PART 1

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// Hospital system - sample UML class diagram in Umple

class Hospital

{

1 -- \* Employee;

1 -- 1..\* Ward;

}

// Subsections within the hospital.

class Ward

{

String name;

Integer capacity;

1..\* -- \* Employee;

1 -- \* Patient;

}

// The people who work at the hospital.

class Employee

{

String name;

Integer id;

Integer salary;

1 -- 1..\* Shift;

1 -- 1..\* Privilege;

}

// Working shifts that the employees have.

class Shift

{

Date date;

Integer startTime;

Integer endTime;

}

// Various privileges and roles that the employees have.

class Privilege

{

String privilege;

}

// Specialized employee who looks after patients.

class Doctor

{

isA Employee;

}

// Specialized doctor who performs advanced procedures on patients.

class Surgeon

{

isA Doctor;

}

// Employee who maintains the cleanliness of the hospital.

class Janitor

{

isA Employee;

}

// Patient who is at the hospital to get better.

class Patient

{

String name;

\* -- \* Doctor;

}

class Inspector

{

Jemima;

isA Employee;

}

class Nurse

{

isA Employee;

\* -- \* Patient;

}

PART 2

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PART 2: Java Code

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