Demo Results Group 3:

Initial Query

$$q(R) \overset{\text{def}}{=} \pi_{AC}\left(\pi_{AB}R \bowtie \pi_{BC}R \cup \pi_{AC}R \bowtie \pi_{BC}R\right)$$

1. **Bags Semantics:**

   Input Table:

A	B	C	annotation
a	b	c	5
d	b	e	1
f	g	e	8

   Query:

   select a,b,annotation from green_paper_table0 # select b,c,annotation from green_paper_table0 # select a,t0.b,c,t0.Annotation as Annotation,t1.Annotation as Annotation1 from t0 join t1 on t0.b=t1.b # select a,c,annotation from green_paper_table0 # select b,c,annotation from green_paper_table0 # select a,b,t3.c,t3.Annotation as Annotation,t4.Annotation as Annotation1 from t3 join t4 on t3.c=t4.c # select * from t2 union all select * from t5 # select a,c,annotation from t6

   Output Table :

a	c	annotation
a	c	50
a	e	5
d	c	5
d	e	10
f	e	136

2. **Provenance Semantics:**

   Input Query:

A	B	C	annotation
a	b	c	t0
d	b	e	t1
f	g	e	t2

Query:

select a,b,annotation from green_paper_table1 # select b,c,annotation from
        green_paper_table1 # select a,t0.b,c,t0.Annotation as Annotation,t1.Annotation as
        Annotation1 from t0 join t1 on t0.b=t1.b # select a,c,annotation from
        green_paper_table1 # select b,c,annotation from green_paper_table1 # select
        a,b,t3.c,t3.Annotation as Annotation,t4.Annotation as Annotation1 from t3 join t4 on
        t3.c=t4.c # select * from t2 union all select * from t5 # select a,c,annotation from t6

Output Table:

a	c	annotation
a	c	(t0 X t0) + (t0 X t0)
a	e	(t0 X t1)
d	c	(t1 X t0)
d	e	(t1 X t1) + (t1 X t1) + (t1 X t2)
f	e	(t2 X t1) + (t2 X t2) + (t2 X t2)

3. Probability Semantics

Input Table :

A	B	C	annotation
a	b	c	0.57
d	b	e	0.86
f	g	e	0.47

Query:

select a,b,annotation from green_paper_table2 # select b,c,annotation from
        green_paper_table2 # select a,t0.b,c,t0.Annotation as Annotation,t1.Annotation as
        Annotation1 from t0 join t1 on t0.b=t1.b # select a,c,annotation from
        green_paper_table2 # select b,c,annotation from green_paper_table2 # select
        a,b,t3.c,t3.Annotation as Annotation,t4.Annotation as Annotation1 from t3 join t4 on
        t3.c=t4.c # select * from t2 union all select * from t5 # select a,c,annotation from t6

Output Table

a	c	annotation
a	c	0.54
a	e	0.49
d	c	0.49
d	e	0.96
f	e	0.63

4. Certainty Semantics:

Input Table:

A	B	C	annotation
a	b	c	0.55
d	b	e	0.57
f	g	e	0.29

Query:
select a,b,annotation from green_paper_table3 # select b,c,annotation from green_paper_table3 # select a,t0.b,c,t0.Annotation as Annotation,t1.Annotation as Annotation1 from t0 join t1 on t0.b=t1.b # select a,c,annotation from green_paper_table3 # select b,c,annotation from green_paper_table3 # select a,b,t3.c,t3.Annotation as Annotation,t4.Annotation as Annotation1 from t3 join t4 on t3.c=t4.c # select * from t2 union all select * from t5 # select a,c,annotation from t6

Output Table:

a	c	annotation
a	c	0.3025
a	e	0.3135
d	c	0.3135
d	e	0.3249
f	e	0.1653

5. Standard Semantics:

Input Table:

A	B	C	annotation
a	b	c	1
d	b	e	1
f	g	e	1

Query:
select a,b,annotation from green_paper_table4 # select b,c,annotation from green_paper_table4 # select a,t0.b,c,t0.Annotation as Annotation,t1.Annotation as Annotation1 from t0 join t1 on t0.b=t1.b # select a,c,annotation from green_paper_table4 # select b,c,annotation from green_paper_table4 # select

a,b,t3.c,t3.Annotation as Annotation,t4.Annotation as Annotation1 from t3 join t4 on t3.c=t4.c # select * from t2 union all select * from t5 # select a,c,annotation from t6

Output Table:

```
a   c   annotation
a   c            1
a   e            1
d   c            1
d   e            1
f   e            1
```