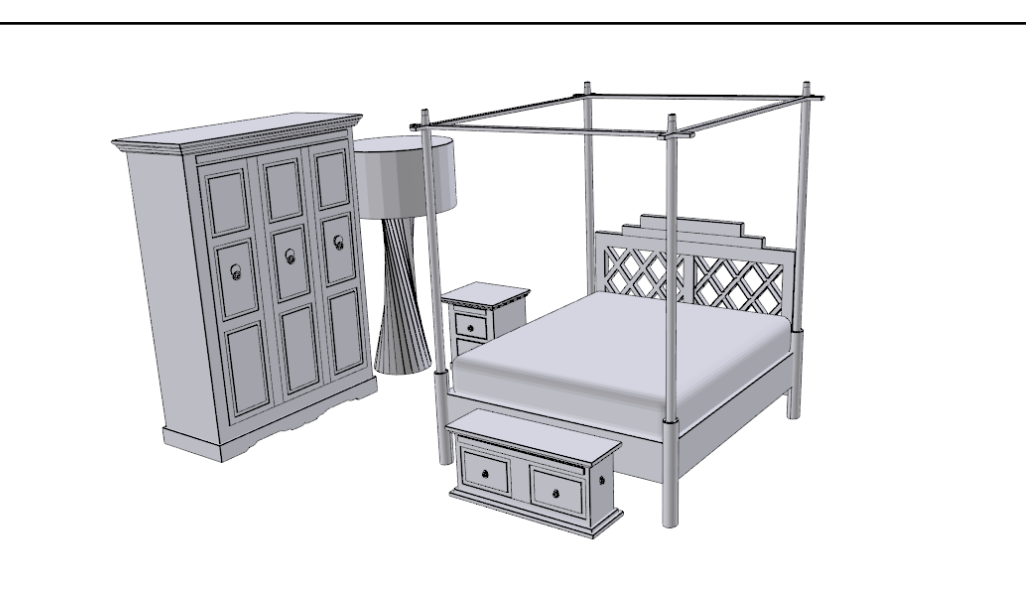

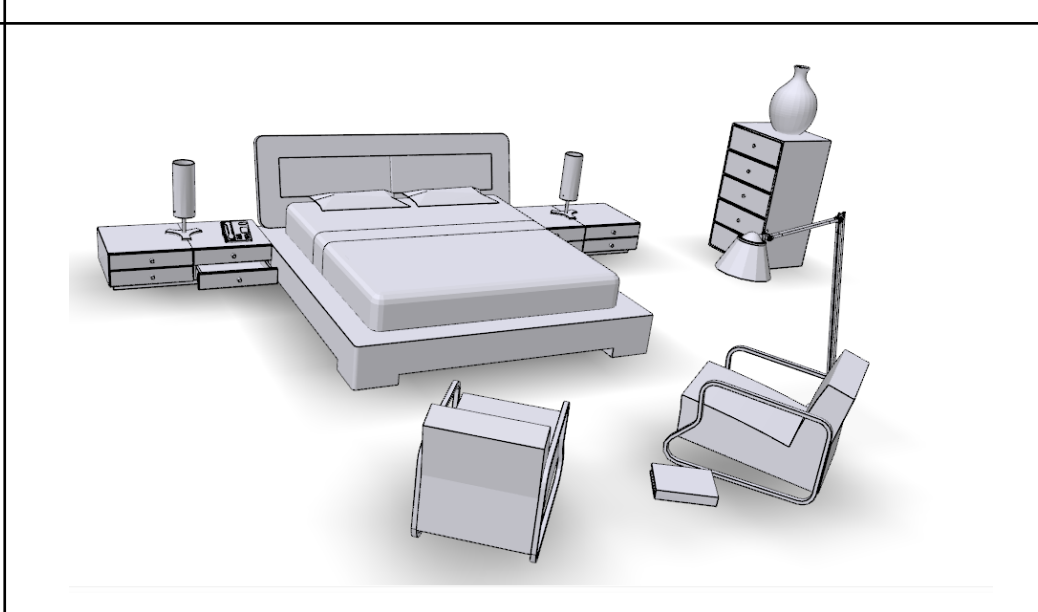
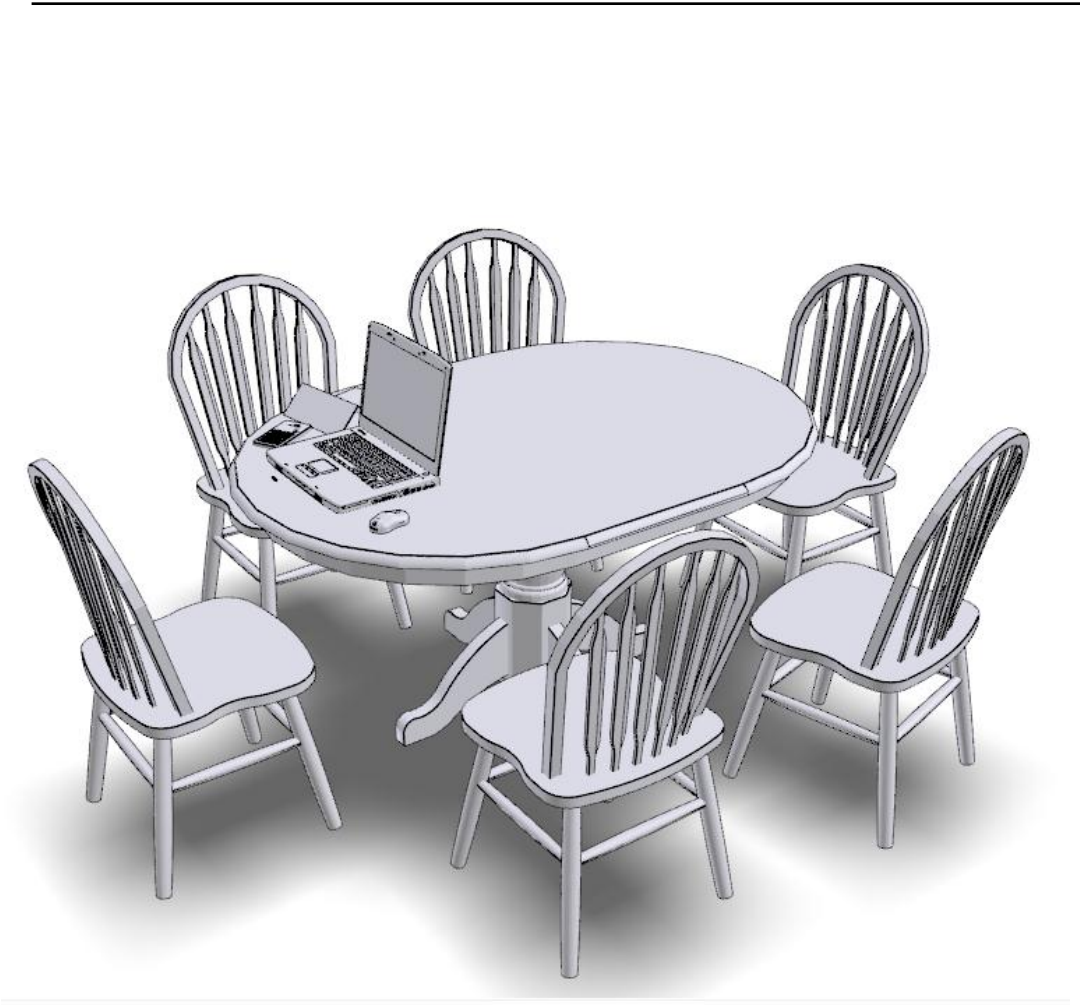
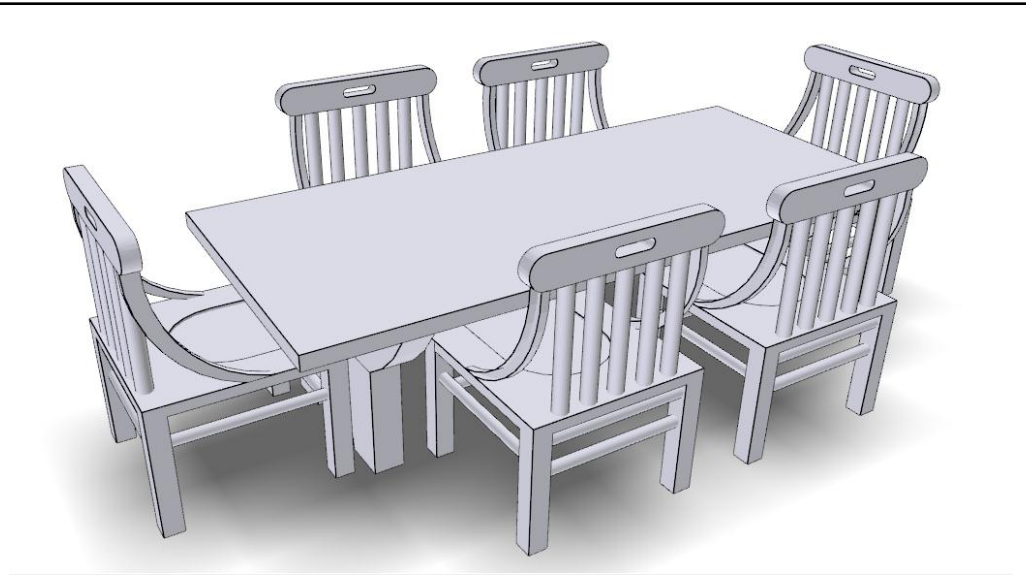
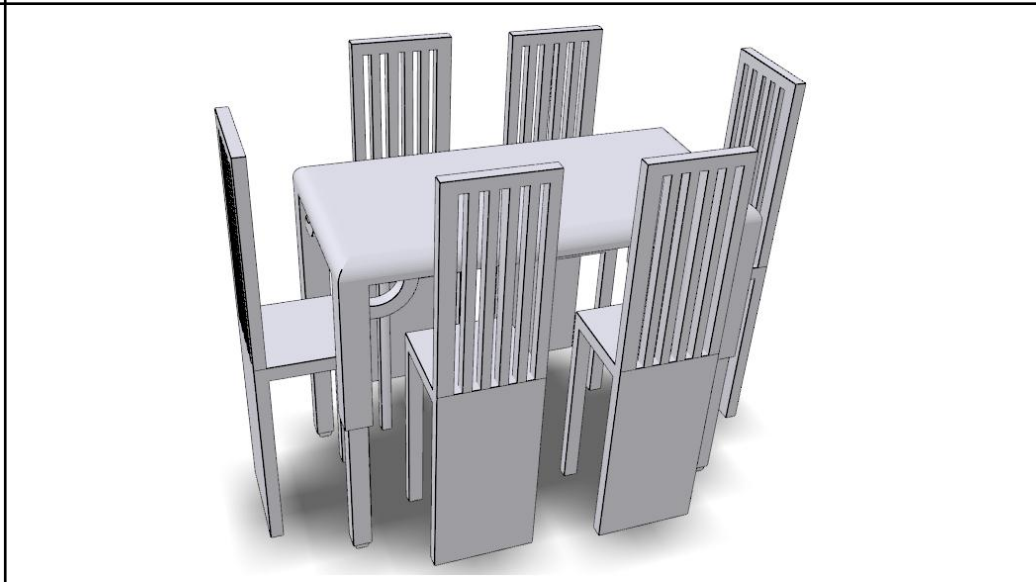
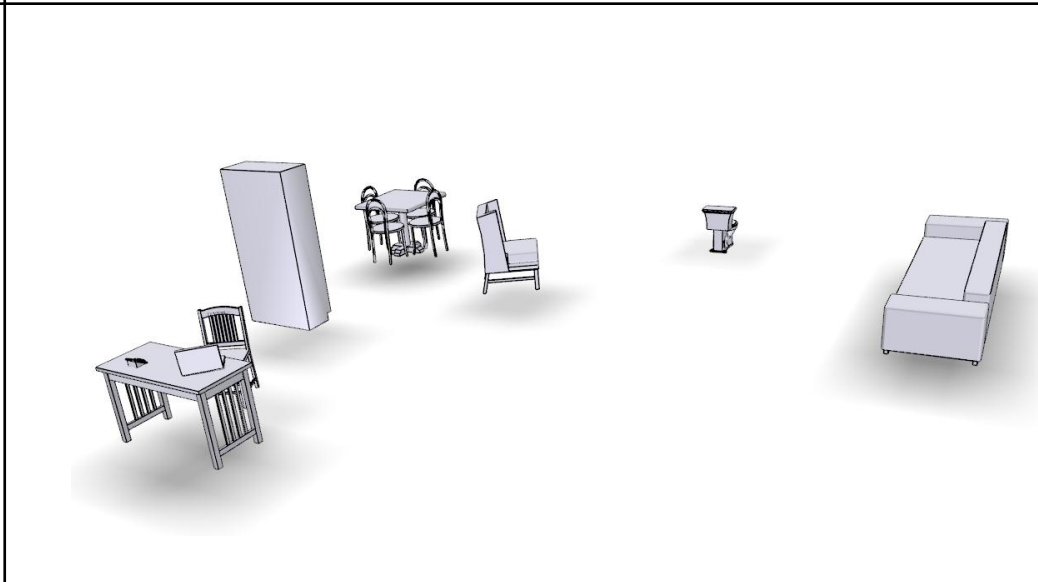
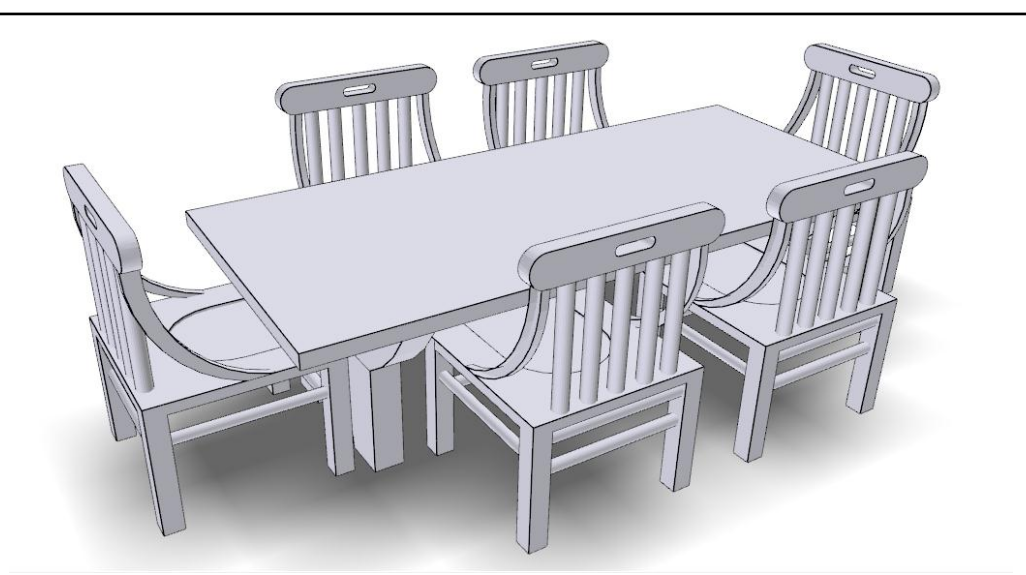
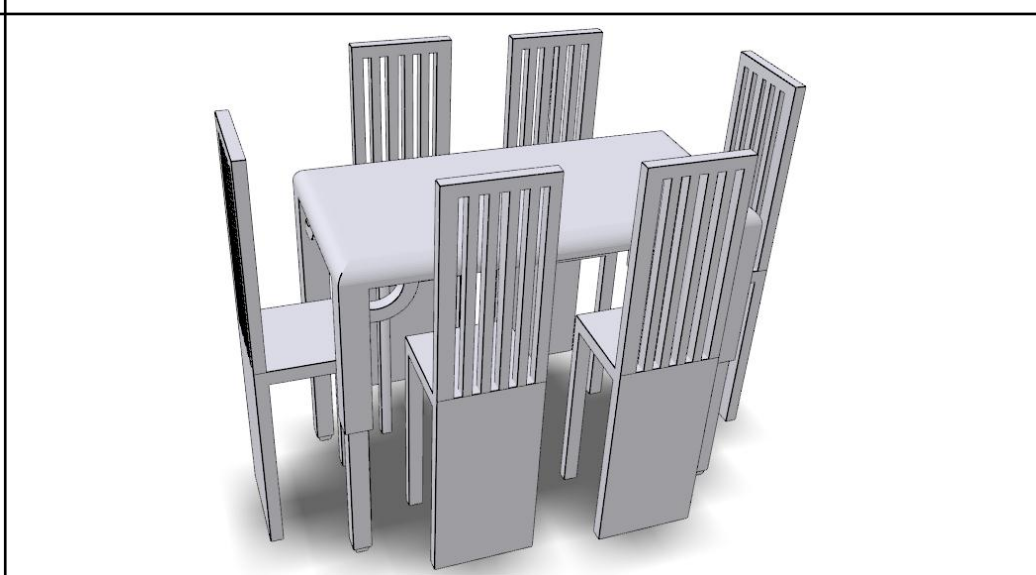
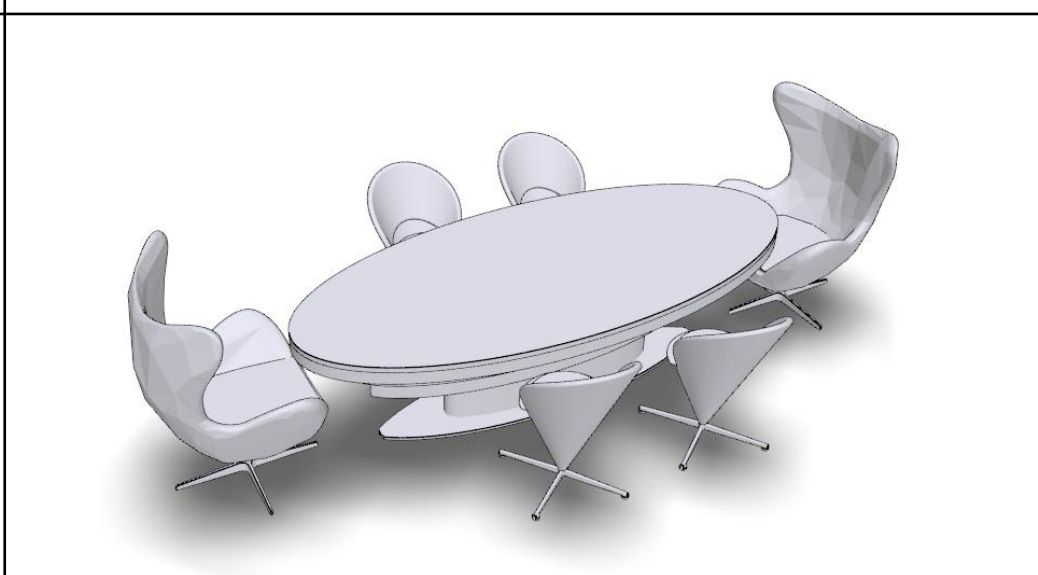
10 queries

