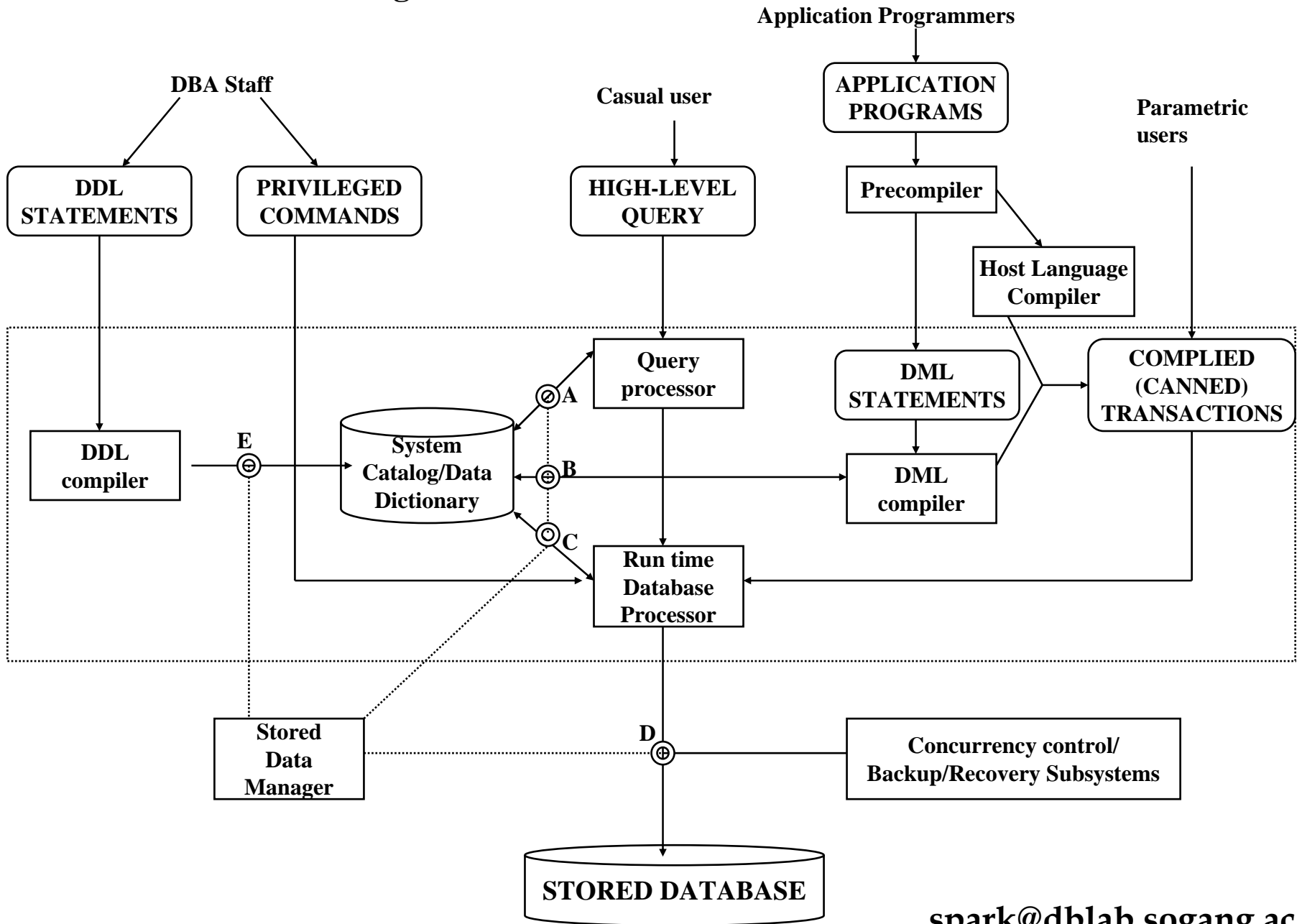


Figure 2.3 Components of a DBMS. Dotted lines show access under the control of the stored data manager.



