

2) To retrieve courier's sender and receiver name whose STATUS is SUCCESSFUL.

Relational Algebra:

$r1 \leftarrow \rho(c, \sigma_{\langle c.c_status='delivered' \rangle} \text{courier})$

$r2 \leftarrow \rho(r, \text{receiver})$

$r3 \leftarrow \rho(se, \text{sendto})$

$r4 \leftarrow \rho(s, \text{sender})$

$$\text{result} \leftarrow \Pi_{\langle s.\text{first_name}, s.\text{last_name}, r.\text{first_name}, r.\text{last_name} \rangle} r1 \bowtie_{\langle c.c_id=s.c_id \rangle} r4 \bowtie_{\langle s.s_id=se.s_id \rangle} r3 \bowtie_{\langle se.r_id=r.r_id \rangle} r2$$

SQL Code:

```
SELECT DISTINCT  
S.FIRST_NAME,S.LAST_NAME,R.FIRST_NAME,R.LAST_NAME FROM  
(SENDER AS S JOIN SENDTO AS SE ON(S.S_ID=SE.S_ID) JOIN RECEIVER AS  
R ON(SE.R_ID=R.R_ID) join courier as c on(c.s_id=s.s_id)) WHERE  
c.c_status='DELIVERED'
```

Output:

`SELECT C.WEIGHT from courier as c join rate as r on(c.rate_id=r.rate_id) where r.c`

	first_name character varying (30)	last_name character varying (30)	first_name character varying (30)	last_name character varying (30)
1	SONALIKA	BHIDE	HIMANSHU	SHARMA
2	SONALIKA	BHIDE	SIDHARTH	GUPTA