1NF

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Patientid | firstname | lastname | Street | City | State | Zip | DoB | HomePhone | WorkPhone | Cell | email | Gender | MaritalStatus (S M W D) | Occupation | DiseaseID | Disease | MedID | Medication | MedType | Status | VisitID | LastVisit | VisitDuration | NextVisit | BillID | Billamount | Price |
| 1 | Earl | Smith | 53635 Green Ridge Lane | Grand Rapids | Michigan | 49560 | 3/14/1954 | 4-(624)520-4078 | 7-(888)743-9055 | 3-(071)801-2921 | esmith0@a8.net | Male | S | Engineer |  |  | Y | Yes | Anti | false | 1 | 02/14/2014 | 1 | 11/17/2012 | 1 | 3292.98 | 77.3 |
| 2 | Beverly | Porter | 10170 Coolidge Alley | Newark | New Jersey | 07195 | 5/31/1957 | 2-(942)082-1228 | 4-(806)475-1899 | 9-(240)676-4467 | bporter1@multiply.com | Female | M | N/A | 2 | STD | N | No |  | false | 2 | 12/20/2010 | 1.5 | 03/20/2013 | 2 | 6191.57 | 73.1 |
| 3 | Samuel | Bowman | 81797 Dakota Point | Detroit | Michigan | 48275 | 10/11/1997 | 8-(631)694-0496 | 4-(210)625-0616 | 7-(077)305-9462 | sbowman2@vk.com | Male | W | Teacher |  |  | N | No |  | true | 3 | 05/15/2012 | 0.5 | 12/25/2010 | 3 | 845.37 | 9.3 |
| 4 | Raymond | Owens | 2730 Mayfield Center | Baton Rouge | Louisiana | 70805 | 8/11/1991 | 4-(982)913-2958 | 9-(707)159-4537 | 8-(589)525-1248 | rowens3@vk.com | Male | D | Doctor | 4 | Heart Disease | N | No |  | true | 4 | 01/18/2012 | 1 | 01/09/2014 | 4 | 2282.74 | 31.1 |
| 5 | Linda | Washington | 96 Susan Terrace | Shawnee Mission | Kansas | 66225 | 4/24/1977 | 2-(842)789-6161 | 7-(280)906-4115 | 1-(089)883-2701 | lwashington4@si.edu | Female | S | Nurse |  |  | N | No |  | true | 5 | 08/10/2012 | 1.5 | 08/18/2014 | 5 | 837.54 | 29.7 |
| 6 | Aaron | Howell | 67 Goodland Point | Pensacola | Florida | 32511 | 4/18/1949 | 2-(826)603-3502 | 0-(234)311-1370 | 1-(946)765-3119 | ahowell5@loc.gov | Male | M | Engineer | 6 | Other | N | No |  | true | 6 | 04/21/2014 | 0.5 | 07/06/2012 | 6 | 3448.5 | 60.5 |
| 7 | Judy | Knight | 7 Kingsford Junction | Newport News | Virginia | 23612 | 2/27/1963 | 6-(472)341-8652 | 2-(347)940-1410 | 3-(351)011-3331 | jknight6@cmu.edu | Female | W | N/A |  |  | N | No |  | true | 7 | 06/29/2013 | 1 | 03/10/2014 | 7 | 182.6 | 2 |
| 8 | Evelyn | Jenkins | 7 High Crossing Pass | Baltimore | Maryland | 21281 | 3/15/2013 | 3-(989)573-1448 | 6-(862)488-5419 | 0-(224)940-3850 | ejenkins7@hostgator.com | Female | D | Teacher |  |  | Y | Yes | Anti | false | 8 | 12/27/2011 | 1.5 | 03/31/2014 | 8 | 5382 | 78 |
| 9 | Johnny | Castillo | 0702 Novick Trail | Katy | Texas | 77493 | 6/15/1999 | 3-(883)076-0318 | 1-(383)432-4461 | 8-(201)005-2877 | jcastillo8@myspace.com | Male | S | Doctor | 1 | Diabetes | Y | Yes | Anti | true | 9 | 08/15/2013 | 0.5 | 11/02/2013 | 9 | 368.16 | 76.7 |
