Name 1:   Date:
Name 2:

joe executes:
1. creates table Sailors;
2. GRANT SELECT ON Sailors TO art WITH GRANT OPTION;
3. GRANT SELECT ON Sailors TO art, bob;
art executes:
4. GRANT SELECT ON Sailors TO bob WITH GRANT OPTION;
joe executes:
5. REVOKE SELECT ON Sailors FROM bob CASCADE;
6. REVOKE SELECT ON Sailors FROM art RESTRICT;
bob executes:
7. GRANT SELECT ON Sailors TO cal, dan,art;
cal executes:
8. GRANT SELECT ON Sailors TO dan;
joe executes:
9. REVOKE SELECT ON Sailors FROM dan;
bob execues:
10. GRANT SELECT ON Sailors to art WITH GRANT OPTION;
joe executes:
11. REVOKE SELECT ON Sailors FROM art CASCADE;
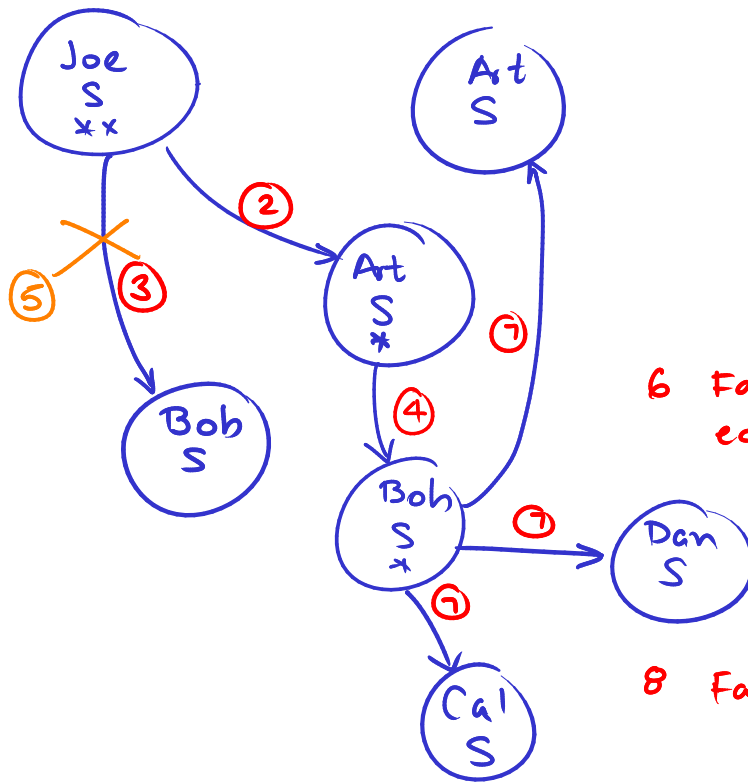
a) What are the privileges on Sailors that every user has:
        1. after (6)
        2. after (8)
        3. after (11)

b) What is the resulting security grant diagram after 10 is executed?

GRAPH FOR Sailorsr.

① Joe S **

Art S

② Art S *

⑤ ③ Bob S

④

⑦ Bob S *

Dan S

⑦ Cal S

6 Fails. Art has outgoing
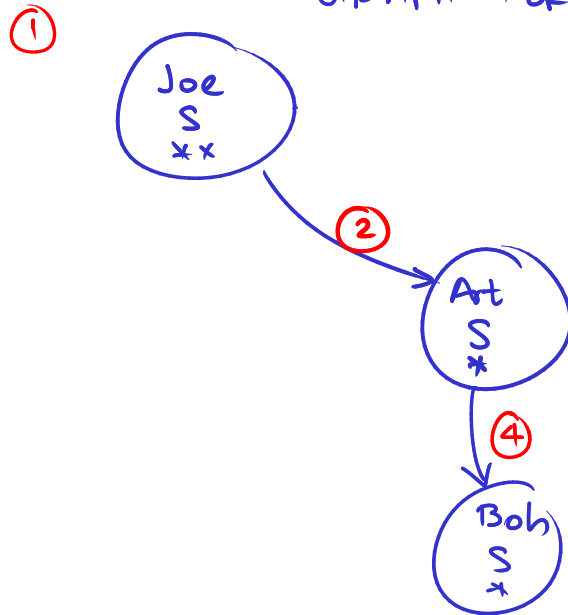   edges.

8 Fails. Cal does not have
   grant option.

9 Does nothing. No edge from
   Joe to Dan.

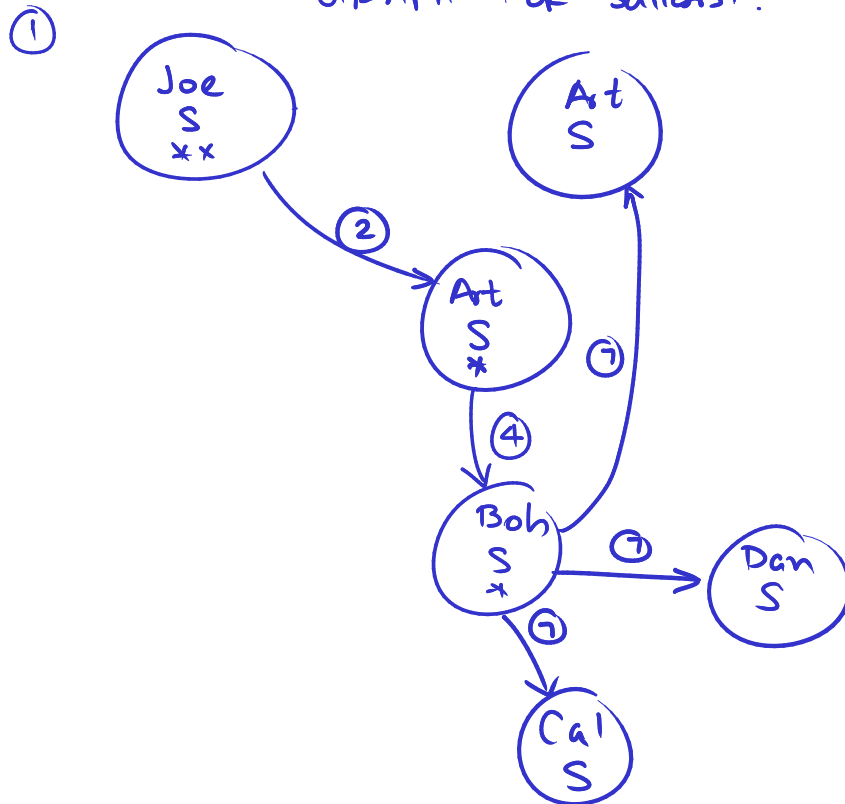10 Fails. We cannot have cycles

11 Removes all edges from graph.
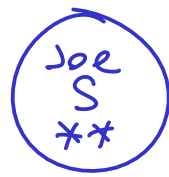
a.1) After 6

GRAPH FOR Sailorsr.

① Joe S **

② → Art S *

④ → Boh S *

a.2. After 8

GRAPH FOR Sailorsr.

① Joe S **

Art S

② → Art S *

⑦ → Art S

④ → Boh S *

⑦ → Dan S

⑦ → Cal S

a.3 After '11

Graph for Sailors

(Joe S **)

b. Graph After '10 in Page 2

- Joe is owner. of Sailors.

- Art and Bob have select with grant option.
  Cal and Dan have select without grant option.

- Art has both nodes reachable, so he
  has select and grant option.