COMP 421 Assignment 1

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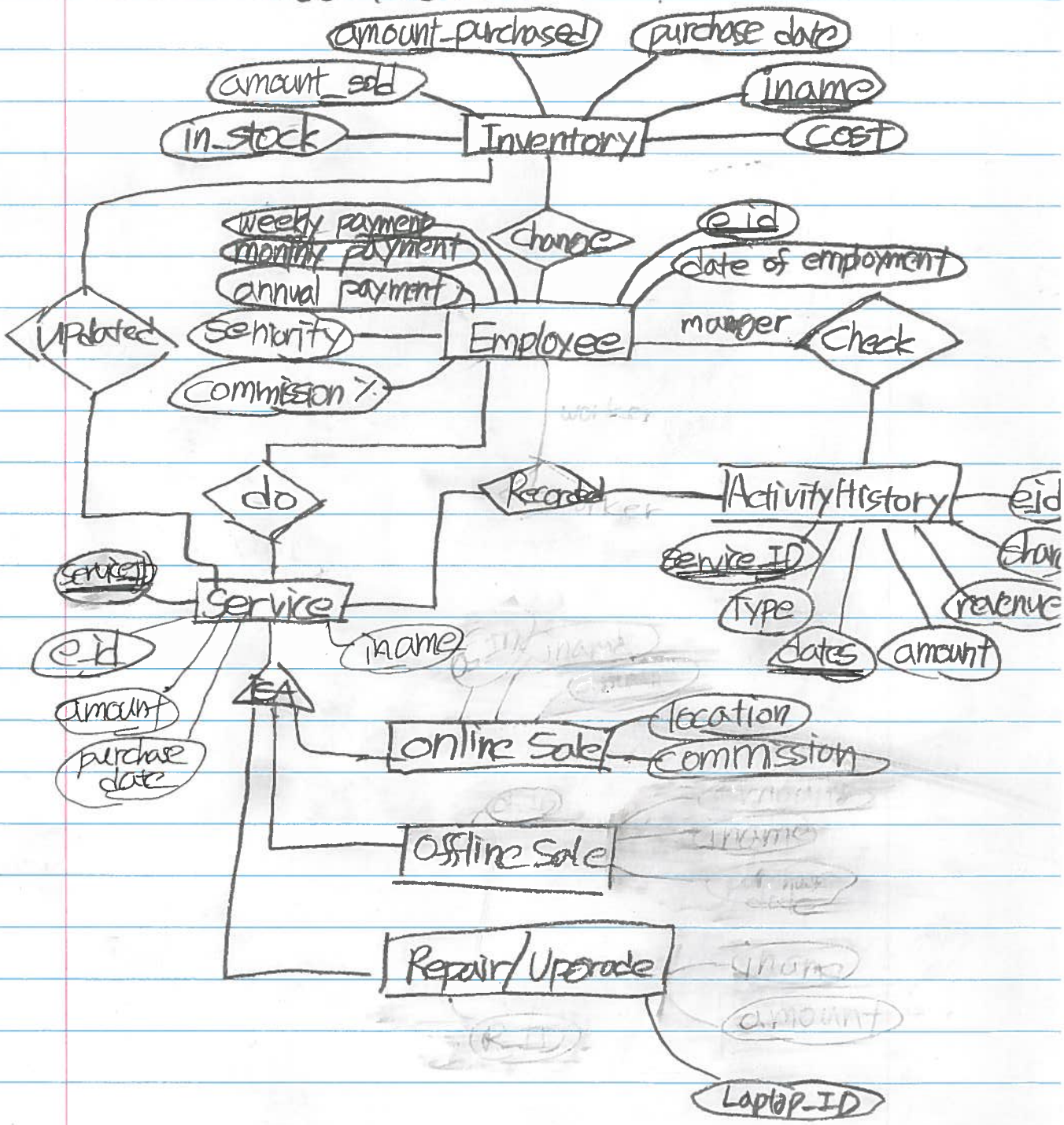

Part2

Inventory (iname, in_stock, purchaseDate, amount_sold, amount_purchased, defaultCost)

Employee (e_id, dateOfEmployment, seniority, weeklyPayment, mantlyPayment, annualPayment)

ActivityHistory (Service_ID, dates, type, amount, revenue, share, e_id)

Service (Service_ID, e_id, iname, amount, Purchasedate)

OnlineSale(Service_ID, e_id, iname, amount, location, commission purchasedate)

OfflineSale(Service_ID, e_id, iname, amount, purchasedate)

RepairUpdate(Service_ID, e_id, iname, amount, historyItemNumber)

change(e_id, iname)

check(e_id)

do (e_id, service_ID)

Recorded(Service_ID, date)

Updated(Service_ID, iname)

Question 2

1. $\rho(Doctor, \sigma_{jobtitle=Doctor}(Employee))$
   We need to add relation table
   s.t Doctor can have specialties & department attribute & "visit_see" [Refinment]

   Then $\sigma_{specialties=heart\ surgery}(Doctor)$

2. $\rho(Nurse, \sigma_{jobtitle=nurse}(Employee))$
   Employee need to have attribute address. [Refinment]

   The $\sigma_{address=Laval \wedge startDate > 20120601}(Nurse)$

3. $\Pi_{medicalReport}(\sigma_{medicalNumber=GivenNumber}(Visit))$

4. $\rho(patient A, \Pi_{doctorID}(\sigma_{medicareNumber=GivenNumber \wedge date \geq 20140601}(Visit$

   $\rho(fee, \Pi_{visit\_fee}(Patient A \bowtie Doctor))$
   Doctor should have Doctor ID [Refinement]

5. Patient should have #ofvisit [Refinement]

   $\sigma_{\#ofvisit>=2}(Patient \bowtie \Pi_{medicalN}(\sigma_{disease=heart}(Visit)$

6. $\Pi_{\text{first name, last name, phone, date admitted, date discharged}}$ (Patient $\bowtie$ ($\sigma_{\text{reasonforAdmission=HIV}}$(Admission) $\cup$ $\sigma_{\text{reasonforAdmission=Cancer}}$(Admission)))

7. $\Pi_{\text{first name, last name, phone, date admitted, date discharged}}$ (Patient $\bowtie$ ($\sigma_{\text{reason for Admission=Cancer}}$(Admission) $\cap$ $\sigma_{\text{reason for Admission=HIV}}$))

8. $\Pi_{\text{first name, last name, phone, date admitted, date discharged}}$ (patient $\bowtie$ ($\sigma_{\text{reason for Admission=Cancer}}$(Admission) $-$ $\sigma_{\text{reason for Admission=HIV}}$))

9. P(DPatient, Patient $\bowtie$ patient first name = doctor.first name $\wedge$ patient.last name = doctor.last name $\Pi_{\text{first name, last name}}$(Doctor))

$\Pi_{\text{first name, last name, phone, dat admitted, date discharg}}$ (DPatient $\bowtie$ Admission)

10. P(HIVPatient, Patient $\bowtie$ Π_{medical}($\sigma_{\text{diagnosis=HIV}}$(Visit)),

$\Pi_{\text{first name, last name, job title, phone\#}}$ (EmployeeWithP