| 10 | Alan | Kim | 43130 Shopko Way | Schenectady | New York | 12325 | 4/4/1953 | 0-(908)962-4001 | 0-(721)822-6460 | 9-(462)610-7696 | akim9@kickstarter.com | Male | M | Nurse | 2 | STD | Y | Yes | Anti | true | 10 | 09/23/2011 | 1 | 04/22/2011 | 10 | 1415.98 | 16.6 |
| 11 | Jennifer | Matthews | 46524 Stuart Trail | Roanoke | Virginia | 24029 | 10/19/1968 | 3-(117)458-6709 | 2-(383)947-5889 | 5-(664)183-9559 | jmatthewsa@wikipedia.org | Female | W | Engineer | 3 | Allergy | N | No |  | true | 11 | 11/01/2013 | 1.5 | 05/28/2014 | 11 | 1104.24 | 51.6 |
| 12 | Wayne | Cook | 63557 American Road | Fort Smith | Arkansas | 72916 | 9/16/1973 | 2-(930)125-6600 | 4-(513)081-4657 | 8-(679)162-5908 | wcookb@msu.edu | Male | D | N/A | 4 | Heart Disease | N | No |  | false | 12 | 04/04/2011 | 0.5 | 02/15/2014 | 12 | 2884.62 | 36.7 |
| 13 | Annie | Thompson | 9495 Buell Street | Orlando | Florida | 32891 | 11/26/1952 | 8-(127)013-4731 | 4-(180)759-1036 | 1-(486)792-0944 | athompsonc@dailymotion.com | Female | S | Teacher | 5 | Hepatitis | N | No |  | true | 13 | 11/09/2011 | 1 | 06/12/2014 | 13 | 6605.6 | 71.8 |
| 14 | Sharon | Long | 02 Forest Dale Hill | Los Angeles | California | 90010 | 12/11/1965 | 5-(524)382-7668 | 5-(083)835-4519 | 7-(892)153-5633 | slongd@instagram.com | Female | M | Doctor | 6 | Other | Y | Yes | Anti | false | 14 | 08/06/2012 | 1.5 | 09/03/2012 | 14 | 1454.52 | 71.3 |
| 15 | Cheryl | Rose | 14 Loomis Place | Montgomery | Alabama | 36109 | 5/5/1989 | 5-(710)622-8210 | 0-(471)030-0570 | 7-(490)021-5418 | crosee@prnewswire.com | Female | W | Nurse |  |  | Y | Yes | Anti | false | 15 | 09/16/2014 | 0.5 | 11/26/2010 | 15 | 210.87 | 7.1 |
| 16 | Evelyn | Wright | 7411 Old Shore Road | Wichita Falls | Texas | 76305 | 12/15/1963 | 6-(106)794-2884 | 7-(699)115-3821 | 7-(716)694-0048 | ewrightf@cmu.edu | Female | D | Engineer |  |  | N | No |  | true | 16 | 04/29/2012 | 1 | 07/29/2013 | 16 | 1635.06 | 23.8 |
| 17 | Bobby | Wagner | 22 Reindahl Avenue | Bethesda | Maryland | 20892 | 4/11/2005 | 9-(859)327-7824 | 6-(739)358-0779 | 4-(303)771-8228 | bwagnerg@php.net | Male | S | N/A | 1 | Diabetes | N | No |  | false | 17 | 07/24/2013 | 1.5 | 09/01/2013 | 17 | 2602.86 | 92.3 |
| 18 | Sarah | Day | 696 Hoard Drive | Port Charlotte | Florida | 33954 | 2/18/1968 | 8-(241)528-1149 | 4-(425)563-2481 | 0-(219)871-5824 | sdayh@ft.com | Female | M | Teacher | 2 | STD | N | No |  | true | 18 | 09/18/2011 | 0.5 | 05/07/2012 | 18 | 1587.6 | 31.5 |
| 19 | Rose | Romero | 19 Grover Plaza | Peoria | Illinois | 61651 | 9/13/1969 | 8-(467)316-5974 | 7-(501)172-8074 | 3-(766)789-9012 | rromeroi@google.com.br | Female | W | Doctor | 3 | Allergy | N | No |  | false | 19 | 03/01/2014 | 1 | 04/21/2013 | 19 | 1631.49 | 45.7 |
| 20 | William | Ward | 3200 Glacier Hill Hill | Huntsville | Alabama | 35805 | 5/31/1966 | 0-(892)889-5052 | 9-(943)037-9658 | 9-(693)659-2717 | wwardj@lycos.com | Male | D | Nurse | 4 | Heart Disease | N | No |  | false | 20 | 03/26/2014 | 1.5 | 01/28/2013 | 20 | 2295.93 | 27.3 |