GK = Graph Kernel

FCGK = Focal Centric Graph Kernel

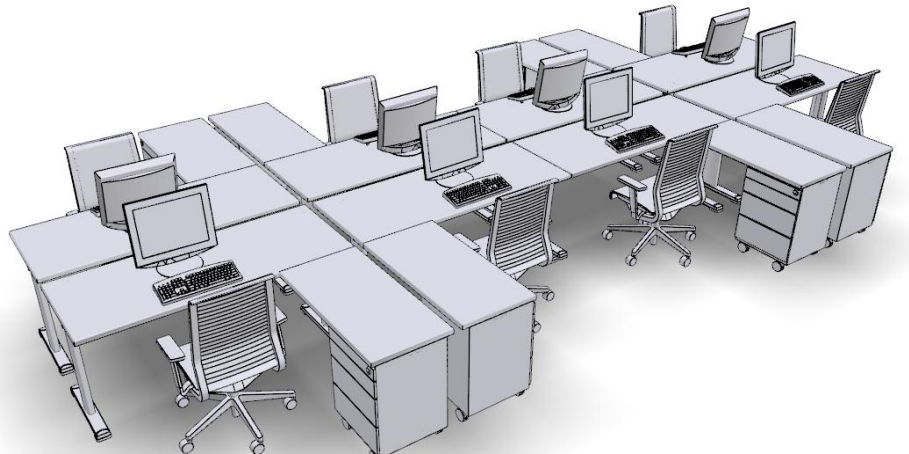

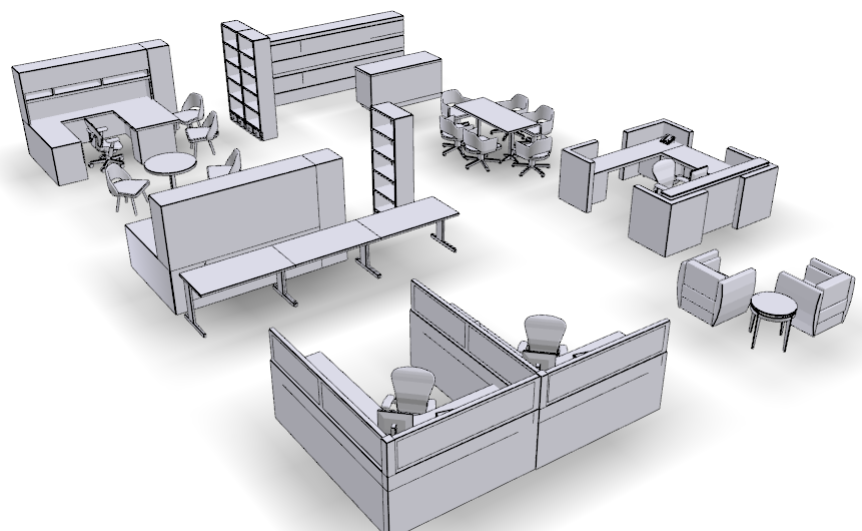
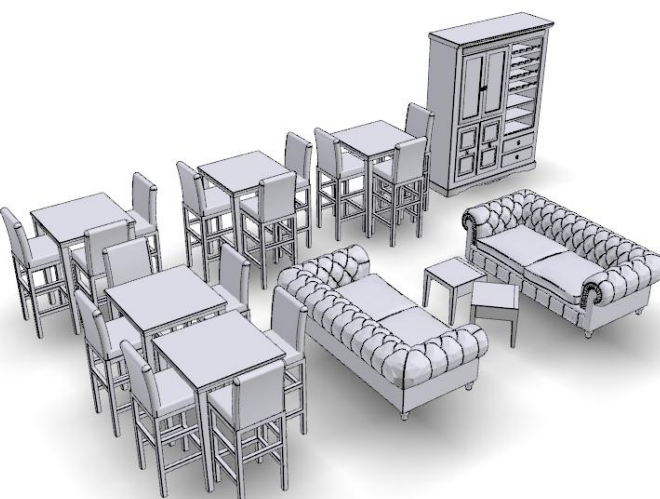
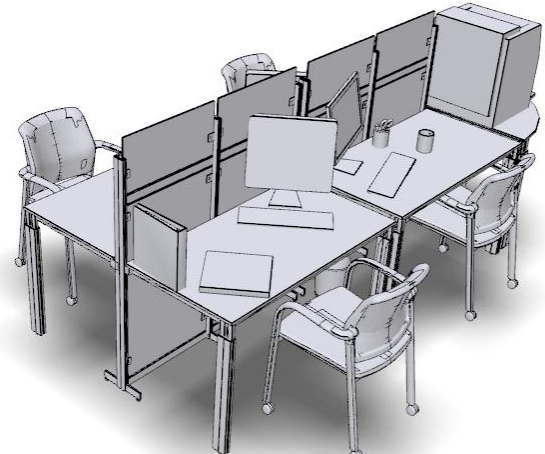
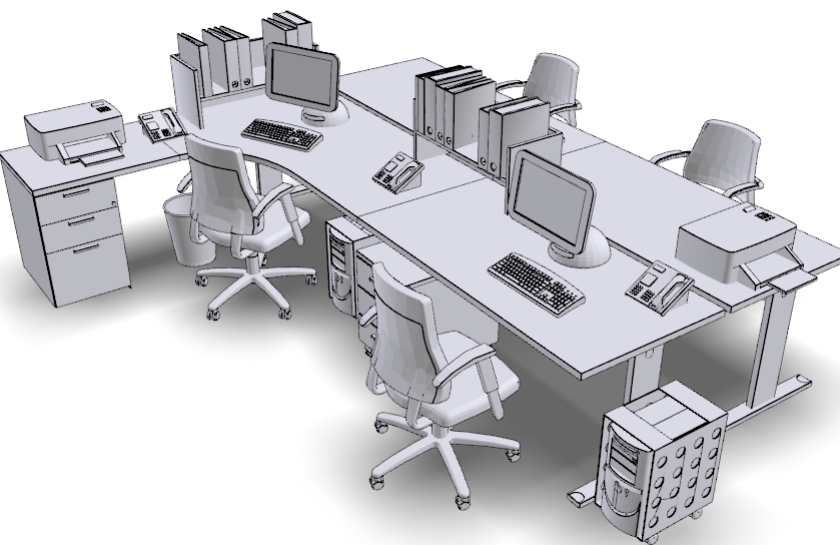
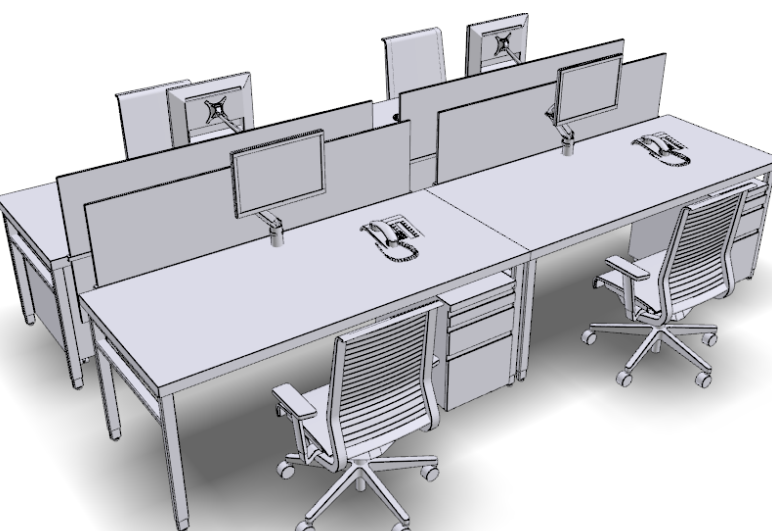

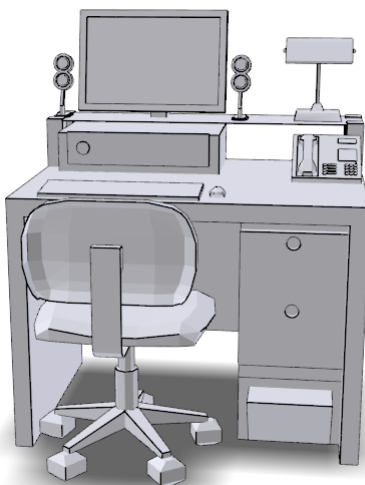
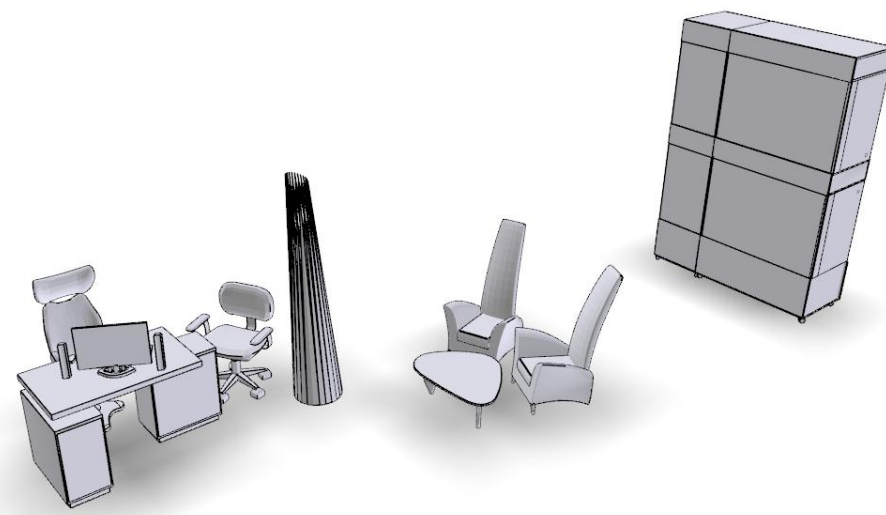

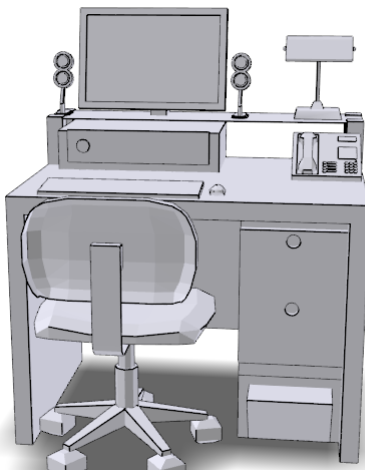

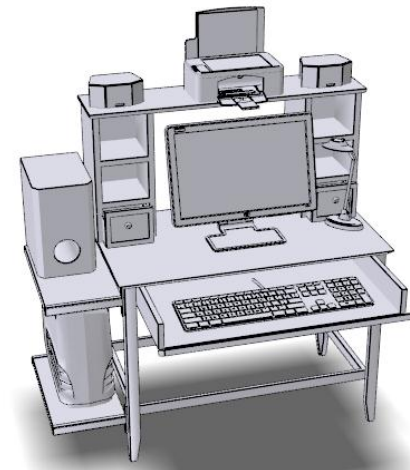
Tsinghua dataset: Query 1-2

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

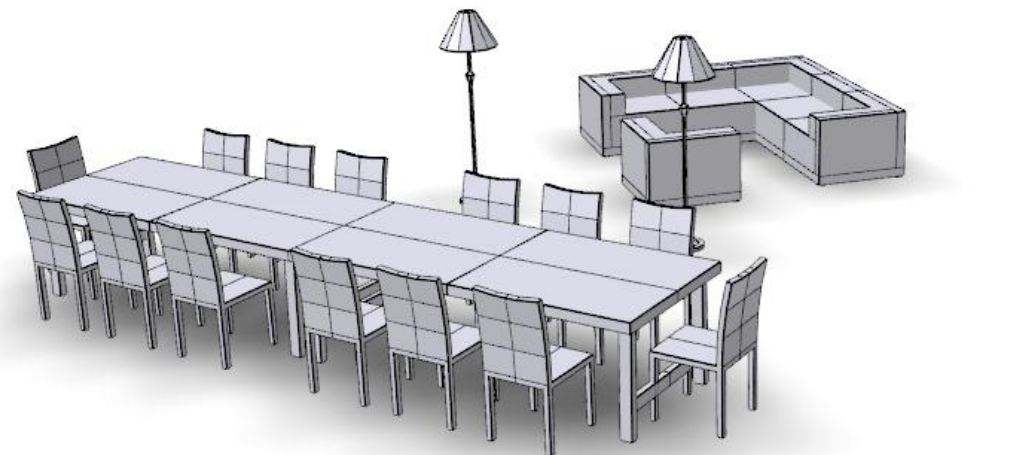
