**Hospital**

For this task you are required to create a Hospital system with the following User Stories and Business rules

**User Stories**

As a Nurse

I want to check the treatment plan of a patient

So that I can review information about the treatment they have already received

As a Doctor

I want to be able to record the treatment that I provide to a patient,

So that the plan is always up to date.

As a Receptionist

I want to be able to admit patients into the hospital

So that I can trace where the patients are.

As a member of the Hospital Admin team

I want to be able to create a team of Doctors

So that the doctors have a clean chain of hierarchy

As a member of the Hospital Admin team

I want to be able to promote a doctor

So that promotions are correctly recorded within the system

As a member of the Hospital Admin team

I want to be able to remove a doctor from a team

So that the system accurately reflects the state of the teams.

As a Receptionist

I want to collect information for various entities in my system

So that I can print hard copies of the information.

**Business Rules**

* a consultant doctor must be at least grade Three
* a junior doctor can be any grade.
* a team must have at least one consultant doctor at all times, a team cannot be created and then a consultant Doctor added later.
* a team must have at least 2 doctors but at most 4 doctors.
* a patient must be assigned a team of doctors when they are admitted
* a patient can only be treated by a doctor that is a member of the team they are assigned to
* a patient must have an auto generated unique ID
* a patient is assigned to a ward when they are admitted
* a ward has a limited capacity
* a doctor can only belong to one team at a time
* if a doctor is removed from a team there must be at least 2 doctors left in the team, 1 of whom must be a consultant
* you are required to create - using TDD
  + a method to treat patients
  + a method to admit patients
  + A method to create a team and assign at least one consultant doctor at creation
  + proof that a team cannot exist without a consultant doctor
  + proof that a patient cannot be admitted to a ward whilst it is full
  + a method to promote a junior doctor to a consultant doctor
  + a method to remove doctors from a team
  + A method that returns information about all the doctors that work in the hospital
  + A method that returns information about all the patients that are in the hospital
  + A method that returns information about all the teams that are in the hospital