PK 🡪 PatientID, VisitID, DiseaseID

FD 🡪 PatientID 🡪 FirstName, LastName, Street, City, State, Zip, DoB, HomePhone, WorkPhone, Cell, email, Gender, MaritalStatus, Occupation, Status

PatientID, DiseaseID, MedID 🡪 FirstName, LastName, Street, City, State, Zip, DoB, HomePhone, WorkPhone, Cell, email, Gender, MaritalStatus, Disease, Medication, MedType

PatientID, visitID 🡪 FirstName, LastName, Street, City, State, Zip, DoB, HomePhone, WorkPhone, Cell, email, Gender, MaritalStatus, Occupation, Status, LastVisits, Duration, nextvisit

PatientID, visitID, BillID 🡪 FirstName, LastName, Street, City, State, Zip, DoB, HomePhone, WorkPhone, Cell, email, Gender, MaritalStatus, Occupation, Status, LastVisits, Duration, nextvisit

BillID 🡪 duration, Price

MaritalStatus 🡪 MStatus

tbPatient

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Patientid (PK) | firstname | lastname | Street | City | State | Zip | DoB | HomePhone | WorkPhone | Cell | email | Gender | MaritalStatus (S M W D) | Occupation | Status |
| 1 | Earl | Smith | 53635 Green Ridge Lane | Grand Rapids | Michigan | 49560 | 3/14/1954 | 4-(624)520-4078 | 7-(888)743-9055 | 3-(071)801-2921 | esmith0@a8.net | Male | S | Engineer | false |
| 2 | Beverly | Porter | 10170 Coolidge Alley | Newark | New Jersey | 07195 | 5/31/1957 | 2-(942)082-1228 | 4-(806)475-1899 | 9-(240)676-4467 | bporter1@multiply.com | Female | M | N/A | false |
| 3 | Samuel | Bowman | 81797 Dakota Point | Detroit | Michigan | 48275 | 10/11/1997 | 8-(631)694-0496 | 4-(210)625-0616 | 7-(077)305-9462 | sbowman2@vk.com | Male | W | Teacher | true |
| 4 | Raymond | Owens | 2730 Mayfield Center | Baton Rouge | Louisiana | 70805 | 8/11/1991 | 4-(982)913-2958 | 9-(707)159-4537 | 8-(589)525-1248 | rowens3@vk.com | Male | D | Doctor | true |
| 5 | Linda | Washington | 96 Susan Terrace | Shawnee Mission | Kansas | 66225 | 4/24/1977 | 2-(842)789-6161 | 7-(280)906-4115 | 1-(089)883-2701 | lwashington4@si.edu | Female | S | Nurse | true |
| 6 | Aaron | Howell | 67 Goodland Point | Pensacola | Florida | 32511 | 4/18/1949 | 2-(826)603-3502 | 0-(234)311-1370 | 1-(946)765-3119 | ahowell5@loc.gov | Male | M | Engineer | true |
| 7 | Judy | Knight | 7 Kingsford Junction | Newport News | Virginia | 23612 | 2/27/1963 | 6-(472)341-8652 | 2-(347)940-1410 | 3-(351)011-3331 | jknight6@cmu.edu | Female | W | N/A | true |
| 8 | Evelyn | Jenkins | 7 High Crossing Pass | Baltimore | Maryland | 21281 | 3/15/2013 | 3-(989)573-1448 | 6-(862)488-5419 | 0-(224)940-3850 | ejenkins7@hostgator.com | Female | D | Teacher | false |