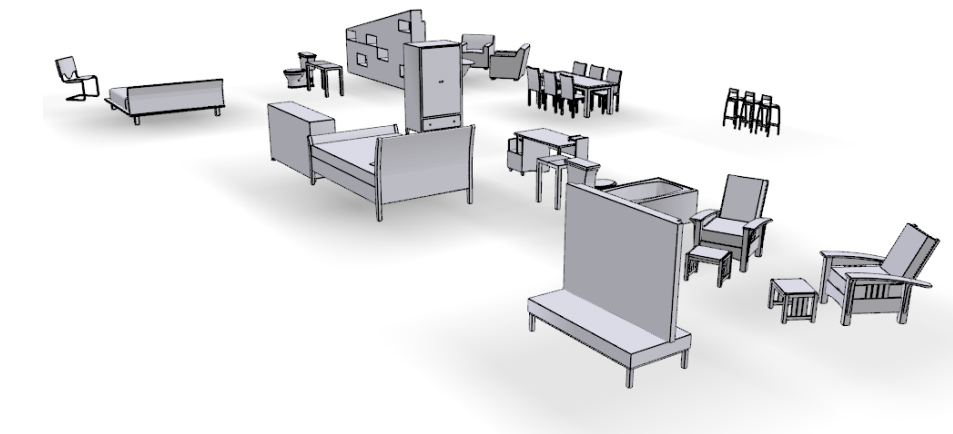
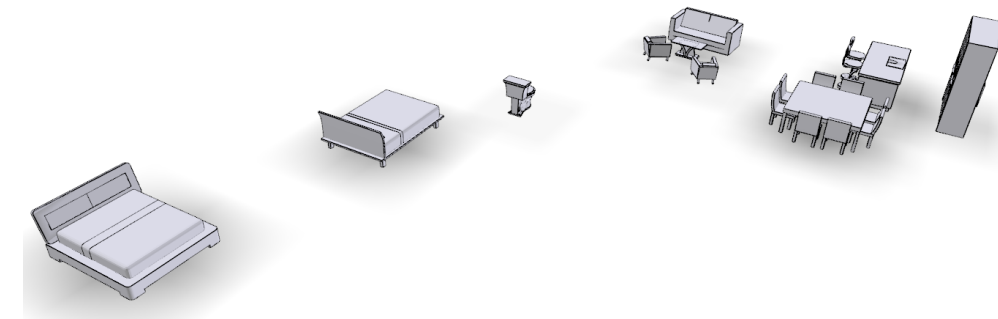
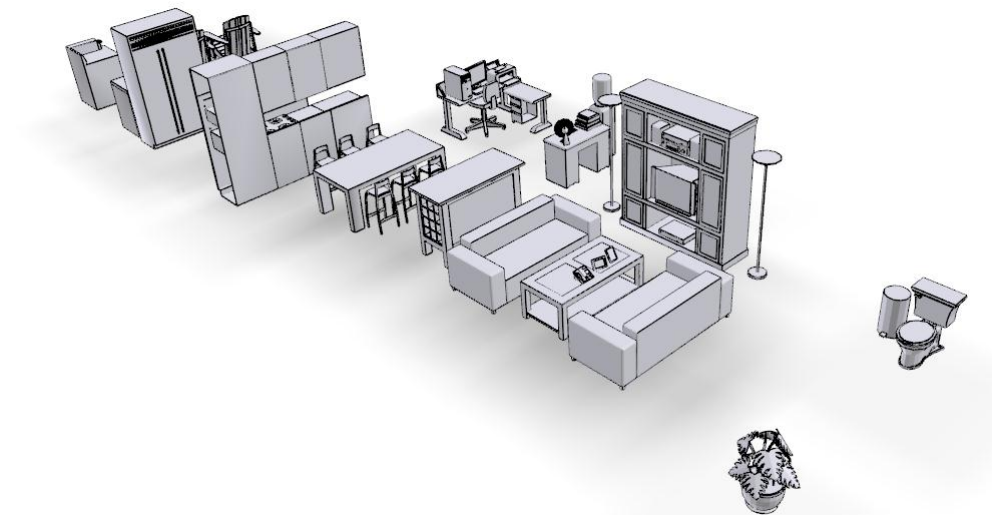
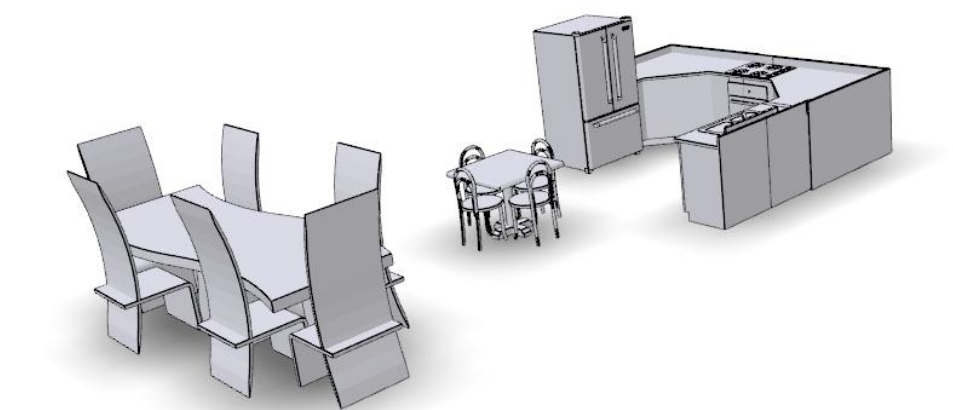
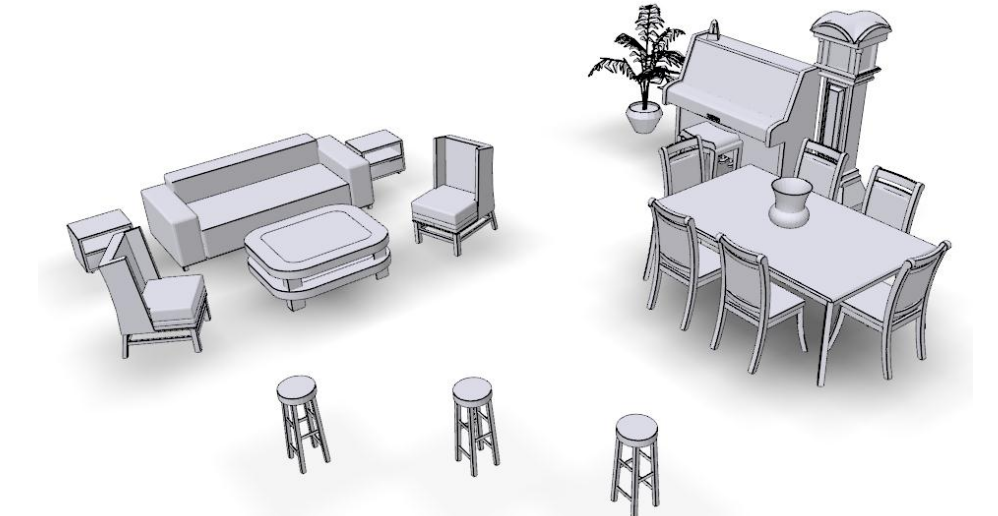
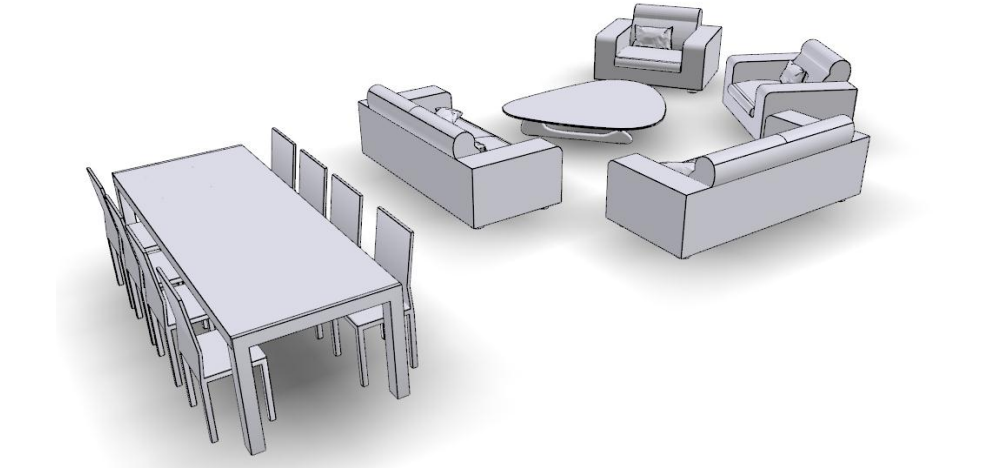
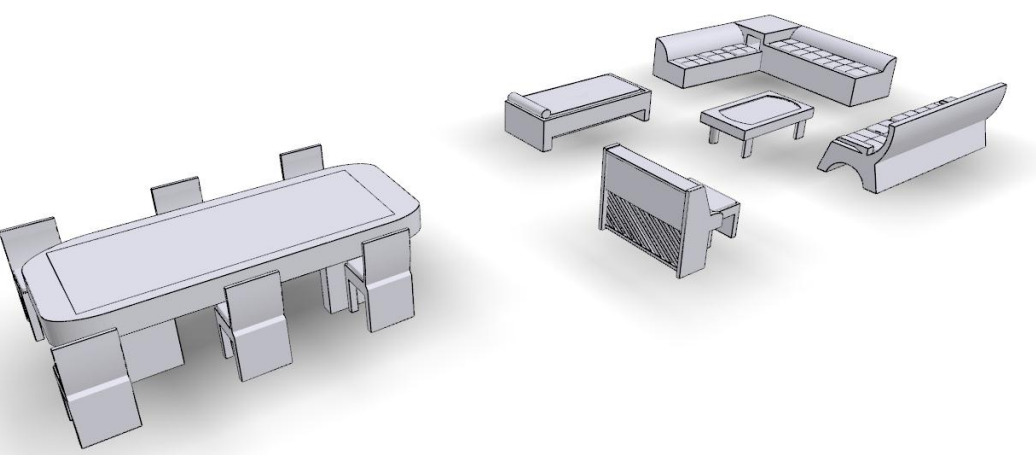
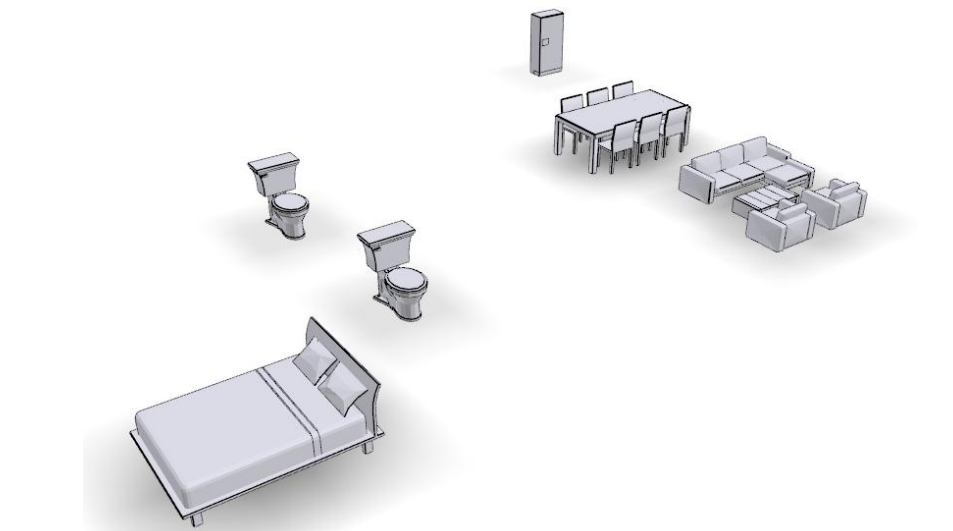
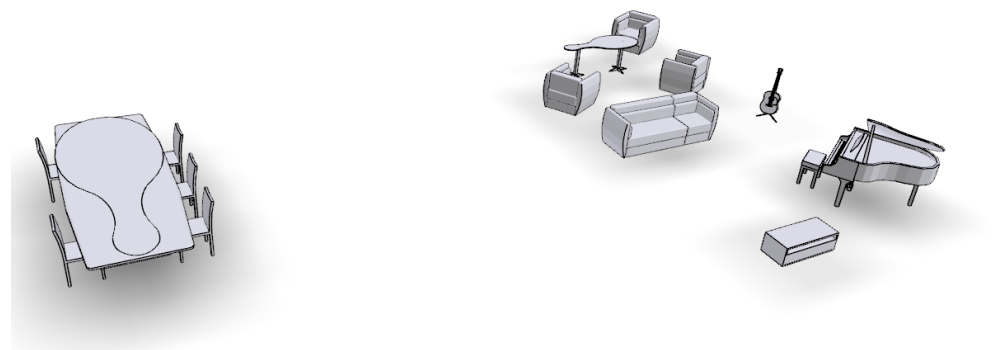
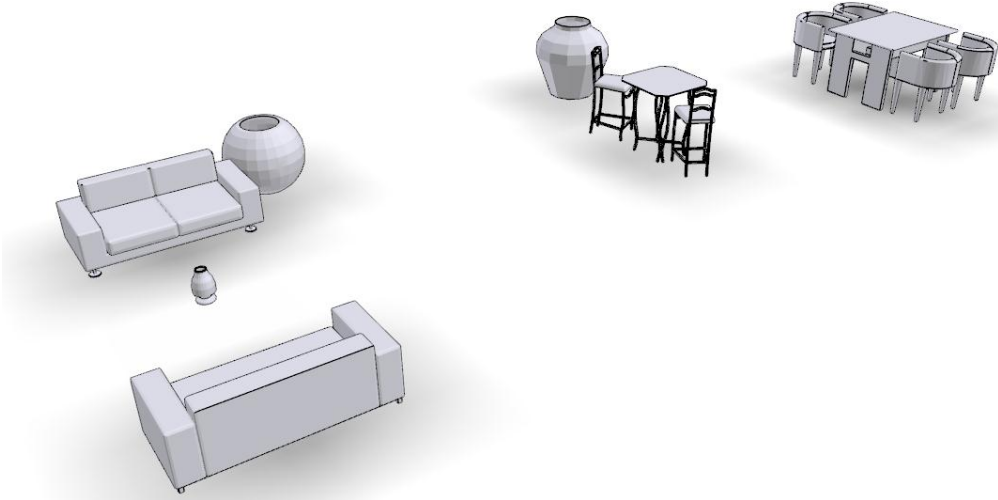
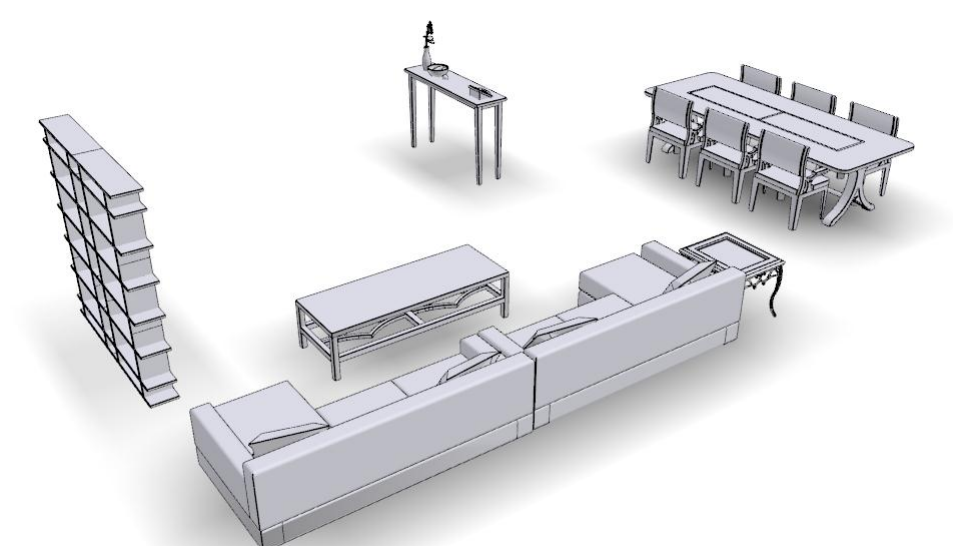
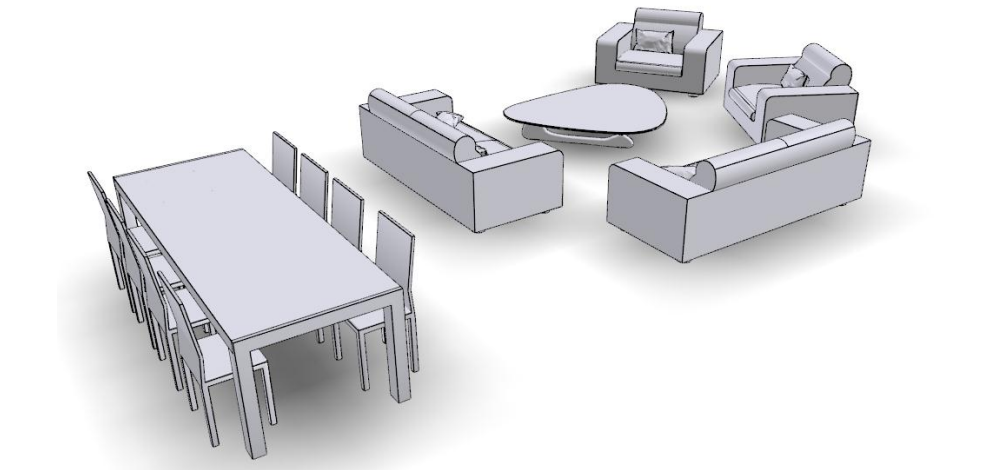
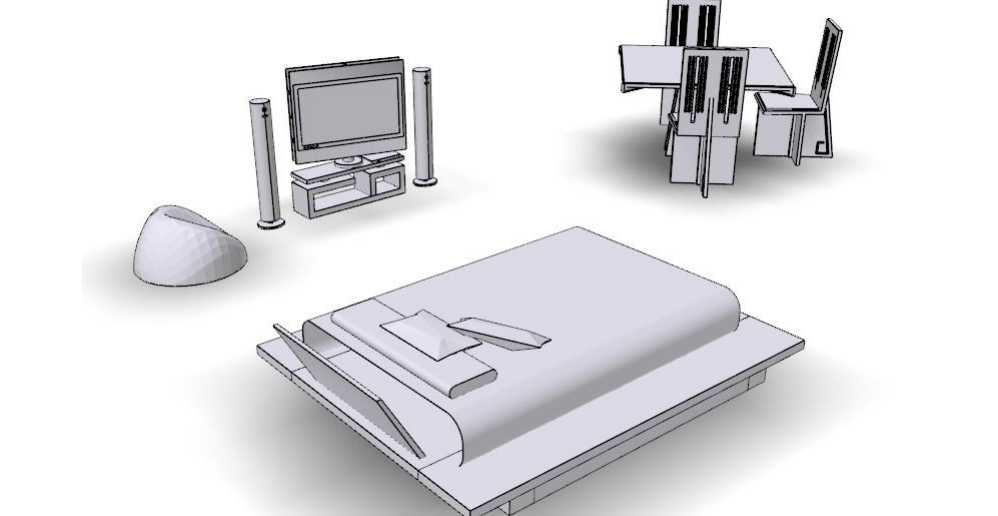
Tsinghua dataset: Query 3-4