S

S#	SNAME	STATUS	CITY
S1	Smith	20	London
S2	Jones	10	Paris
S3	Blake	30	Paris

P

P#	PNAME	COLOR	WEIGHT	CITY
P1	Nut	Red	12	London
P2	Bolt	Green	17	Paris
P3	Screw	Blue	17	Rome
P4	Screw	Red	14	London

SP

S#	P#	QTY
S1	P1	300
S1	P2	200
S1	P3	400
S2	P1	300
S2	P2	400
S3	P2	200

Fig. 3.1 Sample data in relational form.

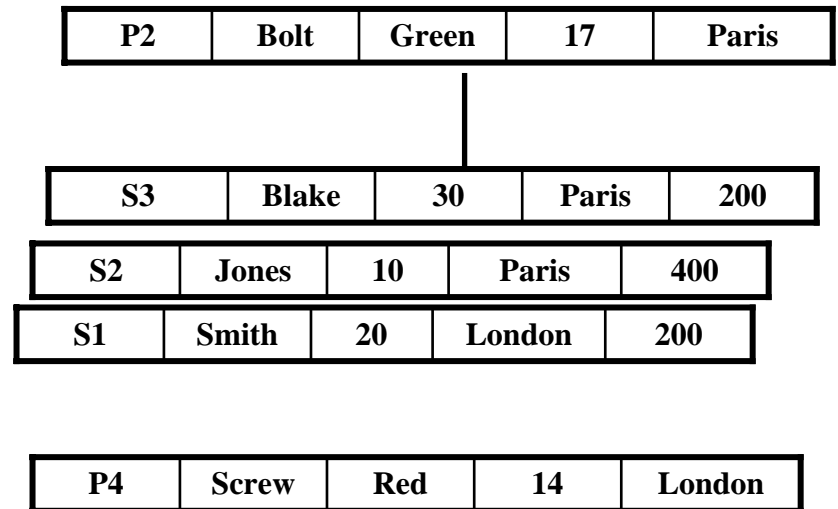
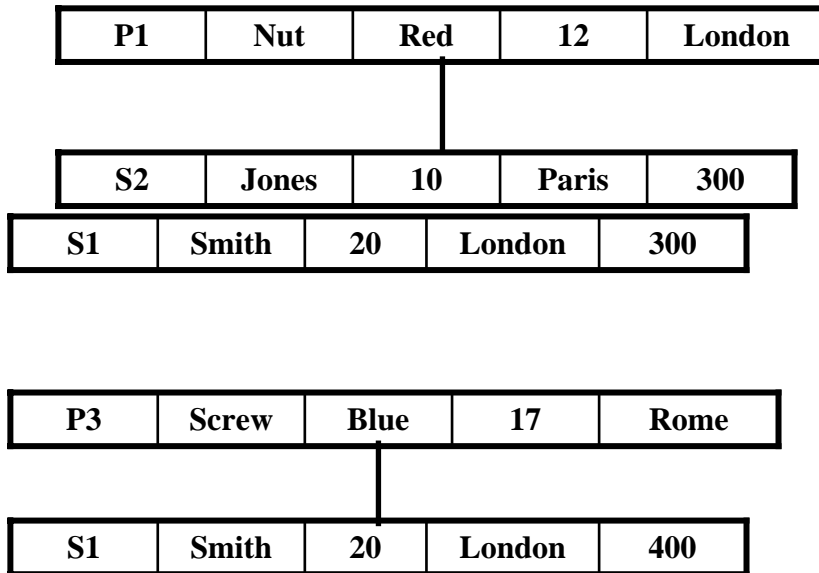


Fig. 3.3 Sample data in hierarchical form(parts superior to suppliers)

