Relational Algebra

**List all the service with charge that customer “John Doe” have ordered:**

ΠID(σRoom\_ID=(πRoom\_ID(σCustomer\_ID = (πID(σFirst\_name = “John” ∧ σLast\_name= “Doe” Customer)) Reservation))Service\_order) ∧

π Service,charge (σID =( ΠService\_ID(σRoom\_ID=(πRoom\_ID(σCustomer\_ID = (πID(σFirst\_name = “John” ∧ σLast\_name= “Doe” Customer))Reservation))Service\_order))Service)

**List all the room that are vacant and ready to reserve:**

Πroom(σstatus\_id=( πID(σstatus­=”Vacant and Ready” room\_status))room)

**List all the customers that ordered the same service type:**

ΠFirst\_name,Last\_name (σID = (Πcustomer\_ID(σRoom\_ID=(πRoom\_ID(σService\_ID=”BF” Service\_order))reservation) Customer))

**List all the customer with the same nationality:**

ΠID,First\_name(σnationality=”USA” Customer)

**Find the room that customer “John Doe” has reserved:**

ΠRoom\_ID(σCustomer\_ID=(πFirst\_name,Last\_name(σFirst\_name­=”John” ∧ σLast\_name=”Doe”­ Customer)) Resvervation)

**Calculate the percentage of cash and online payment**

Fcount(Payment) (σPayment = “cash” Reservation)

Fcount(Payment) (σPayment = “online” Reservation)