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

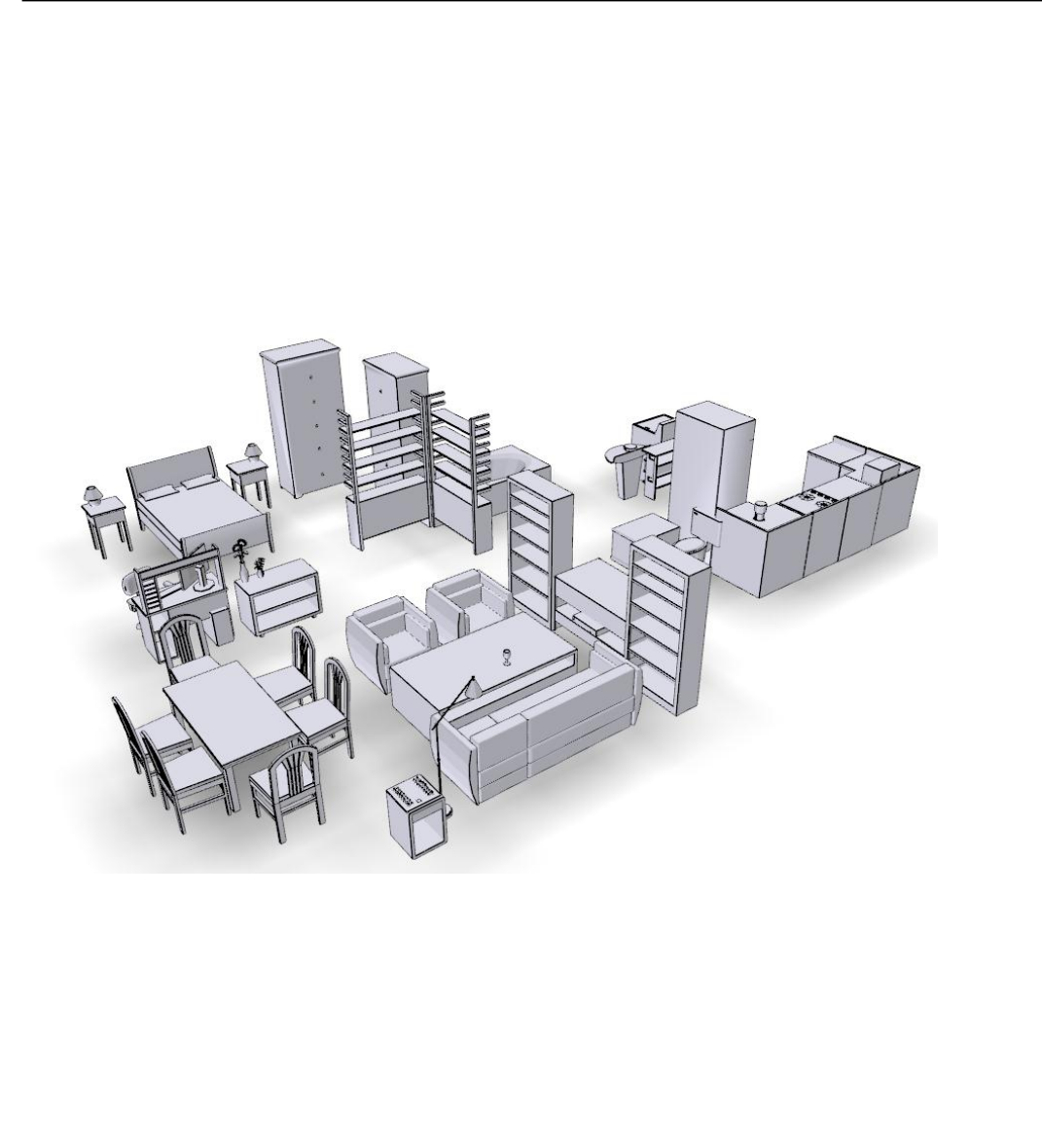
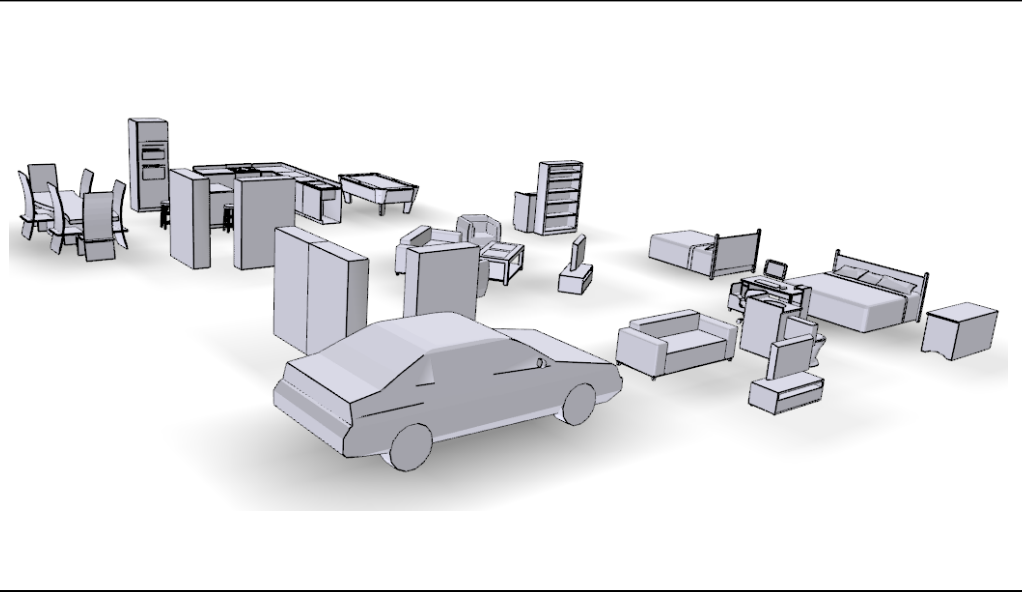
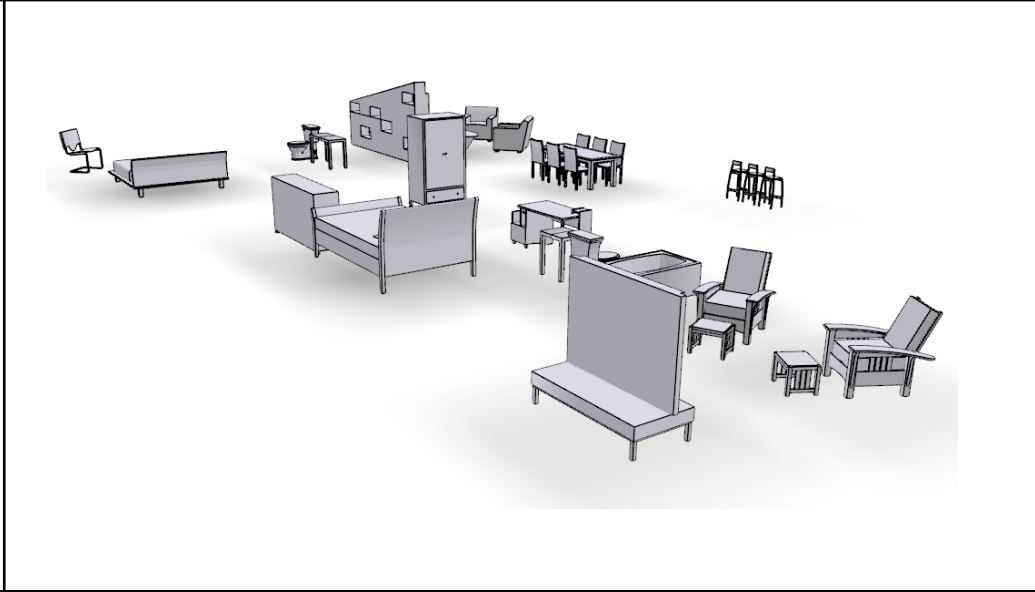
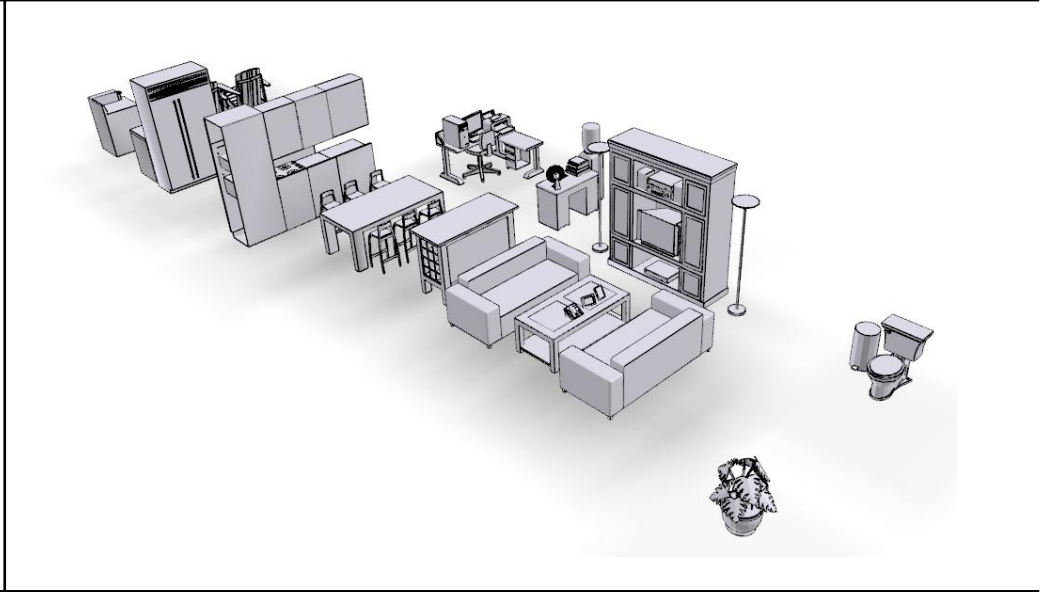
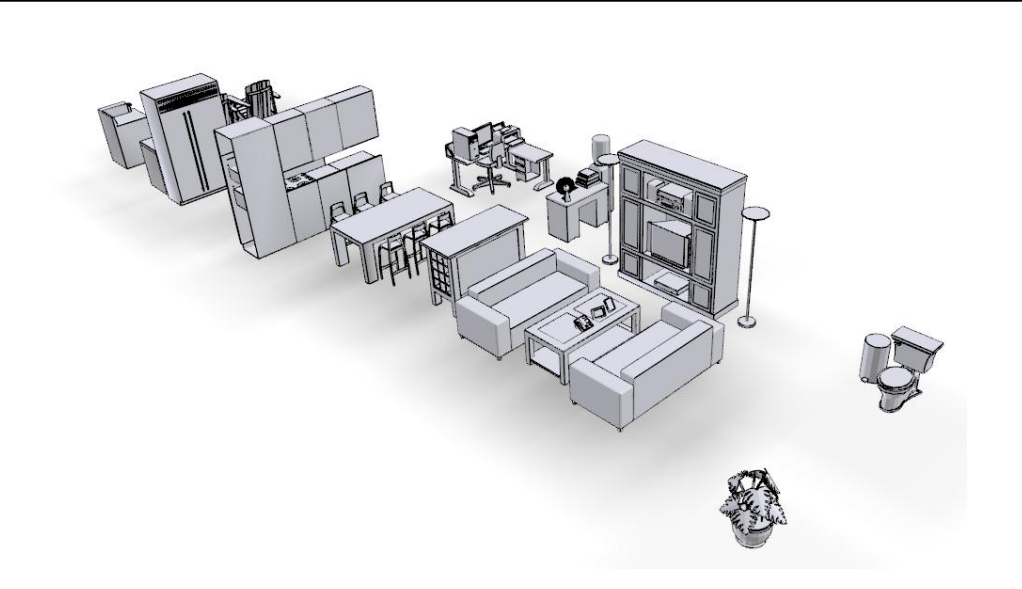
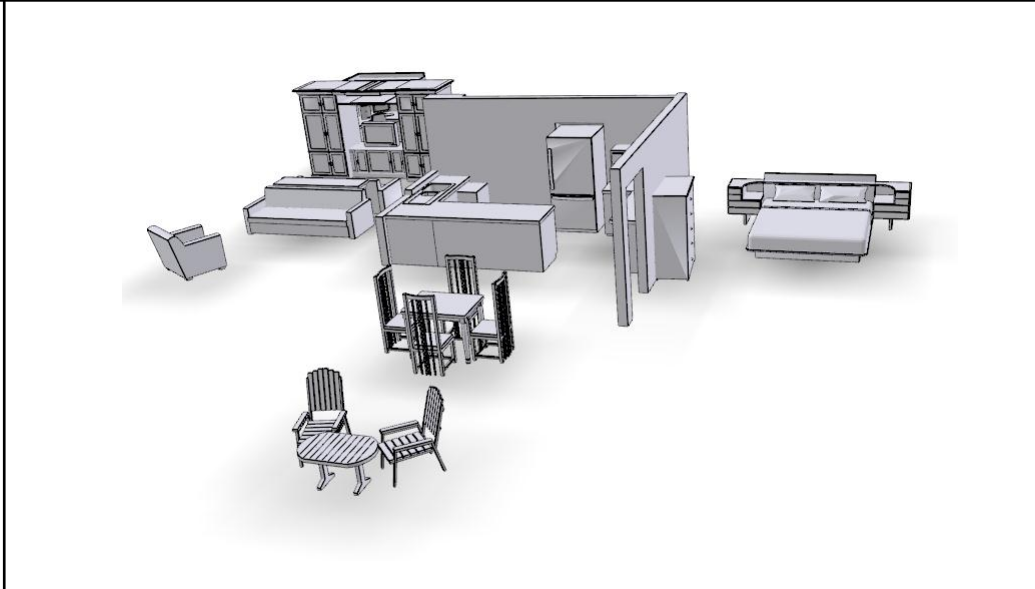
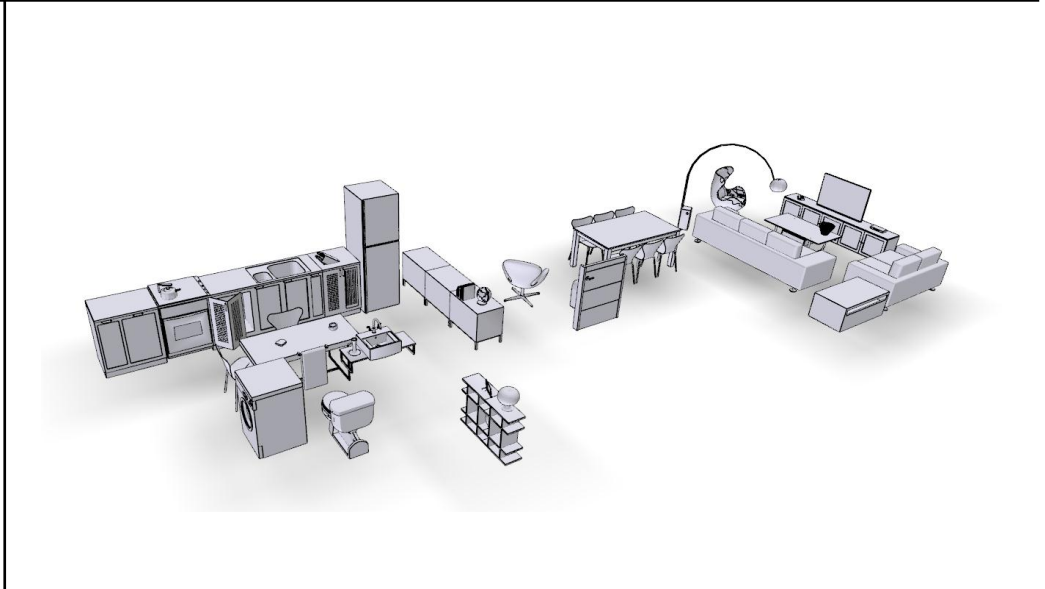
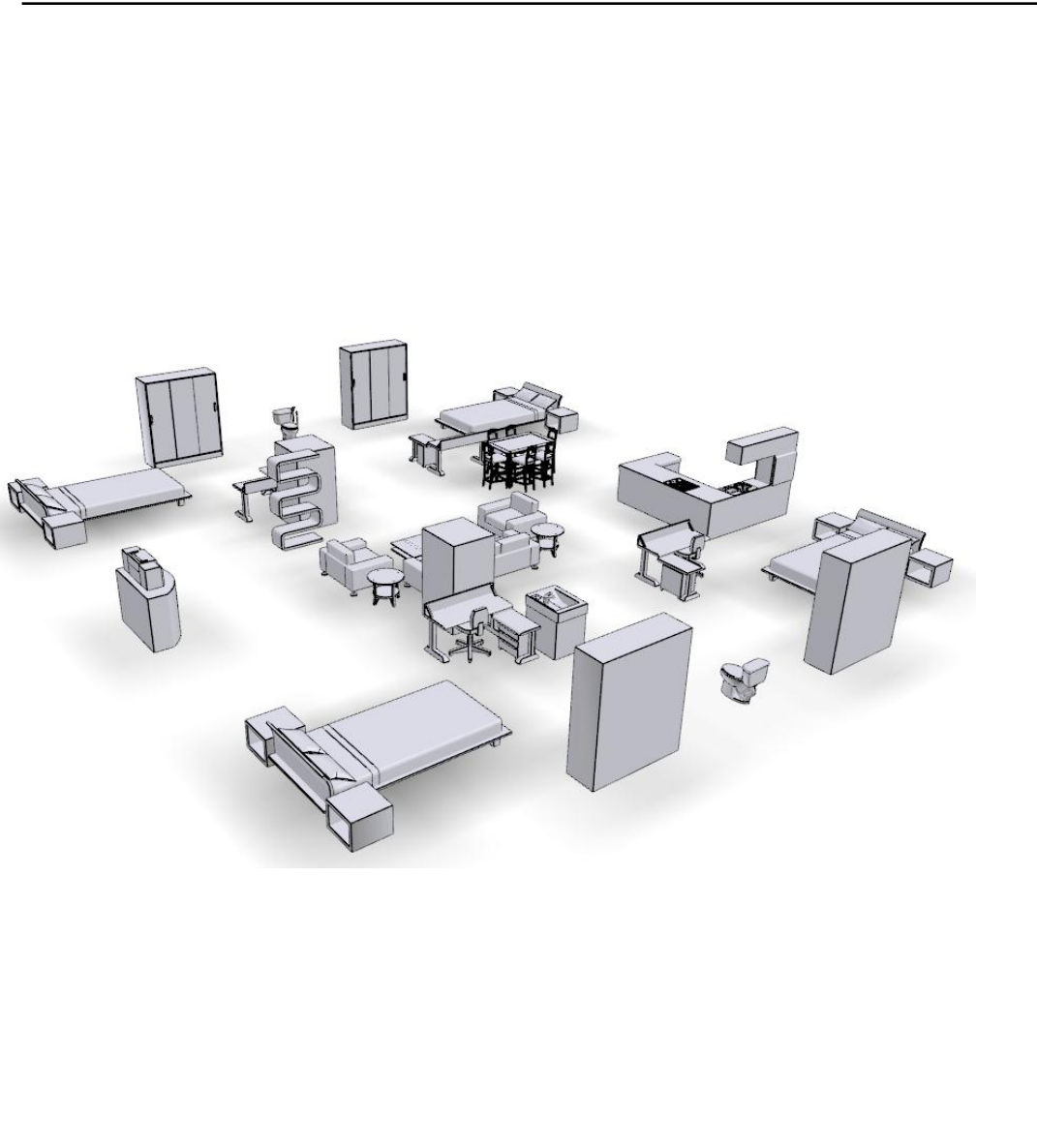
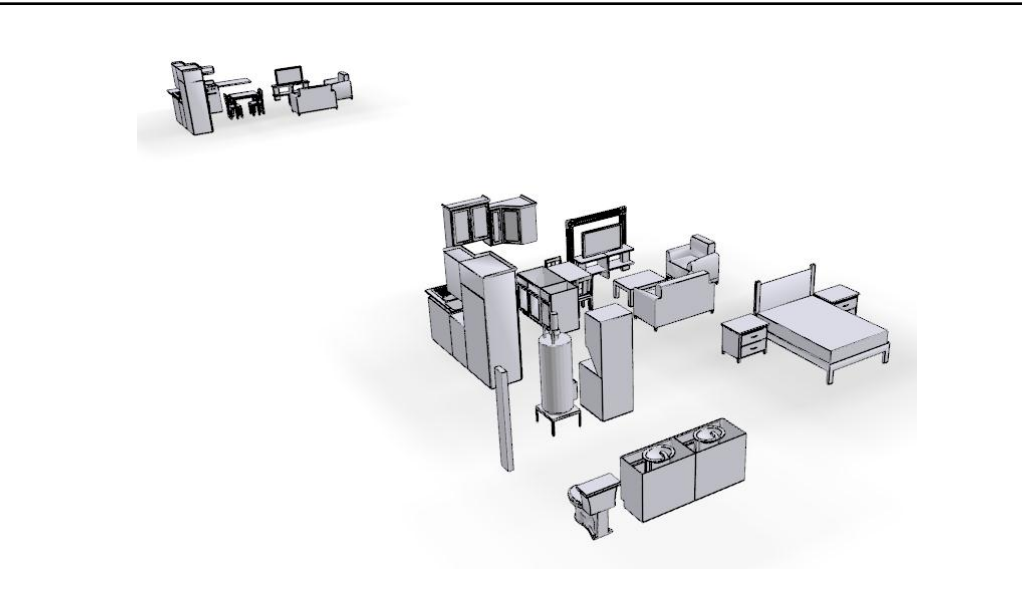
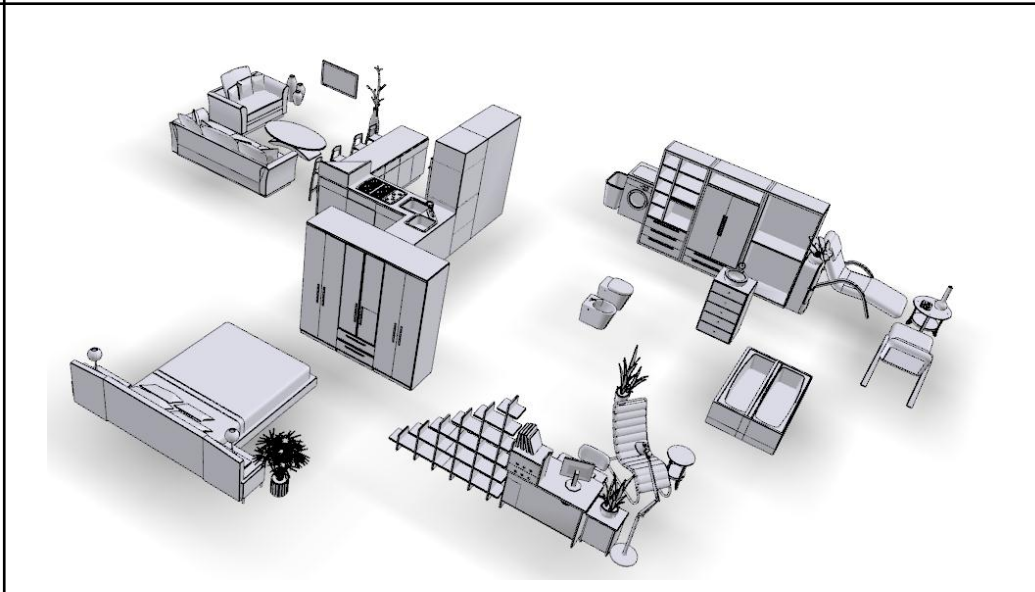
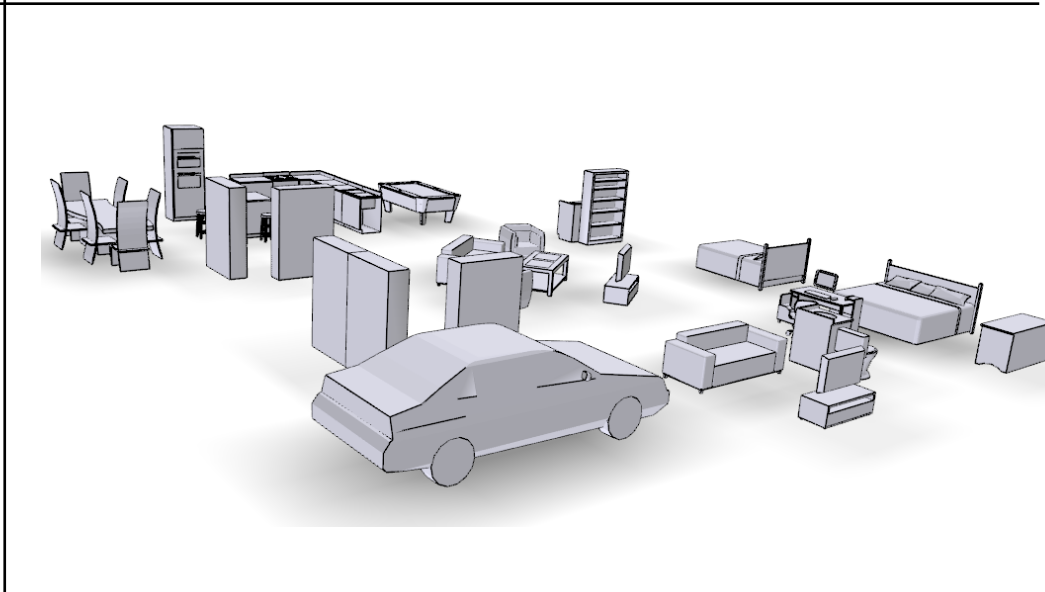
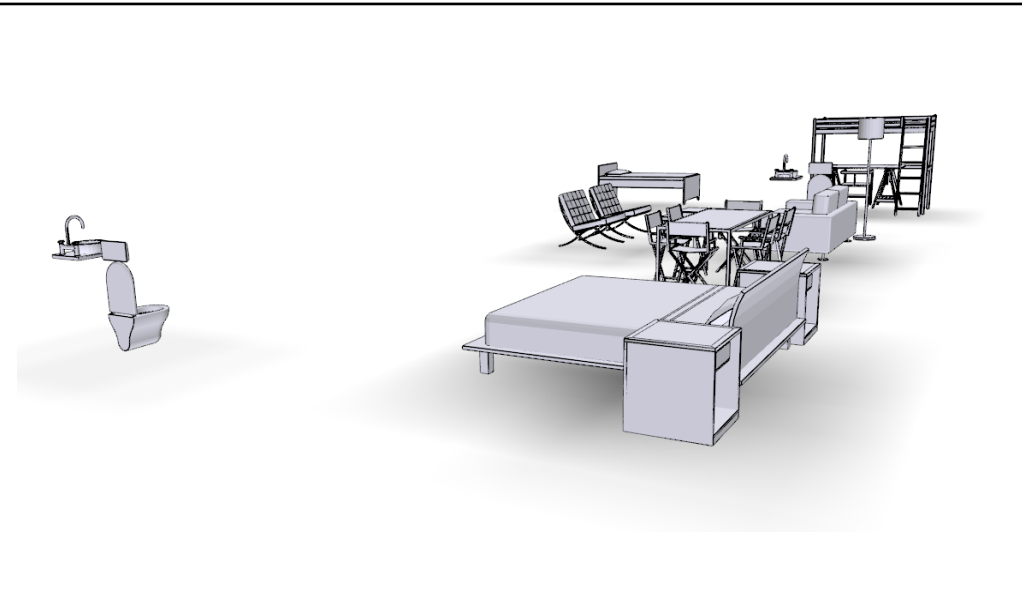
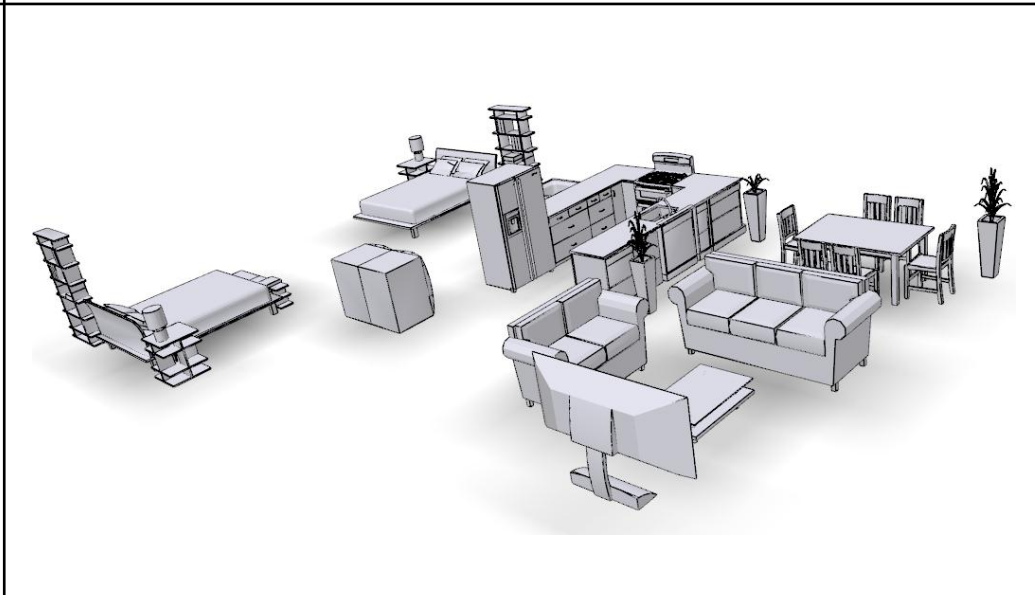
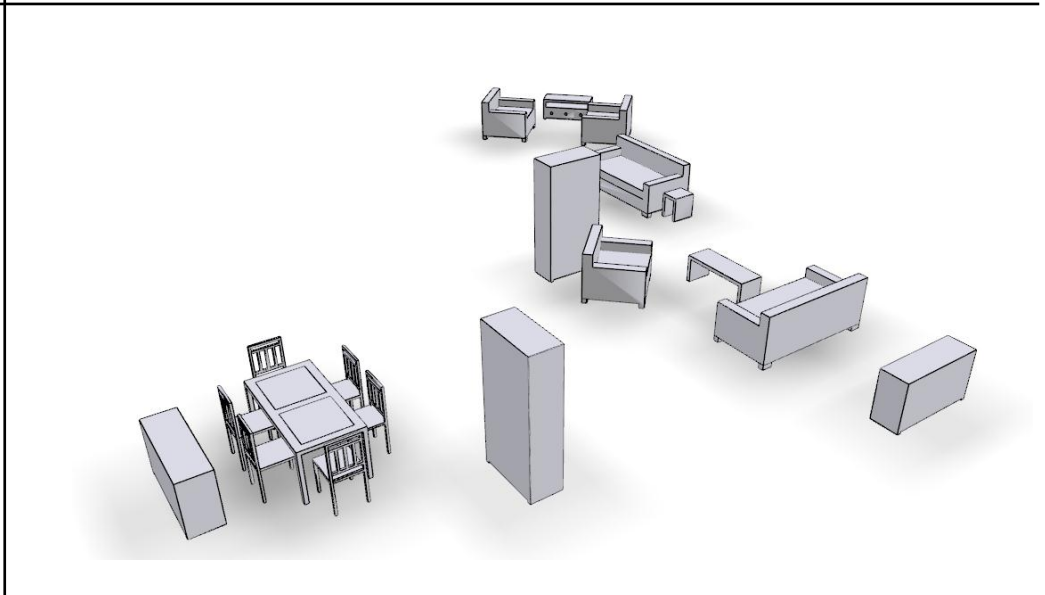
Tsinghua dataset: Query 5-6

