Database Planning and Management

**Sports Injury Clinic**

Using the included data dictionary as a reference see if you can answer the 8 queries relating to the SportsInjuryClinic database.

A data dictionary is sometimes included in a database governance document to show the entity names, attributes, keys, data types and other information such as naming conventions and constraints.

**Data dictionary**

**Database** —Sports Injury Clinic database

**Entity name** —Doctor

**Description** —This table holds details of all doctors working in the clinic.

|  |  |  |  |
| --- | --- | --- | --- |
| **Key** | **Attribute** | **Data** | **Constraints/comments** |
| **** |  | **type** |  |
|  |  |  |
|  | StaffNo | Char(2) | Primary Key |
|  |
|  |  |  |  |
|  | Forename | varchar(20) |  |
|  | Surname | varchar(20) |  |
|  | Salary | decimal | Salaries between 10000– |
|  |  |  | 100000. |
|  |  |  |  |

**Database** —Sports Injury Clinic database

**Entity name** —Patient

**Description** —This table holds details of all patients attending the clinic.

|  |  |  |  |
| --- | --- | --- | --- |
| **Key** | **Attribute** | **Data** | **Constraints/comments** |
| **** |  | **type** |  |
|  |  |  |
|  | PatientNo | Char(5) | Primary Key |
|  |
|  |  |  |  |
|  | Forename | varchar(20) |  |
|  | Surname | varchar(20) |  |
|  | Smoker | Char(3) |  |
|  |  |  |  |

**Database** —Sports Injury Clinic database

**Entity name** —Injury

**Description** —This table holds details of all injuries treated at the clinic.

|  |  |  |  |
| --- | --- | --- | --- |
| **Key** | **Attribute** | **Data** | **Constraints/comments** |
| **** |  | **type** |  |
|  |  |  |
|  | Injury Code | Char(2) | Primary Key |
|  |
|  | Injury Description | Varchar(50) |  |
|  |  |  |  |

**Database** —Sports Injury Clinic database

**Entity name** —Treatment

**Description** —This table holds details of all treatments carried out at the clinic.

|  |  |  |  |
| --- | --- | --- | --- |
| **Key** | **Attribute** | **Data** | **Constraints/comments** |
| **** |  | **type** |  |
|  |  |  |
|  | Treatment Code | Char(3) | Primary Key |
|  |
|  | Treatment Description | Varchar(50) |  |
|  | Cost per Visit | decimal | Cost between £10–£200 and no |
|  |  |  | decimal places. |
|  |  |  |  |

