Q1. Prepare the class diagram for a Hospital Management System, by identifying the classes, attributes, relationships and their cardinality.

Columbia Russia Hospital chain plans to create a unified application for use across different locations of the hospital. The initial requirements gathered are as follows.

- The hospital has many locations with its locality, address, phone, date of inception are to be captured in the system

- Each location has different set of departments where technical and clerical staff work. The department details like name and head of the department need to be captured.

- Along with common staff details, the technical staff need to be assigned to a lab or OT under that department

- Doctors can be full time or visiting doctors who have a primary department they are assigned to. The full time doctors are paid monthly salary and remuneration for additional work carried out (overtime/more operations than monthly limit/etc.). Visiting Doctors are paid remuneration for every patient that consults them and every operation that they may perform. These charges details have to be captured in the system.

- A Visiting Doctor may be consulted at different locations of the hospital based on the doctor's preference of consultation day and hours. The system should track the doctor availability in each location they visit.

- Patients with their basic details stored, can consult more than one doctor at different locations. The consultation details like location, date and time, observations and diagnosis suggested, whether admission required are captured. The fees for the consultation along with payment date and payment mode are to be stored