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

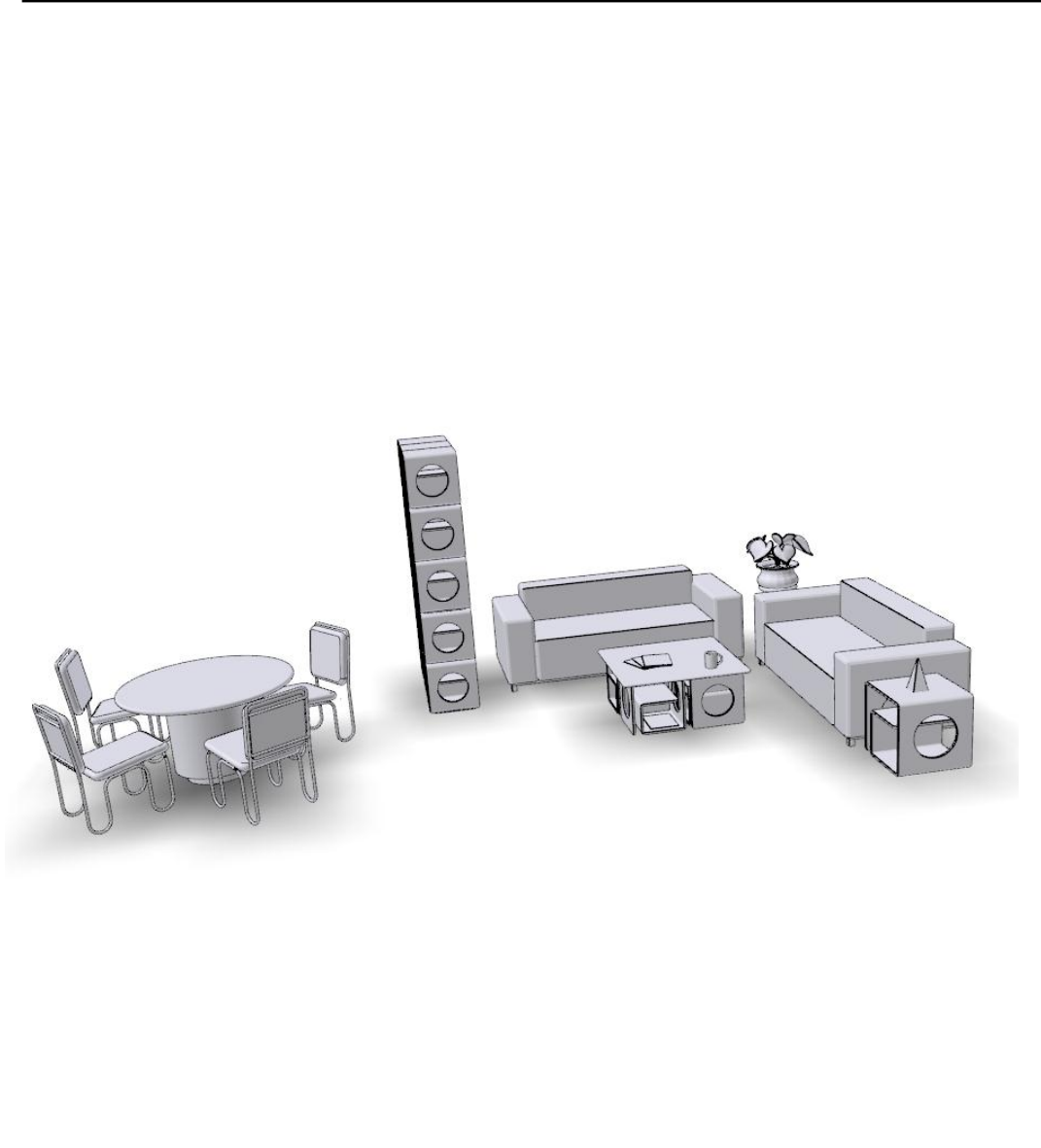
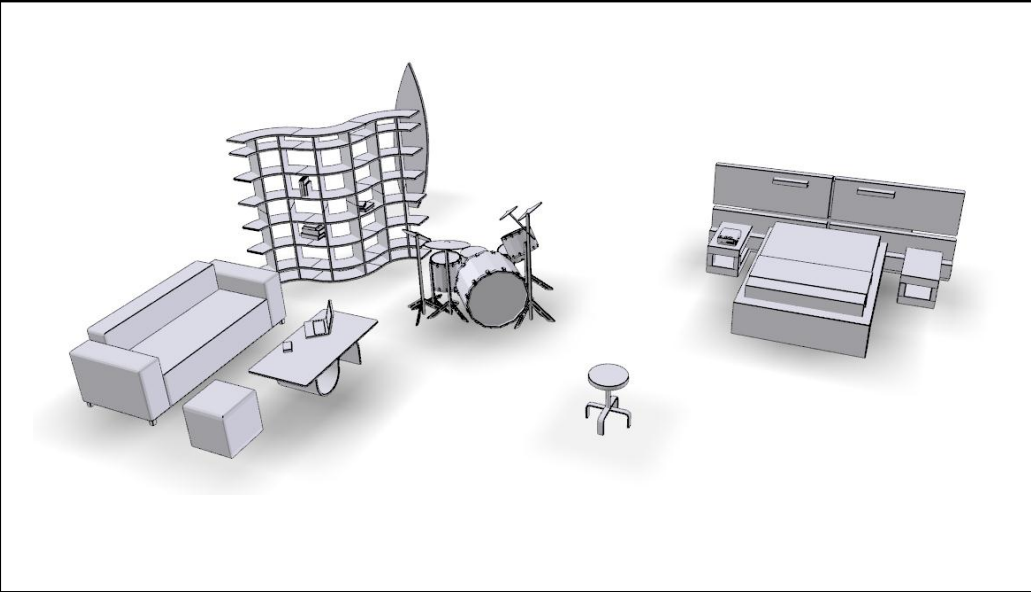
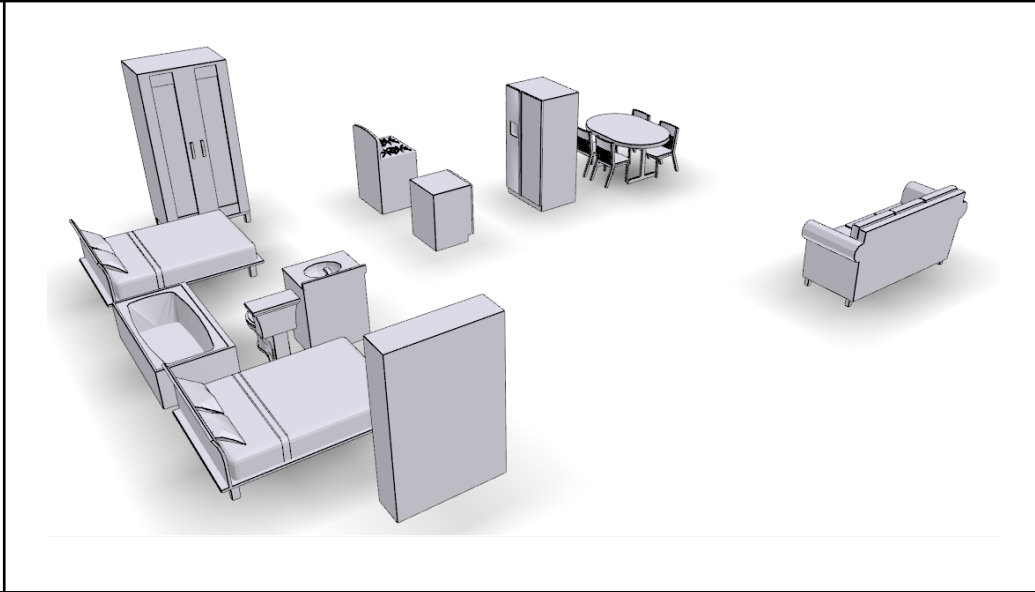
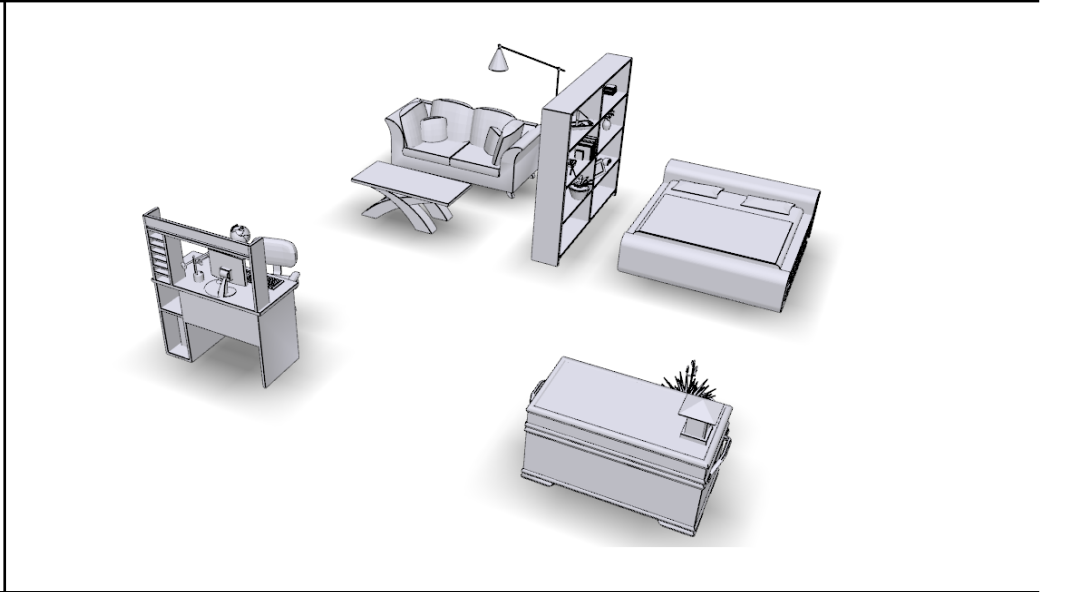
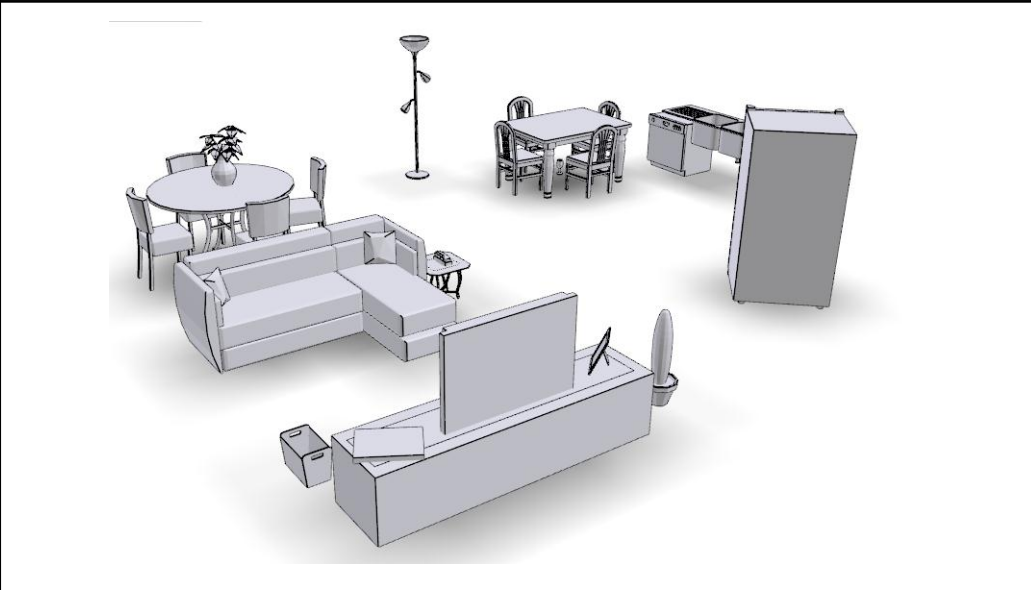
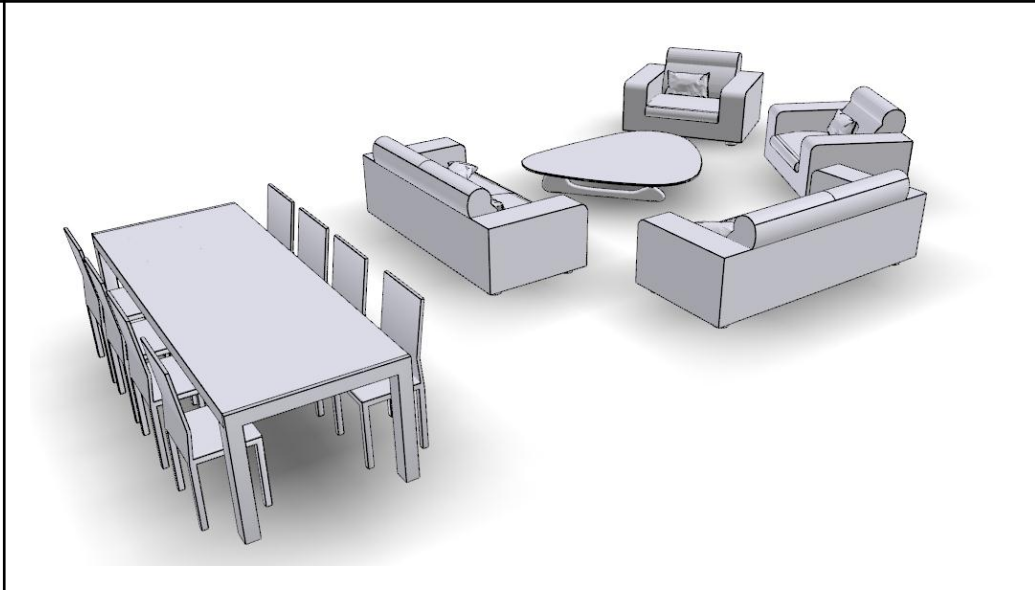
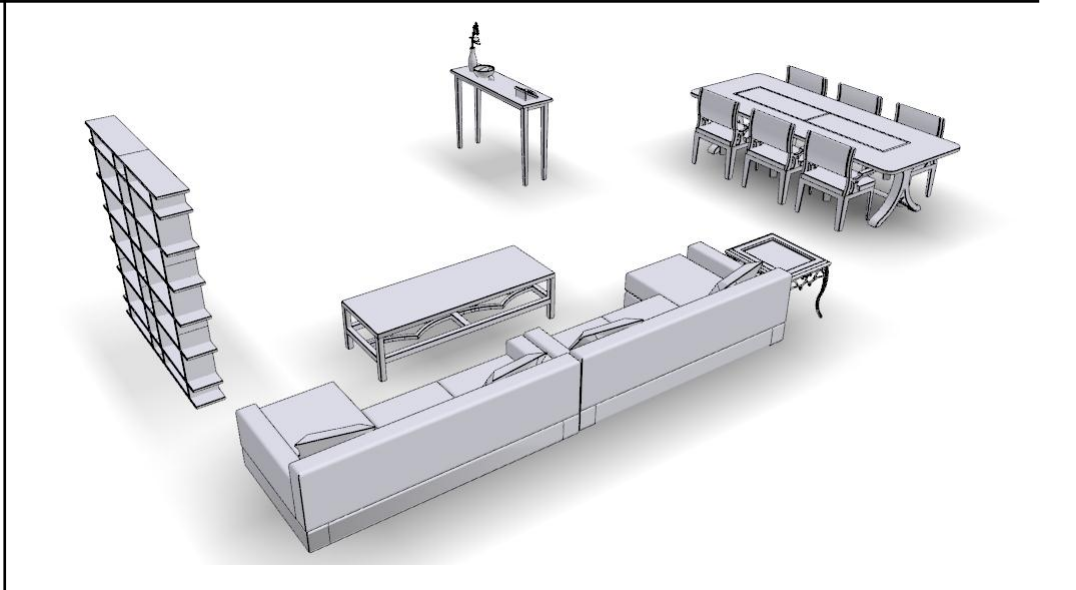