**Database** —Sports Injury Clinic database

**Entity name** —Appointment

**Description** —This table holds details of all appointments at the clinic.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Key** | **Attribute** | **Data** | **Constraints/comments** | |
|  | **** |  | **type** |  |  |
|  |  |  |  |  |
|  |  | Appointment Code | Numeric | Primary Key Automatically | |
|  |  |
|  |  |  |  | assigned. | |
|  |  | Appointment Date | Date | Format to suit. | |
|  |  | StaffNo | Char(2) | Foreign Key | |
|  |  |  |  |  | |
|  |  | PatientNo | Char(5) | Foreign Key | |
|  |  |  |  |  | |
|  |  | Injury Code | Char(2) | Foreign Key | |
|  |  | Treatment Code | Char(3) | Foreign Key | |
|  |  |  |  |  | |
|  |  |  |  |  | |
|  |  |  |  |  | |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **DOCTOR** | |  |
|  |  |
| **Staff No** | **Forename** | **Surname** | **Salary** |
| A1 | Harry | Sinclair | 40000.00 |
| A2 | Mohammed | Rasul | 30000.00 |
| A3 | Brenda | Taylor | 25000.00 |
| B1 | Stuart | McNab | 35000.00 |
| B2 | Julia | Ng | 38000.00 |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PATIENT** | |  |
|  |  |
| **Patient** | **Forename** | **Surname** | **Smoker** |
| **No** |  |  |  |
| BC021 | Ben | Croft | No |
| JG001 | Jack | Green | Yes |
| JS076 | Jill | Strang | No |
| MM010 | Mary | Miller | Yes |
| MM011 | Murdo | McTavish | No |
| SR017 | Sally | Rose | No |
| WM002 | Bill | McGrory | Yes |
| WM004 | Wendy | Miller | No |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **INJURY** | |  |
|  |  |
|  | **Injury Code** | **Injury Description** |  |
|  | BA | Broken Arm |  |
|  | BL | Broken Leg |  |
|  | BN | Broken Nose |  |
|  | FS | Frozen Shoulder |  |
|  | SA | Sprained Ankle |  |
|  | TE | Tennis Elbow |  |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **TREATMENT** |  |
|  |  |
| **Treatment code** | **Treatment description** | **Cost per** |
|  |  | **Visit** |
| MAS | Massage | £30.00 |
| PHY | Physiotherapy | £40.00 |
| PKL | Painkillers | £15.00 |
| PLA | Plaster | £25.00 |
|  |  |  |
|  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **APPOINTMENT** | |  |  |
|  |  |  |  |
| **Appointment** | **Appointment** | **Staff**  **No** | **Patient** | **Injury** | **Treatment** |
| **Code** | **Date** |  | **Code** | **Code** | **Code** |
| 1 | 24/06/2013 | B1 | WM004 | TE | MAS |
| 2 | 24/06/2013 | A2 | SR017 | SA | PKL |
| 3 | 26/06/2013 | A1 | JS076 | BA | PKL |
| 4 | 26/06/2013 | B2 | MM011 | BL | PLA |
| 5 | 24/06/2013 | A1 | JS076 | BA | PLA |
| 6 | 25/06/2013 | A1 | SR017 | BA | PLA |
| 7 | 25/06/2013 | A2 | JG001 | FS | MAS |
| 8 | 25/06/2013 | A3 | SR017 | SA | PHY |
| 9 | 25/06/2013 | B2 | WM002 | TE | PHY |
| 10 | 25/06/2013 | A3 | WM004 | FS | PKL |
| 11 | 26/06/2013 | B1 | BC021 | BN | PKL |
| 12 | 26/06/2013 | A2 | MM011 | BL | PHY |
| 13 | 26/06/2013 | B2 | MM010 | TE | PKL |
| 14 | 26/06/2013 | A1 | WM002 | BN | PKL |
| 15 | 26/06/2013 | A1 | JS076 | BL | PLA |
| 16 | 26/06/2013 | A3 | SR017 | BA | PLA |

**Task**

***You are to extract the following information from the Sports Injury Clinic database.***

1. The clinic wants to promote its new ‘Quit Smoking’ treatment. Using a filter, produce a list of all patients who smoke, in alphabetical order of surname. Print out the results of your filter.
2. Senior doctors are those that earn in excess of £30,000. Using a filter, produce a list of Senior Doctors. Print out the results of your filter.
3. Using a filter, show all the appointments for last Tuesday, where the treatment was either Physiotherapy or Massage. Print out the results of your filter.
4. Doctor Sinclair is complaining of his heavy workload. Using a filter, produce a list of his appointments. Print out the results of your filter.
5. All Doctors are going to be given a salary increase of 5%. Create a query that shows the Doctor’s Forename, Surname, Current Salary, Increase and the New Salary. Print out the results of your query.
6. Create a query confirming which appointments were given a treatment of either Painkillers or Plaster displaying Appointment Date, the Doctor’s Name, Injury and Treatment, sorted firstly by date, and secondly by Doctor. Print out the results of your query.
7. Create a view that shows only the Appointment Date, Doctor’s Name, and Treatment for any appointments that were for something broken. Print out the results of your query.
8. Create a query that shows the Total Number of patients seen on each day. Print out the results of your query.