

Sean Lossef; Lab 2

1a

$$\pi_{recipeName}(\sigma_{season=spring \text{ OR } season=summer} Menu)$$

1b

$$\pi_{recipeName}(\sigma_{season=winter \text{ AND } containsNuts=True} (\rho_{ingredientName/name} Ingredient \bowtie \rho_{recipeName/name} Recipe \bowtie Menu))$$

1c

$$\pi_{recipeName}(\sigma_{season=Fall} Menu) \\ - (\pi_{recipeName}(\sigma_{season=Fall \text{ AND } containsNuts=True} (\rho_{ingredientName/name} Ingredient \bowtie \rho_{recipeName/name} Recipe \bowtie Menu)))$$

2a

$$a, b$$

2b

$$ac; \quad c \rightarrow f; \quad acf;$$