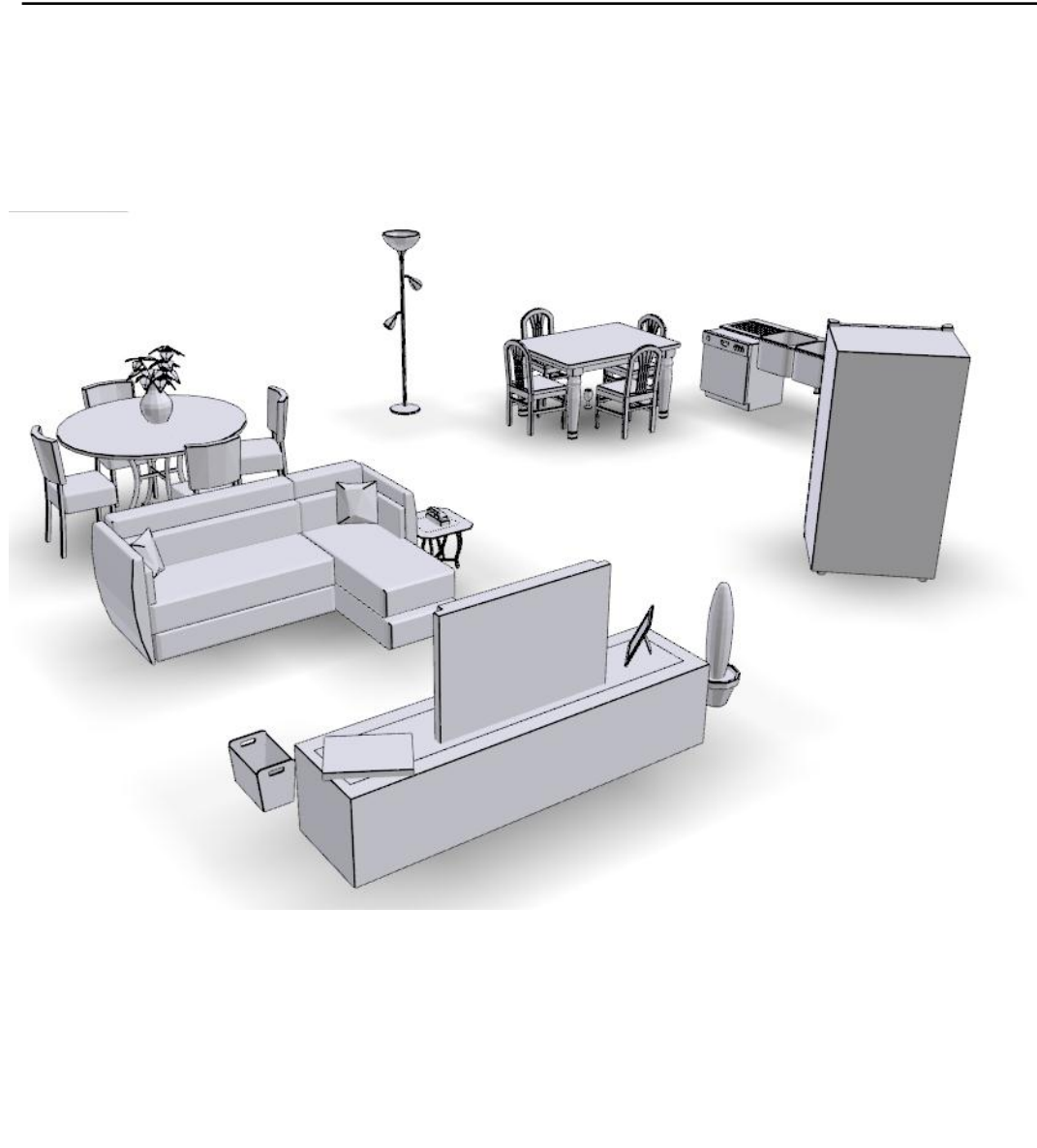
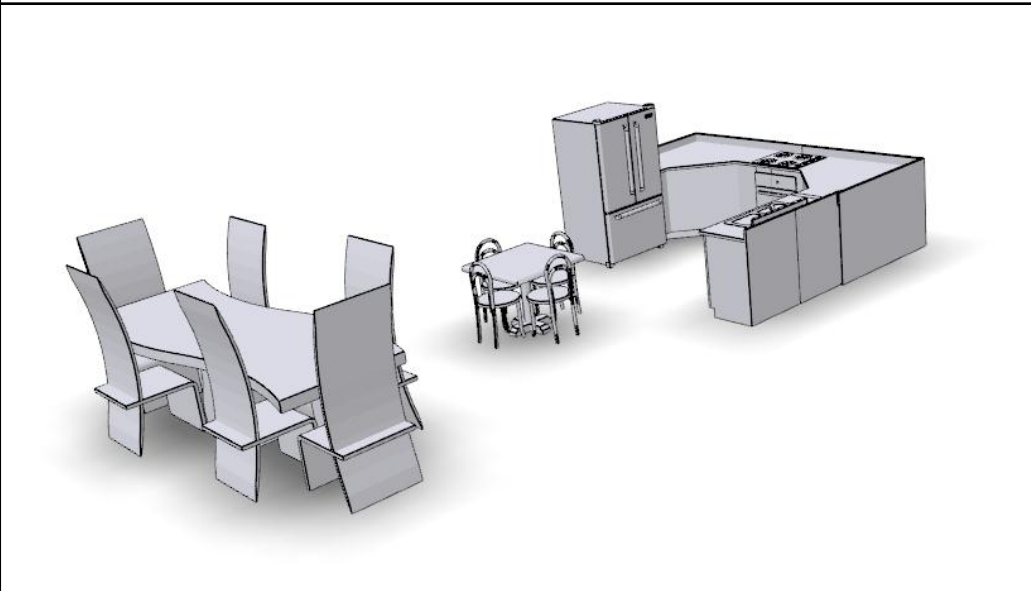
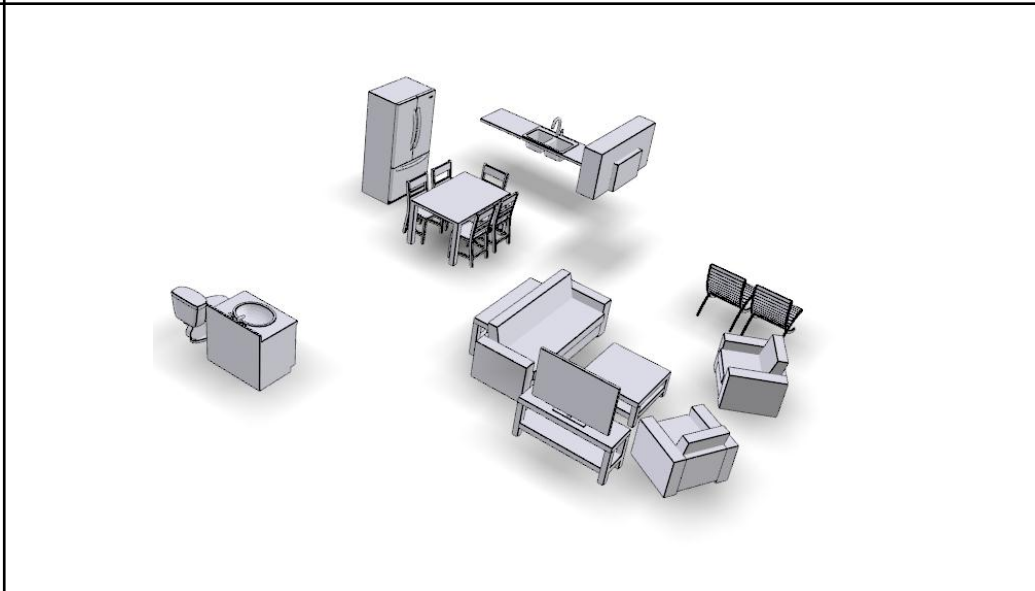
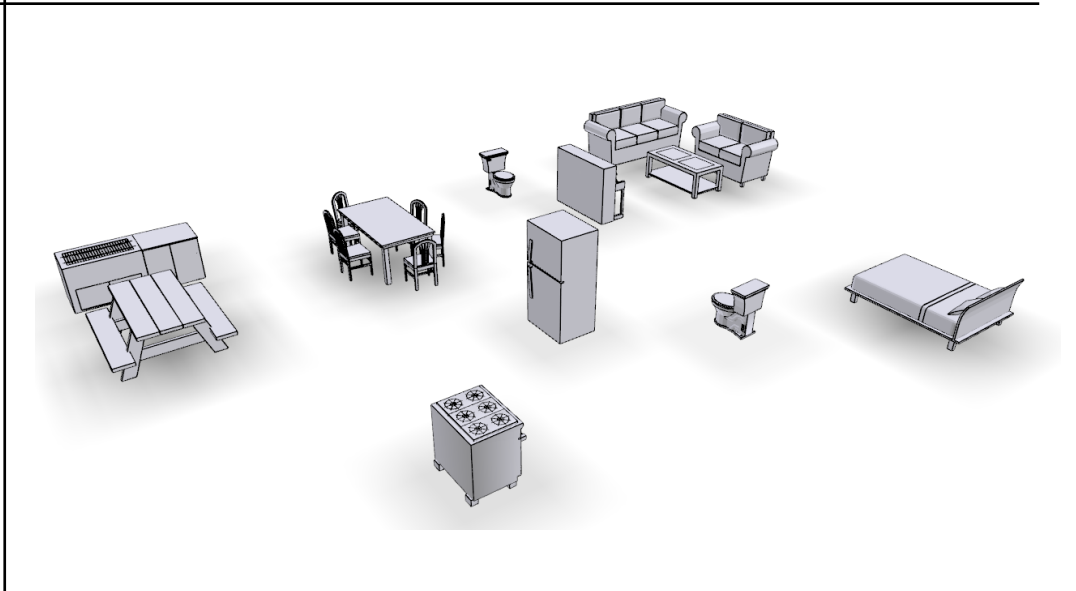
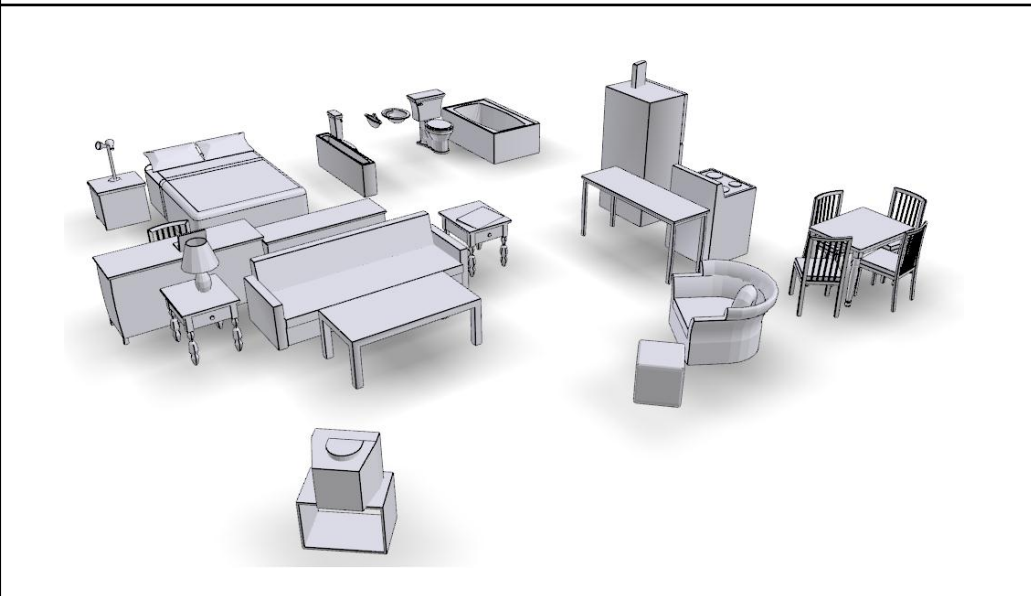
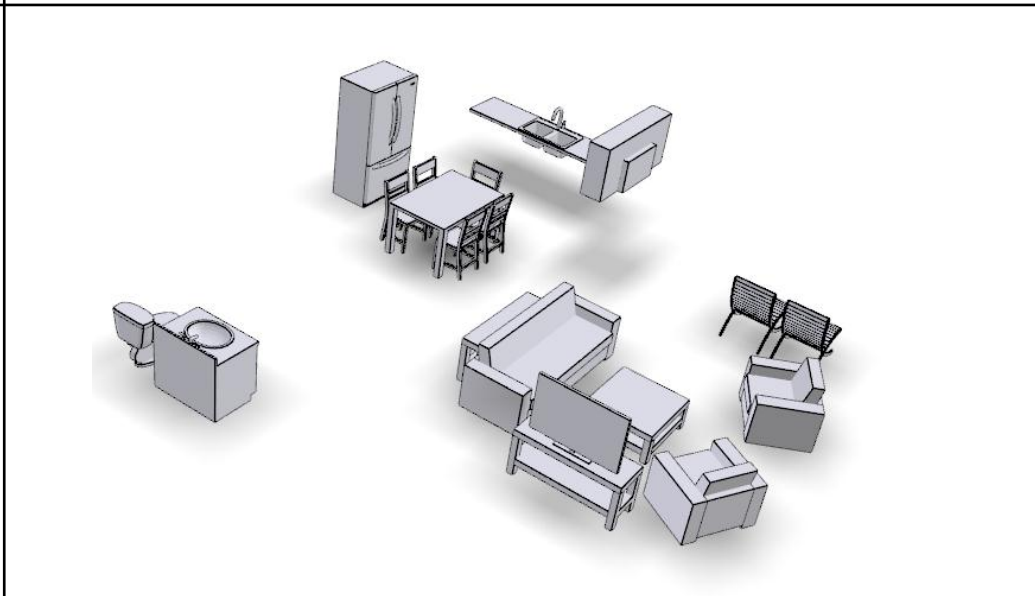
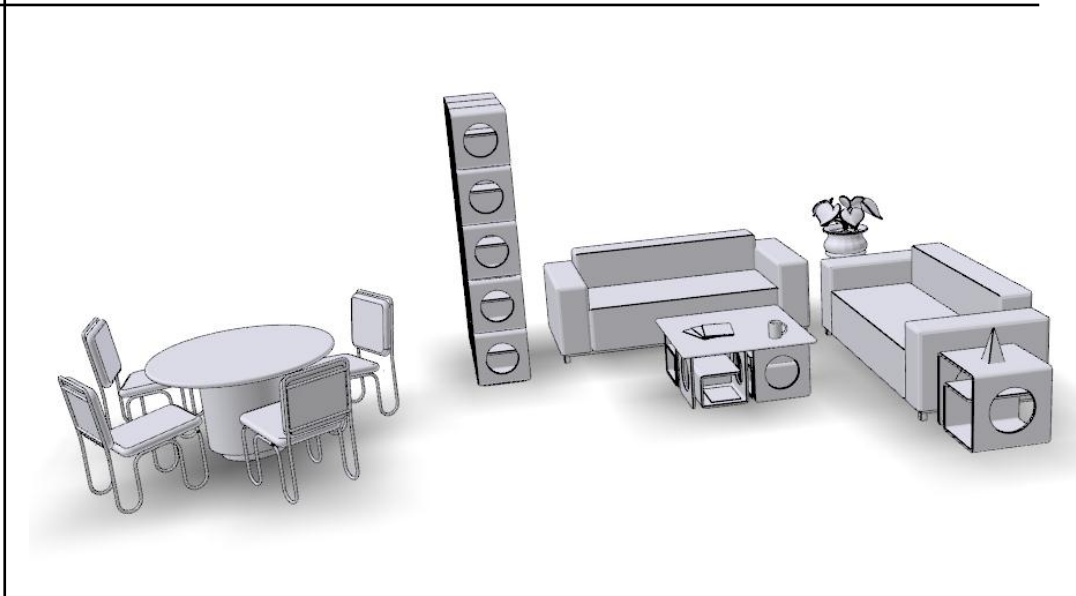
Tsinghua dataset: Query 7-8

