Question 1:

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Question 2:

Π first\_name, salary (employees)

Question 3:

σ departments.manager\_id=employees.employee\_id (departments⋈employees)

Question 4:

σ salary > 50000 (employees)

Question 5:

Employees ⋈ departments

Question 6:

Employees x projects

Question 7:

*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*employees*−(*employees*⋈*employees*.*emp*\_*id*=*departments*.*manager*\_*id*​*departments*))

Question 8:

Departments ⨝ projects

Question 9:

*πdepartment*\_*name*,*location*​(*departments*)

Question 10:

*σbudget*>100000​(*projects*)

Question 11:

*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*employees*⋈*employees*.*emp*\_*id*=*departments*.*manager*\_*id*​*σdepartment*\_*name*=′*Sales*′​(*departments*))

Question 12:

*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*σdepartment*\_*name*=′*Engineering*′​*(departments*))∪*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*σdepartment*\_*name*=′*Finance*′​(*departments*))

Question 13:

*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*employees*−(*employees*⋈*employees*.*emp*\_*id*=*projects*.*emp*\_*id*​*projects*))

Question 14:

*employees*⋈*employees*.*emp*\_*id*=*projects*.*emp*\_*id*​*projects*

Question 15:

*πemp*\_*id*,*first*\_*name*,*last*\_*name*,*salary*​(*employees*−*σ*50000≤*salary*≤70000​(*employees*))