Instructions Very Hard Exercise1: Emergency Room

a) Patients (Ins-#) access with traumata Emergency Rooms (Depart-#), within a certain Period (Period-#).

b) An Emergency room can consist of more than one Surgery (Sur-#), more than one Internal (Int-#) but only of one Radiology (Rad-#). All three are uniquely assigned to one Emergency Room.

c) Surgery has a Surgeon (Surgeon-#), who is responsible for one or more Surgeries. One or more Surgeons can examine one ore more traumata of the patients in the emergency room.

d) Internal has an Internist (Internist-#), who is responsible for one or more Internals. One or more Internists can consult in one or more examinations.
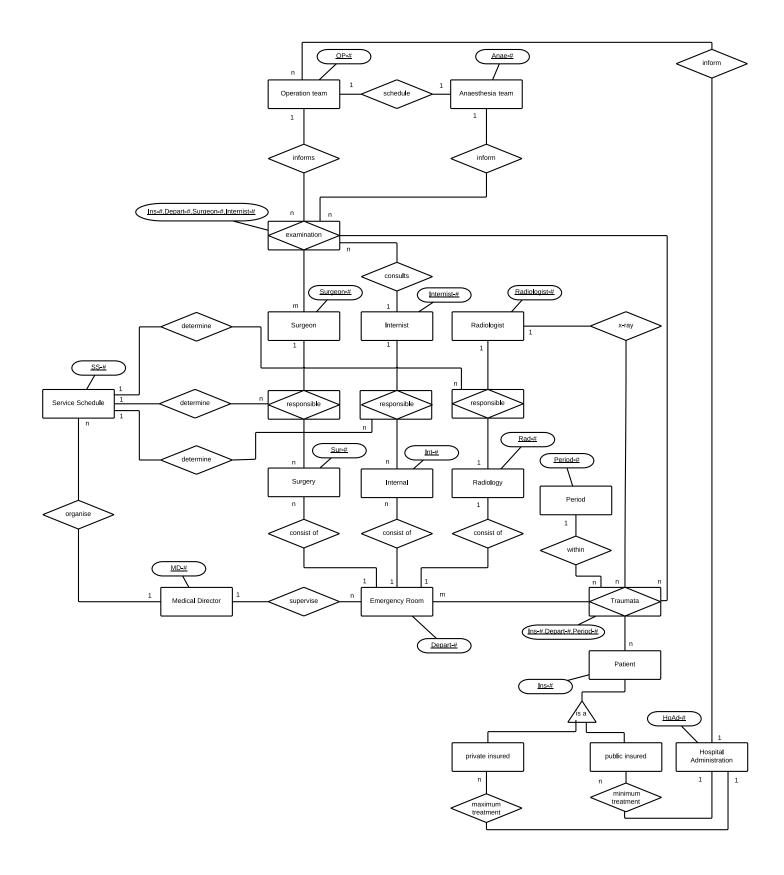
e) Radiology has a Radiologist (Radiologist-#), who is responsible for the Radiology and x-rays the Traumata. A Radiologist can x-ray more than one Traumata.

f) Each of the three responsibilities are uniquely determined in the Service Schedule (SS-#). Service Schedules are organised by the only Medical Director (MD-#), who also supervises the Emergency Rooms.

g) Examinations inform only one Operation team (OP-#) and only one Anaesthesia team (Anae-#).

h) One Operation team schedules the operation with one Anaesthesia team.

i) Patients are either privately insured or publicly insured. The relationship between private insured patients and the Hospital Administration (HoAd-#) is maximum treatment. The relationship between public insured patients and the hospital administration is minimum treatment. The Hospital Administration informs one or more Operation teams.

Entity-Relationship Diagram:

- OP-# — Operation team (n)
- Anae-# — Anaesthesia team
- Operation team — 1 — schedule — 1 — Anaesthesia team
- Operation team — 1 — informs
- Anaesthesia team — 1 — inform
- inform (top right)
- Ins-#,Depart-#,Surgeon-#,Internist-# — examination (n) (n) (n)
- examination — consults — Surgeon / Internist
- Surgeon-# — Surgeon (m) (1)
- Internist-# — Internist (1) (1)
- Radiologist-# — Radiologist — 1 — x-ray
- Surgeon — determine — Service Schedule
- SS-# — Service Schedule (1)(1)(1)(n)
- Service Schedule — determine — responsible (n)
- Service Schedule — determine
- responsible (Surgeon 1) / responsible (Internist 1) / responsible (Radiologist 1 / n)
- Sur-# — Surgery (n)
- Int-# — Internal (n)
- Rad-# — Radiology (1)
- Period-# — Period
- Surgery — n — consist of — 1
- Internal — n — consist of — 1
- Radiology — 1 — consist of — 1
- Period — 1 — within — n
- Service Schedule — n — organise
- MD-# — Medical Director (1)
- Medical Director — 1 — supervise — n — Emergency Room — m — Traumata
- Emergency Room — Depart-#
- Traumata (n)(n)(n)
- Ins-#,Depart-#,Period-# — Traumata
- Patient — n
- Ins-# — Patient
- Patient — is a — private insured / public insured
- HoAd-# — Hospital Administration
- private insured — n — maximum treatment
- public insured — n — minimum treatment
- Hospital Administration (1)(1)(1)

Operations Team

OP-#	...

Anaesthesia Team

Anae-#	...

examinations

Ins-#	Depart-#	Surgeon-#	Internist-#	...

Surgeon

Surgeon-#	...

Internist

Internist-#	...

Radiologist

Radiologist-#	...

Hospital Administration

HoAd-#	...

Surgery

Sur-#	Surgeon-#	...

Internal

Int-#	Internist-#	...

Radiology

Rad-#	Radiologist-#	...

Service Schedule

SS-#	MD-#	...

Period

Period-#	...

Traumata

Ins-#	Depart-#	Period-#	...

Medical Director

MD-#	...

Emergency Room

Depart-#	MD-#	...

Patient

Ins-#	...