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

Tsinghua dataset: Query 9-10

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

Single query results

Stanford dataset

10 queries

GK = Graph Kernel

FCGK = Focal Centric Graph Kernel

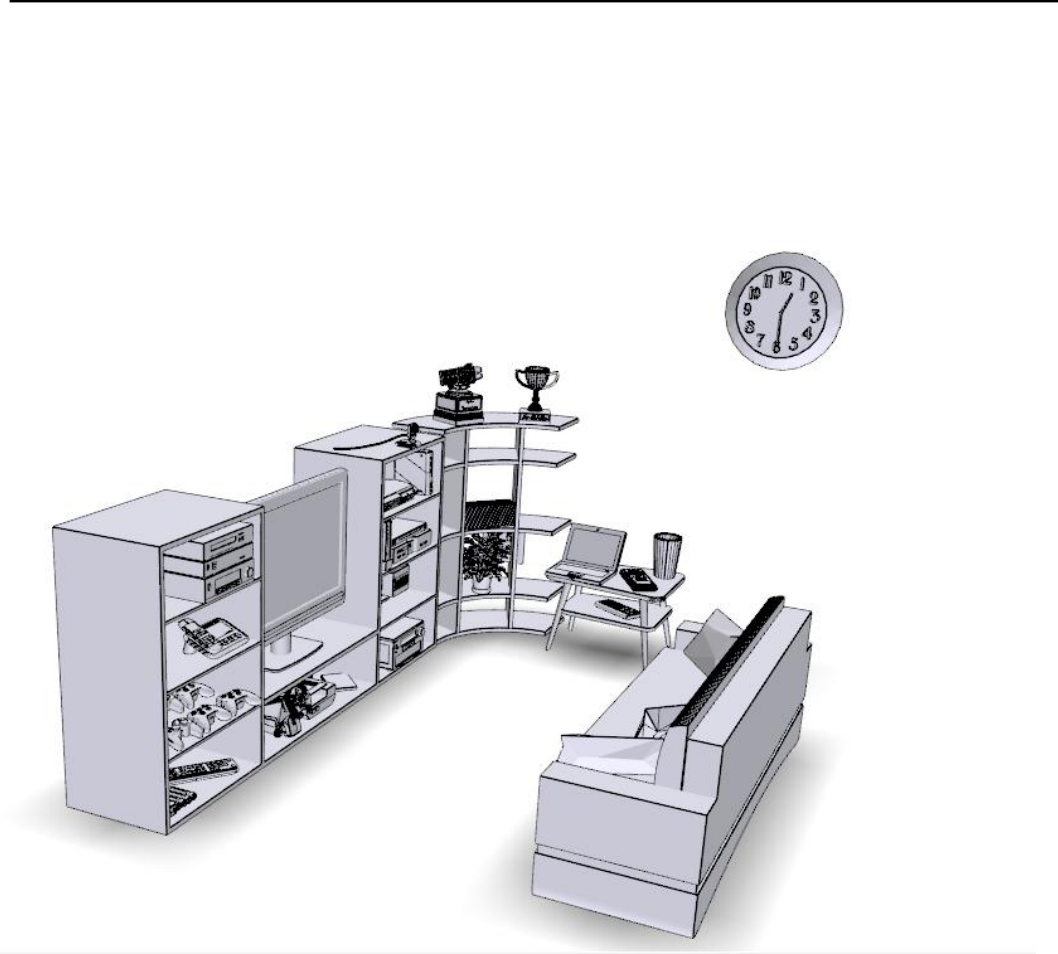
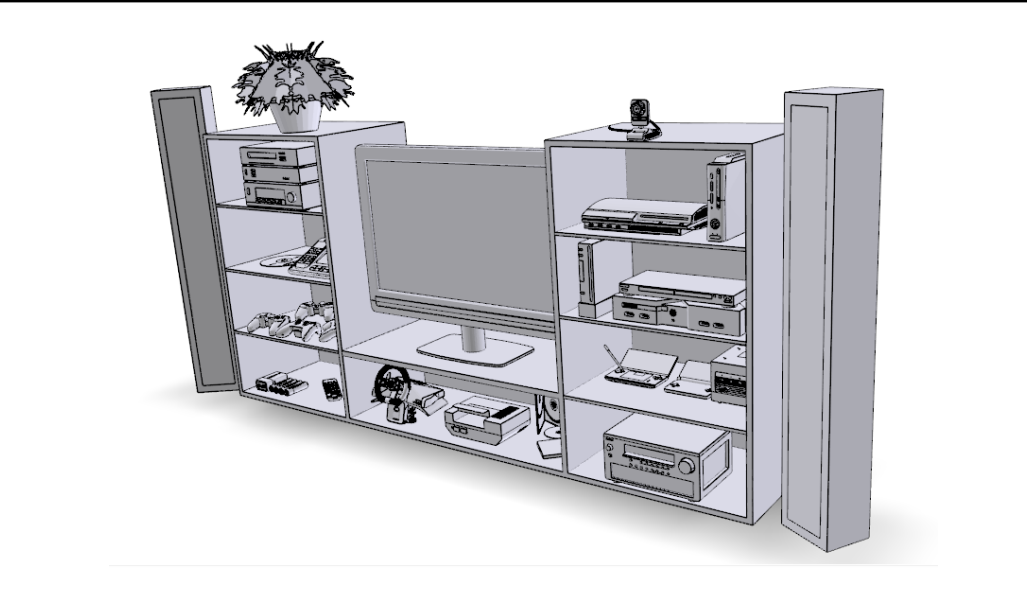
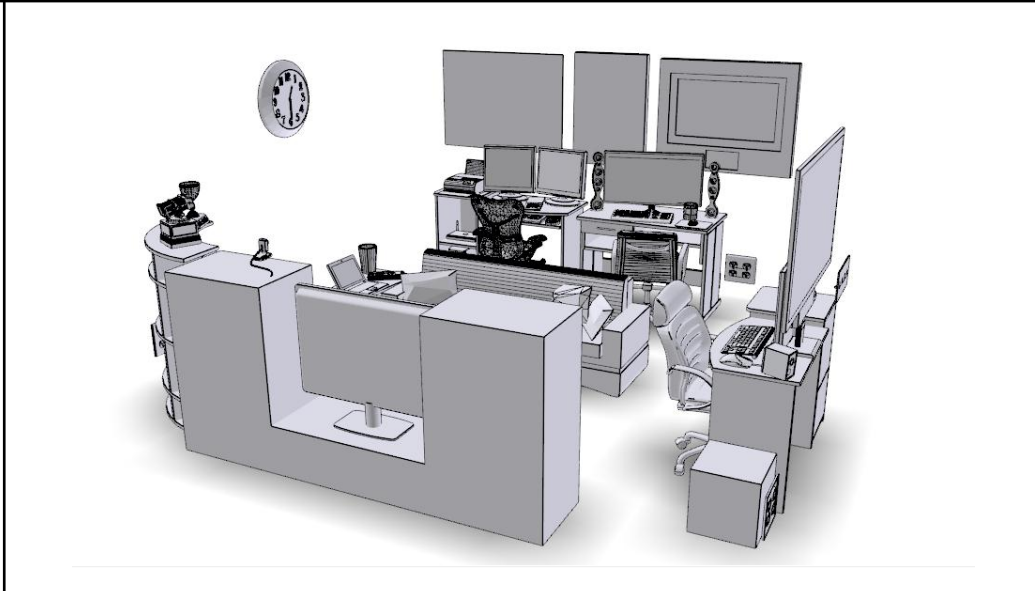
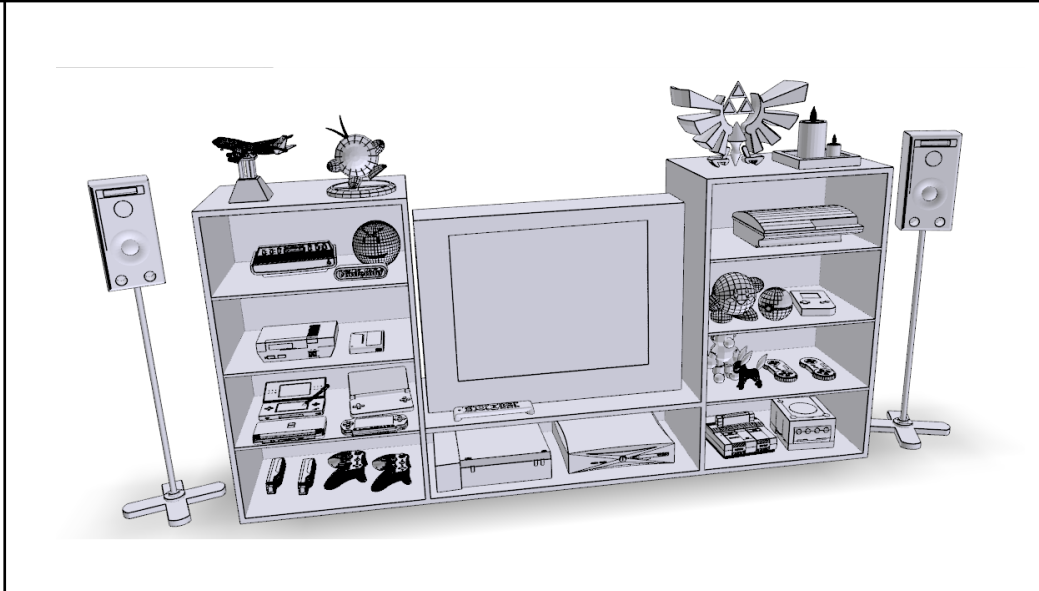
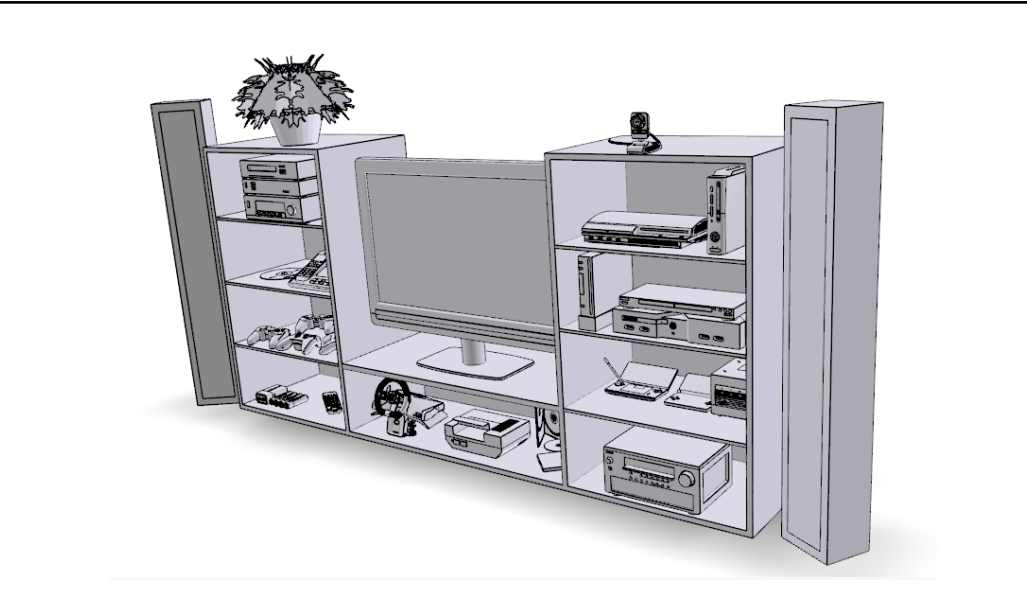
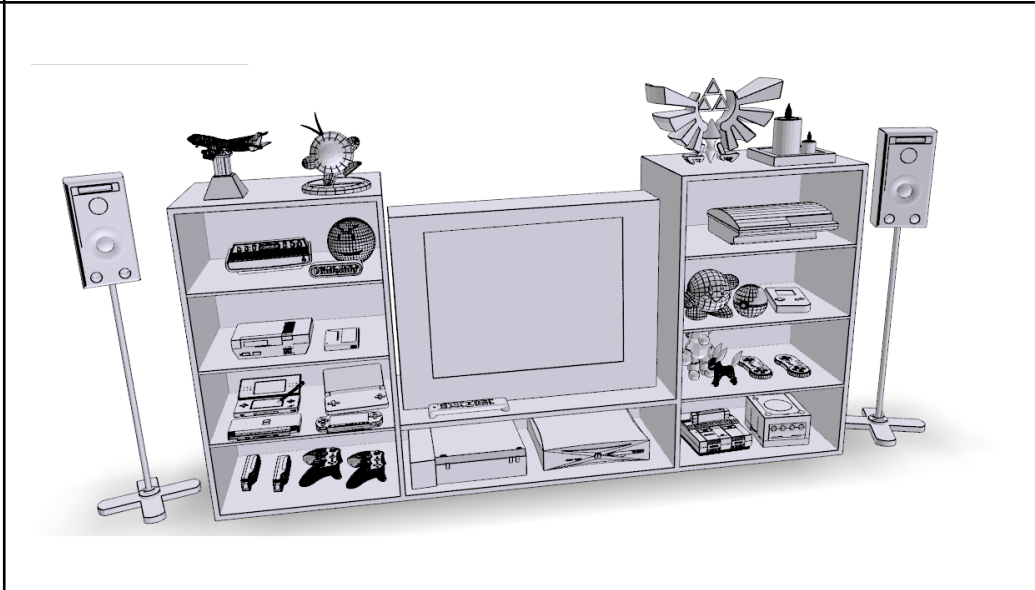
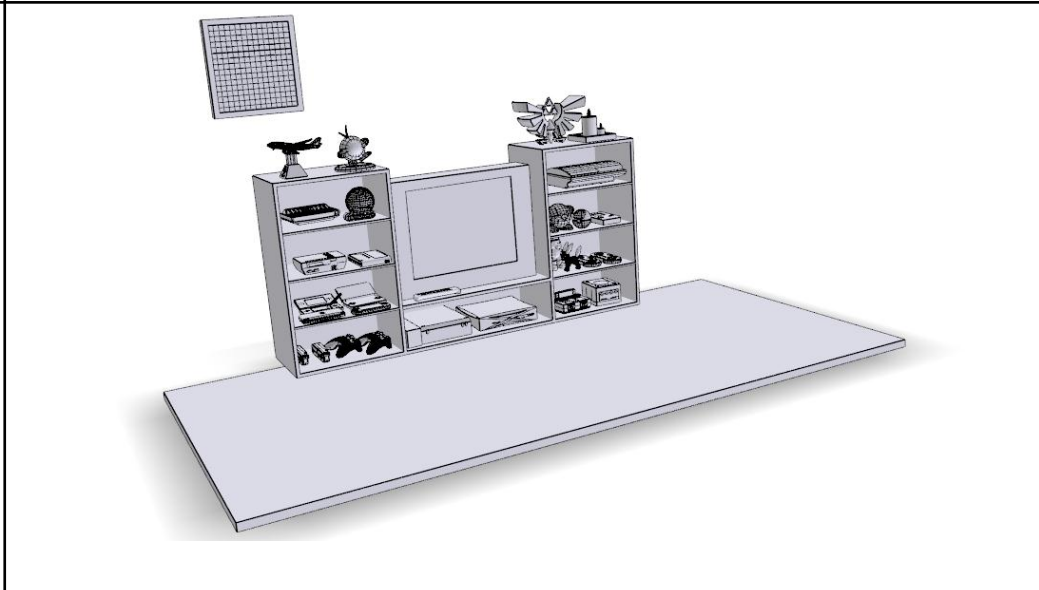

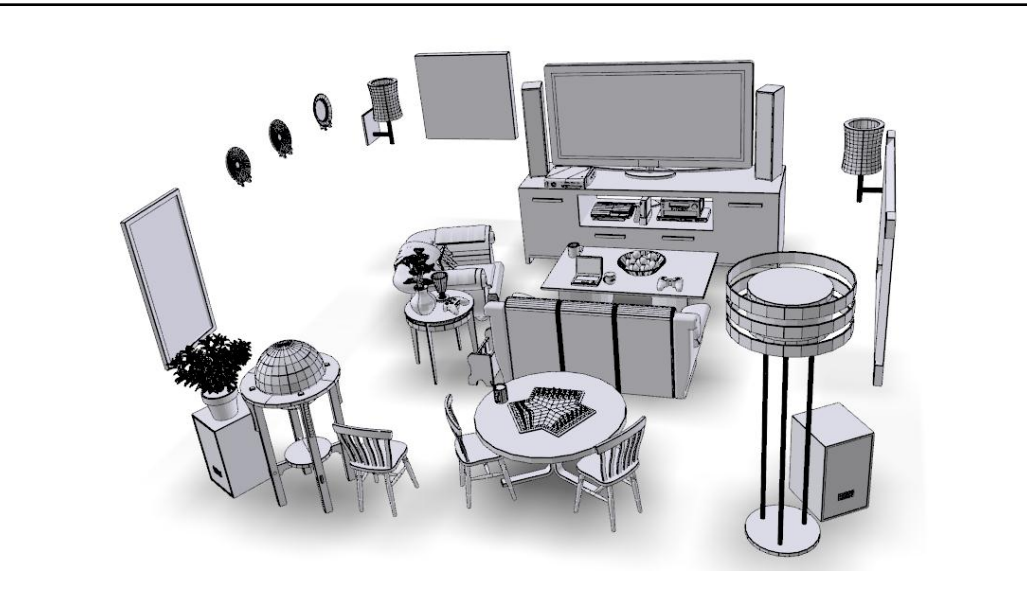
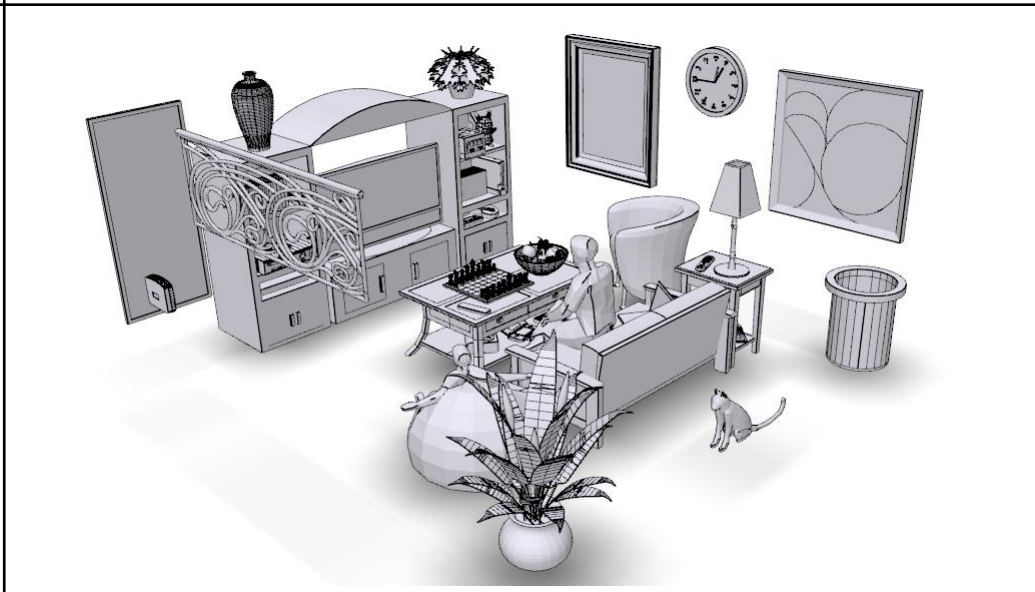
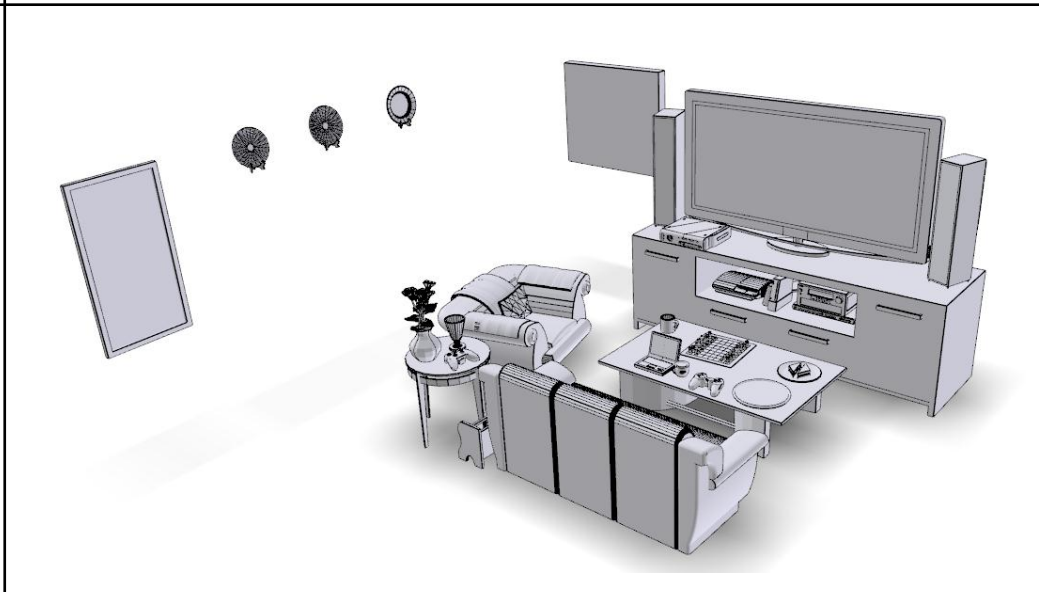
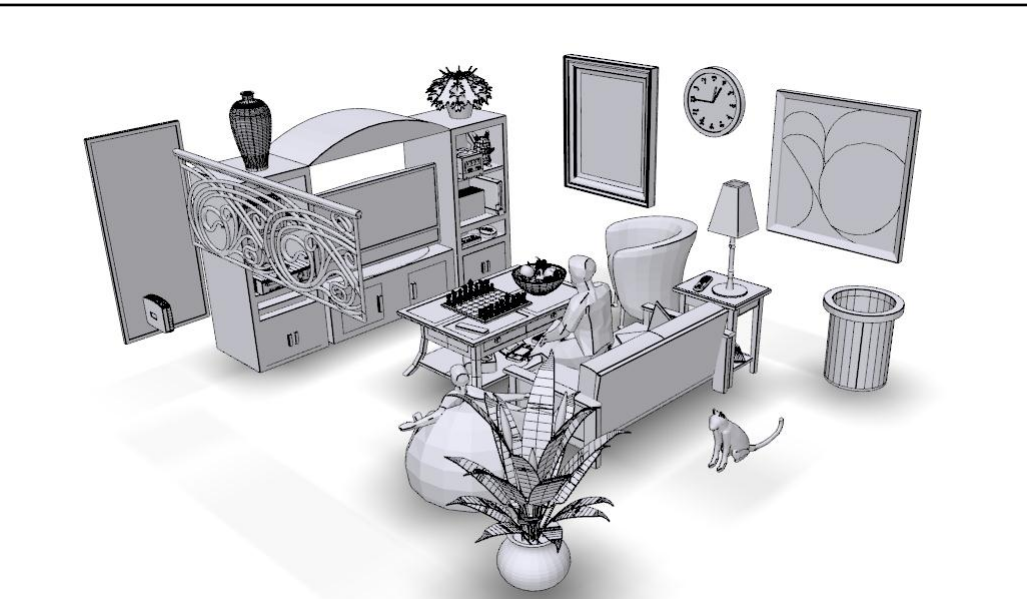
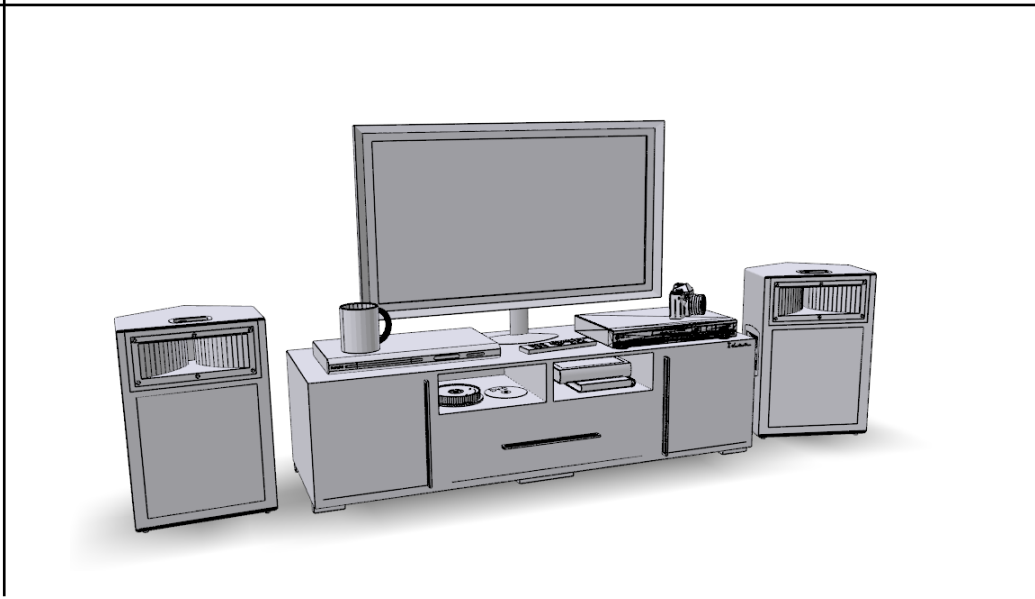
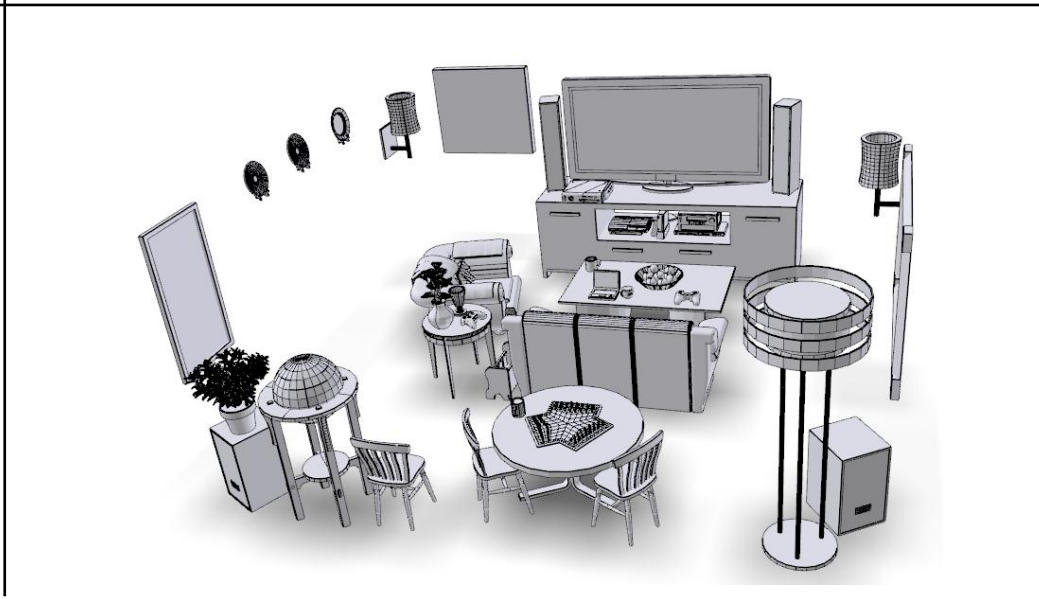
Stanford dataset: Query 1-2