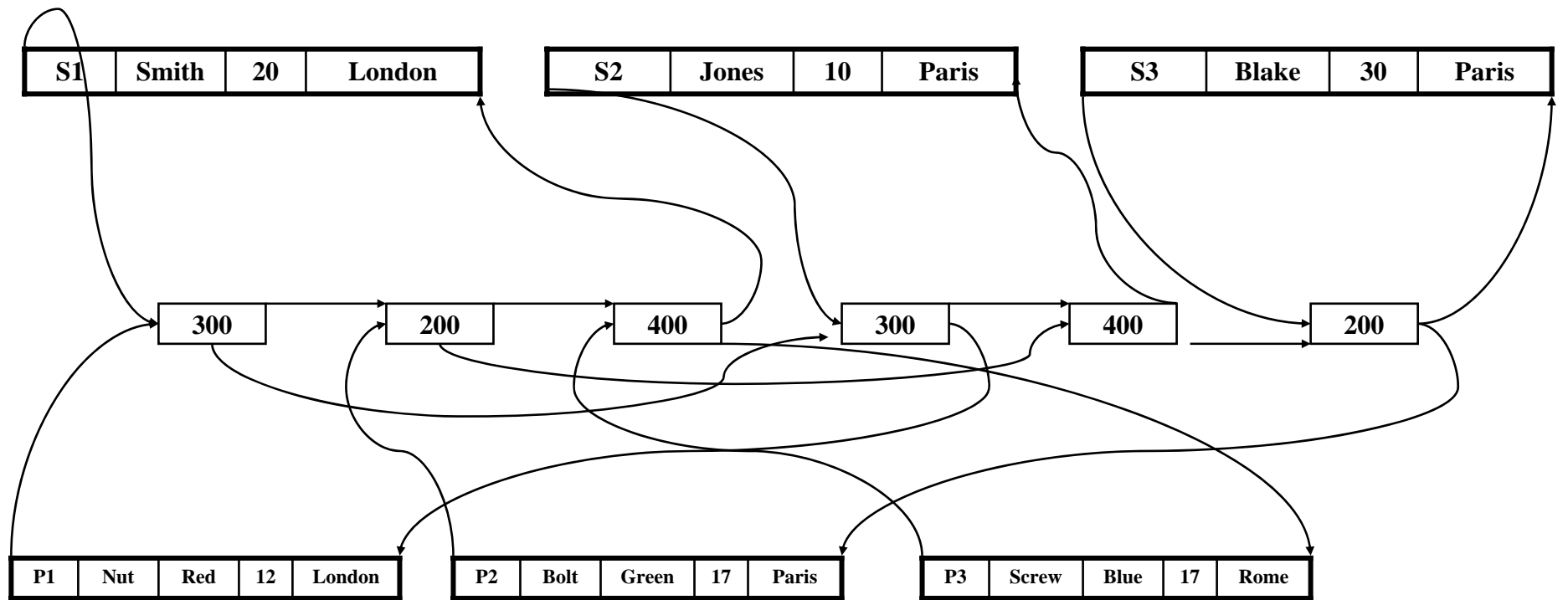


Fig. 3.5 Sample data in network form.

Q1: Find supplier numbers for suppliers who supply part P2.	Q2: Find part numbers for parts supplied by supplier S2.
do until no more shipments; get next shipment where P# = P2; print S#; end;	do until no more shipments; get next shipment where S# = S2; print P#; end;

Fig. 3.2 Two sample queries against the relational view

Q1: Find supplier numbers for suppliers who supply part P2.	Q2: Find part numbers for parts supplied by supplier S2.
get [next] part where P# = P2; do until no more suppliers under this part; get next supplier under this part; print S#; end;	do until no more parts; get next part; get [next] supplier under this part where S# = S2; if found then print P#; end;

Fig. 3.4 Two sample queries against the hierarchical view.

Q1: Find supplier numbers for suppliers who supply part P2.	Q2: Find part numbers for parts supplied by supplier S2.
get [next] part where P# = P2; do until no more connectors under this part; get next connector under this part; get supplier over this connector; print S#; end;	Get [next] supplier where S# = S2; do until no more connectors under this supplier; get next connector under this supplier; get part over this connector; print P#; end;

Fig. 3.2 Two sample queries against the relational view