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SQL - Database Design

Patient (**patientNo**, patName, patAddr, DOB)
Primary Key **patientNo**

Ward (**wardNo**, wardName, wardType, noOfBeds)
Primary Key **wardNo**

Contains (**patientNo**, **wardNo**, **admissionDate**)
Primary Key **patientNo**
Foreign Key **wardNo**
Alternate Key **admissionDate**

Drug (**drugNo**, drugName, costPerUnit)
Primary Key **drugNo**

Prescribed (**patientNo**, **drugNo**, unitsPerDay, **startDate**, finishDate)
Primary Key **patientNo**
Foreign Key **drugNo**
Alternate Key **startDate**

(1) List all the patients' details, alphabetically by name.

```
SELECT *
FROM Patient
ORDER BY patName
```

(2) List all the patients contained in the 'Surgical' ward.

```
SELECT p.patientNo, p.patName
FROM Patient p, Ward w, Contains c
WHERE w.wardNo = c.wardNo AND c.patientNo = p.patientNo
AND wardName= 'Surgical'
```

(3) List all the patients admitted today.

```
SELECT p.patientNo, p.patName
FROM Patient p, Contains c
WHERE c.patientNo = p.patientNo AND admissionDate = 'today'
```

(4) Find the names of all the patients being prescribed 'Morphine'.

```
SELECT p.patName
FROM Patient p, Prescribed pr, Drug d
WHERE pr.patientNo = p.patientNo AND pr.drugNo = d.drugNo AND drugName = 'Morphine'
```

(5) List each patient that was admitted in August 2011.

```
SELECT patientNo
FROM Contains
WHERE admissionDate = '2011'
```

(6) List each patient, every drug they are prescribed and the cost per day of that drug.

```
SELECT patName , patientNo, drugNo, unitPerDay
FROM Patient p , Prescribed
```

(7) List each patient, and the cost per day of all drugs they are being prescribed

(8) What is the maximum, minimum and average number of beds in a ward? Create appropriate column headings for the results table.

```
SELECT MAX(noOfBeds) AS Maximum, MIN(noOfBeds) AS Minimum, AVG(noOfBeds) AS Average FROM Ward
```

(9) For each ward that admitted more than 10 patients today, list the ward number, ward type and number of beds in each ward.

```
SELECT w.wardNo, wardType, noOfBeds
FROM Patient p, Ward w, Contains c
WHERE w.wardNo = c.wardNo AND c.patientNo = p.patientNo AND
admissionDate = 'today'
GROUP BY wardNo, wardType, noOfBeds HAVING COUNT(*) > 10
```

(10) Change the costPerUnit of 'Morphine' to \$10.00.

```
UPDATE Drug
SET costPerUnit = '$10.00'
WHERE drugName = 'Morphine'
```