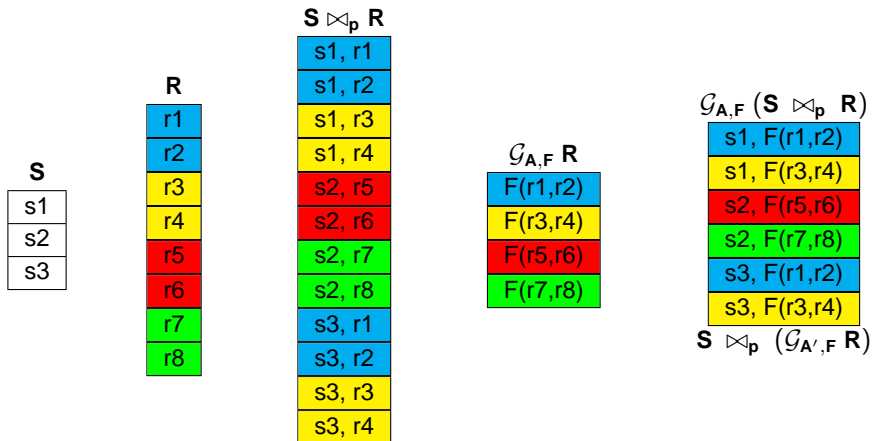


Pushing group by below join (cont.)



Tuples with same color have same $A \cap \text{columns}(R)$ values