1.a{(title,length) | (film\_id, title, \_, \_,\_,\_,\_,\_,length,\_,\_,\_,\_) ϵ film, length>=95, length<=97}

b{f.title, f.length | f ϵ film, f.length>=95, f.length<=97 }

2.a{(first\_name, last\_name, title, length)| (actor\_id, film\_id) ϵ film\_actor,(actor\_id, first\_name, last\_name, \_) ϵ actor, last\_name='STREEP',(film\_id, title, \_, \_,\_,\_,\_,\_,length,\_,\_,\_,\_) ϵ film, length<55 }.

b{a.first\_name, a.last\_name, f.title, f.length | a ϵ actor, f ϵ film,fa ϵ film\_actor,a.actor\_id = fa.film\_id, f.film\_id = fa.film\_id,a.last\_name = 'STREEP', f.length<55 } .

3.a{(inventory\_Id)|(inventory\_Id, \_, \_, \_) ϵ inventory (rental\_Id, \_, inventory\_Id, \_, \_, \_, \_) ϵ rental,(inventory\_Id) ∉rental }

b{I.inventory\_id | I ϵ inventory, r ϵ rental,I.inventory\_id ϵ inventory <> I.inventory\_id ϵ rental }

4.a{(title)| (film\_id, title, \_, \_,\_,\_,\_,\_,length,\_,\_,\_,\_) ϵ film, (actor\_id\_1, film\_id, \_) ϵ film\_actor, (actor\_id\_2, film\_id, \_) ϵ film\_actor,(actor\_id\_1, ‘ED’, ‘CHASE’,\_) ϵ actor,(actor\_id\_2, ‘JON’, ‘CHASE’,\_) ϵ actor }

b{f.title} | f ϵ film, a1 ϵ actor, a2 ϵ actor ,f.film\_id = a1.actor\_id,f.film\_id = a2.actor\_id,fa1 ϵ film\_actor,fa2 ϵ film\_actor,fa1.actor\_id = a1.actor\_id,fa2.actor\_id = a2.actor\_id,a1.first\_name = 'ED', a1.last\_name = 'CHASE',a2.first\_name = 'JON', a2.last\_name = 'CHASE' } .

5.a{(title)|(film\_id, title, \_, \_,\_,\_,\_,\_,length,\_,\_,\_,\_) ϵ film,( actor\_id, film\_id,\_) ϵ film\_actor, (actor\_id\_1, ’ED’, ‘CHASE’, \_) ϵ actor(actor\_id\_1, film\_Id\_2) ∉film\_actor V (actor\_id\_2, film\_Id\_1) ∉film\_actor V(film\_Id\_2, actor\_Id\_2) ∉film\_actor V (actor\_id\_2, ‘JON’, ‘CHASE’) ∉actor}

b{(f.title) | f ϵ film, fa1 ϵ film\_actor, fa2 ϵ film\_actor,f.film\_id = fa.film\_id,a1 ϵ actor, a2 ϵ actor,a1.actor\_id = fa1.actor\_id, a2.actor\_id = fa2.actor\_id,a1.first\_name = 'ED', a1.last\_name = 'CHASE',fa2 ∉ film\_actor V a2 ∉ actor V a1.actor\_id <> fa2.actor\_id V fa2film\_id <> fa1.film\_idVa2.first\_name <> 'JON', a2.last\_name = 'CHASE' } .