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			






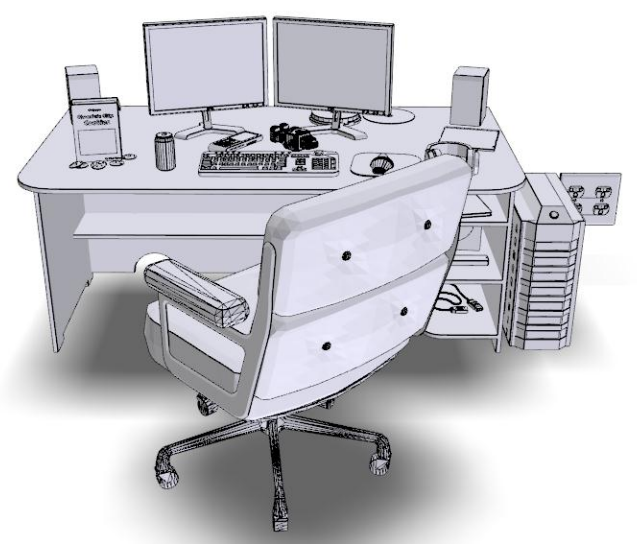






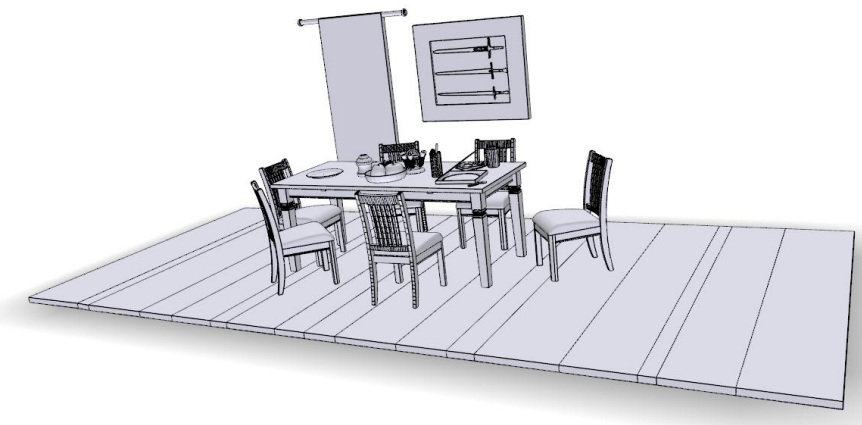
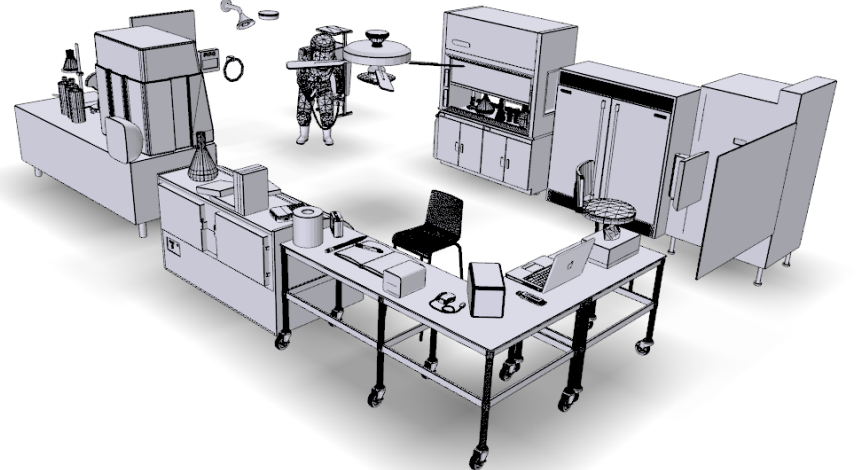
Stanford dataset: Query 3-4

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			






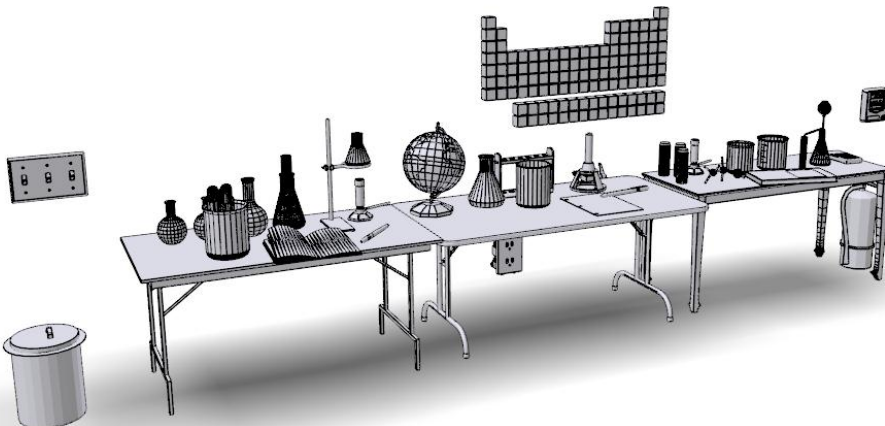
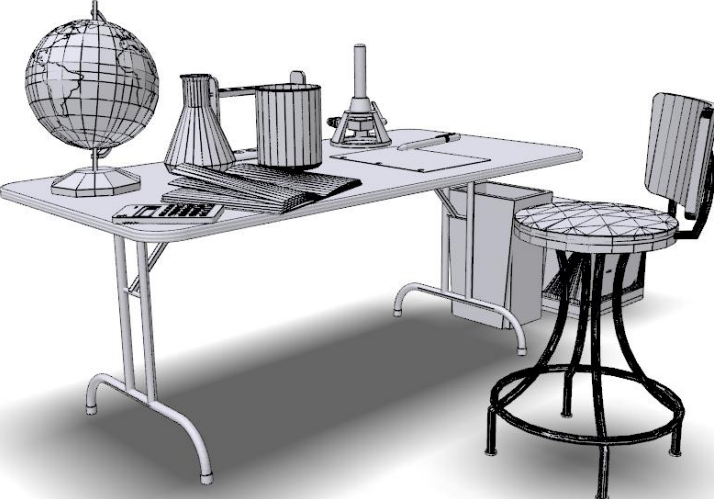
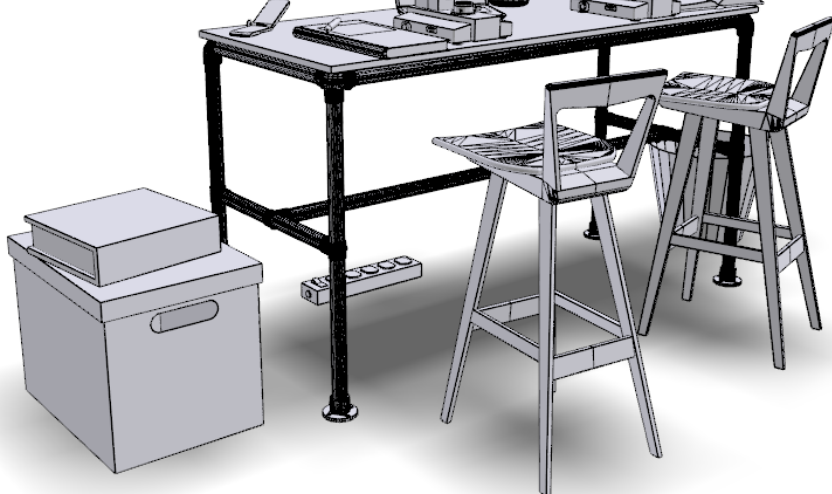

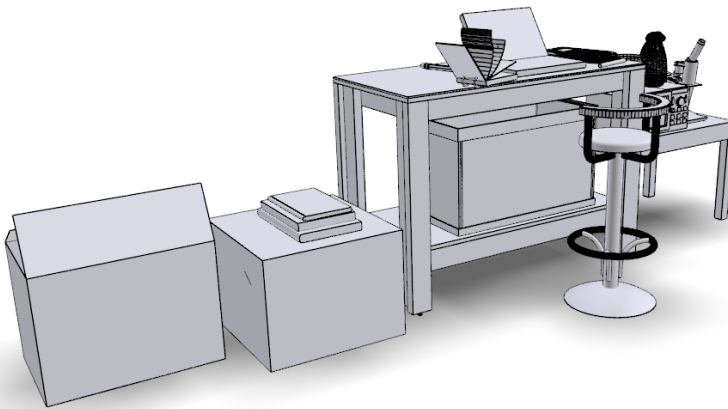


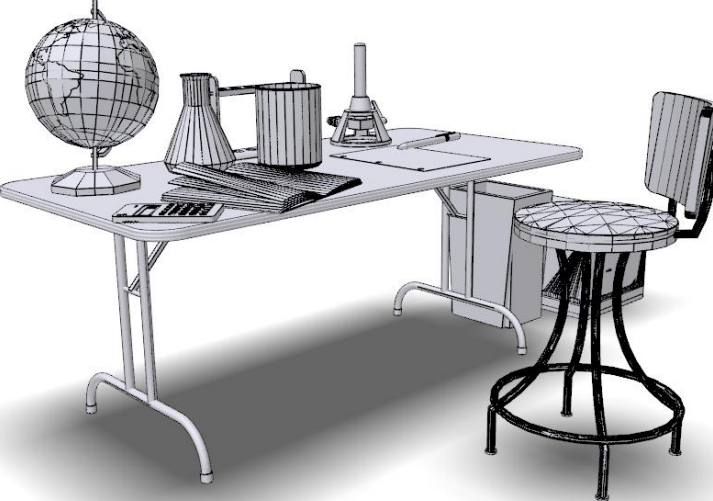

Stanford dataset: Query 5-6

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			



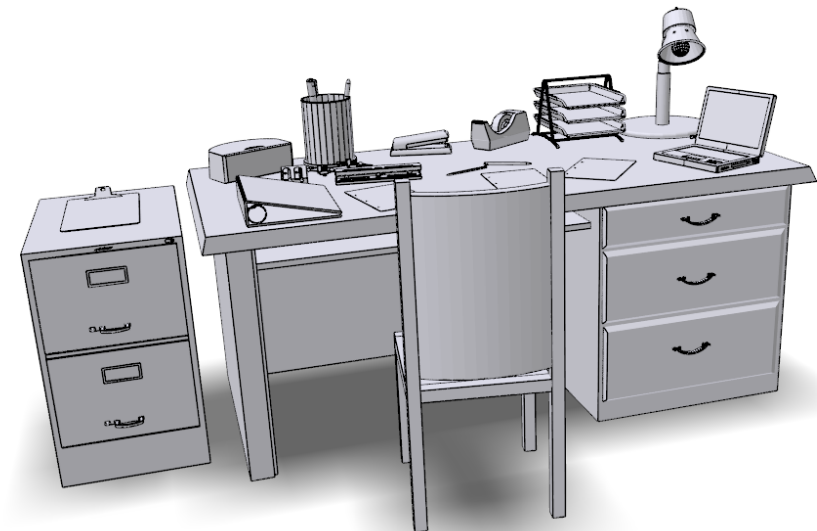




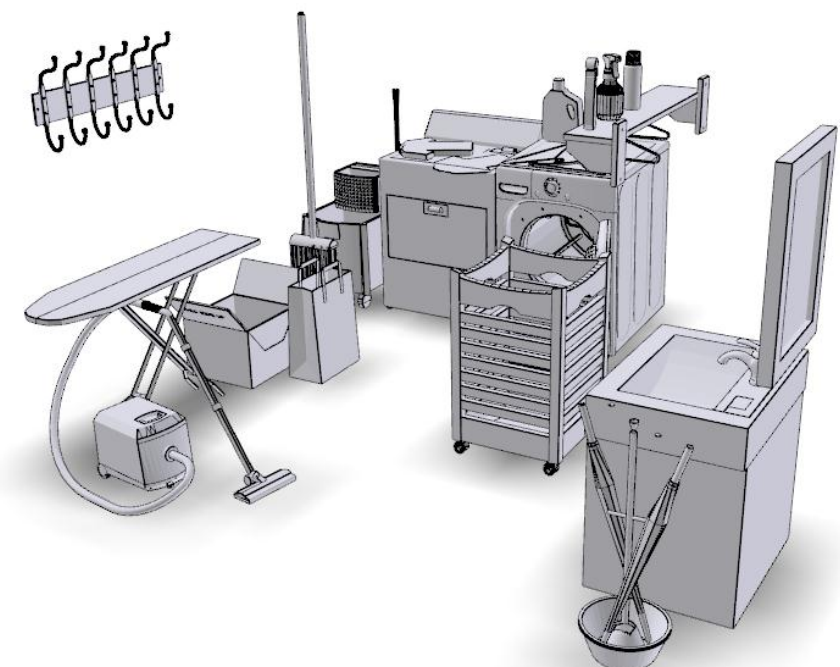
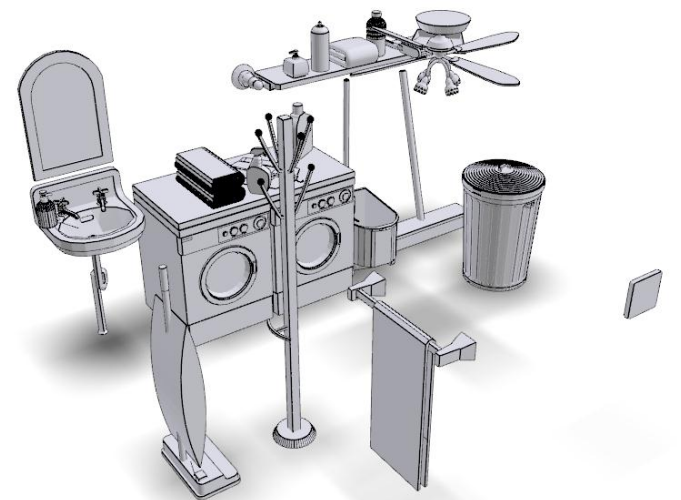
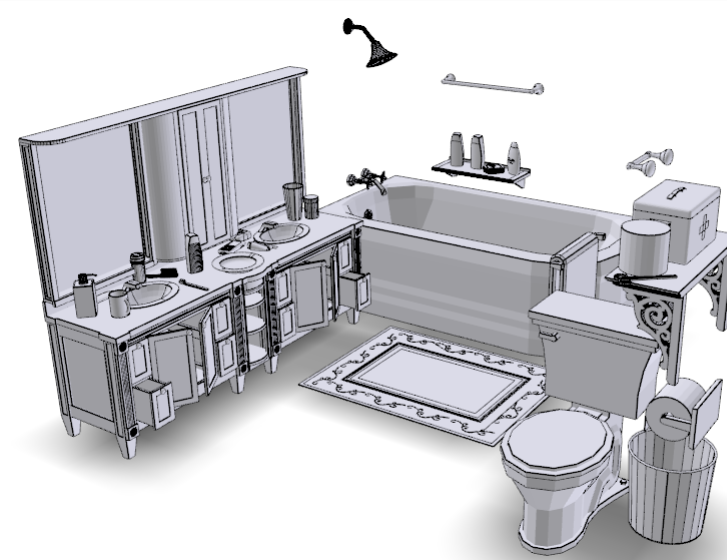
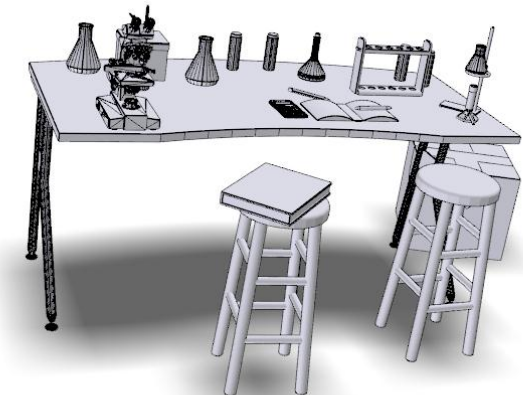
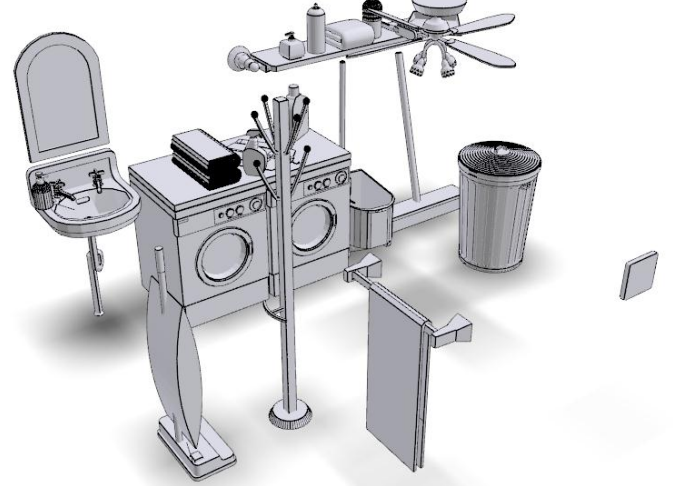
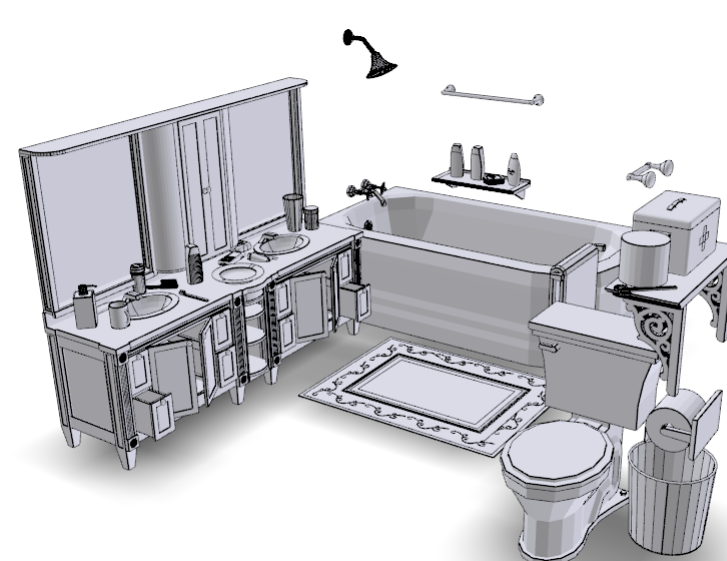
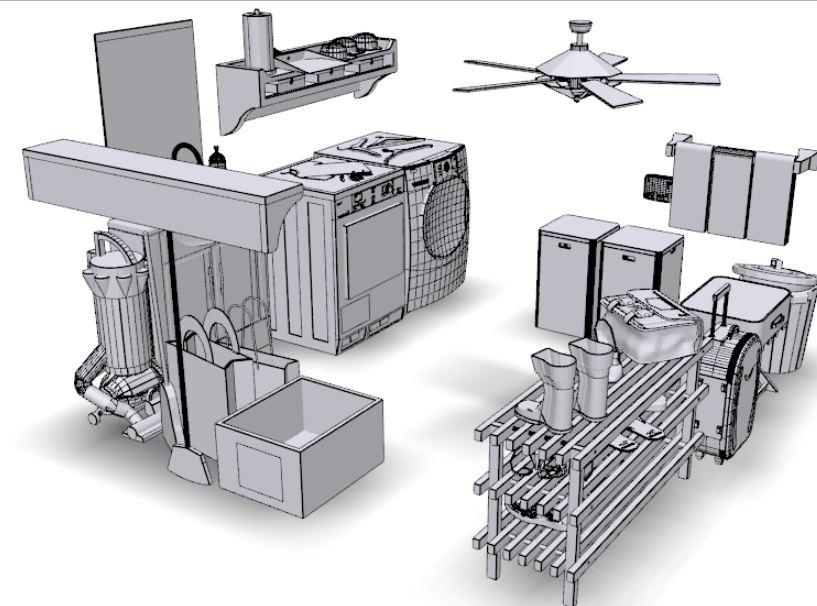
Stanford dataset: Query 7-8

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

Stanford dataset: Query 9-10

back

query		1	2	3
	GK			
	FCGK			
	GK			
	FCGK			

[back](#)

Thank you!