| 9 | Johnny | Castillo | 0702 Novick Trail | Katy | Texas | 77493 | 6/15/1999 | 3-(883)076-0318 | 1-(383)432-4461 | 8-(201)005-2877 | jcastillo8@myspace.com | Male | S | Doctor | true |
| 10 | Alan | Kim | 43130 Shopko Way | Schenectady | New York | 12325 | 4/4/1953 | 0-(908)962-4001 | 0-(721)822-6460 | 9-(462)610-7696 | akim9@kickstarter.com | Male | M | Nurse | true |
| 11 | Jennifer | Matthews | 46524 Stuart Trail | Roanoke | Virginia | 24029 | 10/19/1968 | 3-(117)458-6709 | 2-(383)947-5889 | 5-(664)183-9559 | jmatthewsa@wikipedia.org | Female | W | Engineer | true |
| 12 | Wayne | Cook | 63557 American Road | Fort Smith | Arkansas | 72916 | 9/16/1973 | 2-(930)125-6600 | 4-(513)081-4657 | 8-(679)162-5908 | wcookb@msu.edu | Male | D | N/A | false |
| 13 | Annie | Thompson | 9495 Buell Street | Orlando | Florida | 32891 | 11/26/1952 | 8-(127)013-4731 | 4-(180)759-1036 | 1-(486)792-0944 | athompsonc@dailymotion.com | Female | S | Teacher | true |
| 14 | Sharon | Long | 02 Forest Dale Hill | Los Angeles | California | 90010 | 12/11/1965 | 5-(524)382-7668 | 5-(083)835-4519 | 7-(892)153-5633 | slongd@instagram.com | Female | M | Doctor | false |
| 15 | Cheryl | Rose | 14 Loomis Place | Montgomery | Alabama | 36109 | 5/5/1989 | 5-(710)622-8210 | 0-(471)030-0570 | 7-(490)021-5418 | crosee@prnewswire.com | Female | W | Nurse | false |
| 16 | Evelyn | Wright | 7411 Old Shore Road | Wichita Falls | Texas | 76305 | 12/15/1963 | 6-(106)794-2884 | 7-(699)115-3821 | 7-(716)694-0048 | ewrightf@cmu.edu | Female | D | Engineer | true |
| 17 | Bobby | Wagner | 22 Reindahl Avenue | Bethesda | Maryland | 20892 | 4/11/2005 | 9-(859)327-7824 | 6-(739)358-0779 | 4-(303)771-8228 | bwagnerg@php.net | Male | S | N/A | false |
| 18 | Sarah | Day | 696 Hoard Drive | Port Charlotte | Florida | 33954 | 2/18/1968 | 8-(241)528-1149 | 4-(425)563-2481 | 0-(219)871-5824 | sdayh@ft.com | Female | M | Teacher | true |
| 19 | Rose | Romero | 19 Grover Plaza | Peoria | Illinois | 61651 | 9/13/1969 | 8-(467)316-5974 | 7-(501)172-8074 | 3-(766)789-9012 | rromeroi@google.com.br | Female | W | Doctor | false |
| 20 | William | Ward | 3200 Glacier Hill Hill | Huntsville | Alabama | 35805 | 5/31/1966 | 0-(892)889-5052 | 9-(943)037-9658 | 9-(693)659-2717 | wwardj@lycos.com | Male | D | Nurse | false |

|  |  |
| --- | --- |
| Patientid (PK) | primary key, CHAR(4) |
| firstname | VARCHAR2(20), REQUIRED field |
| lastname | VARCHAR2(20), REQUIRED field |
| Street | VARCHAR2(30) |
| City | Char(20) |
| State | Char(2) |
| Zip | Number(6,0) |
| DoB | Date |
| HomePhone | VARCHAR2(20) |
| WorkPhone | VARCHAR2(20) |
| Cell | VARCHAR2(20) |
| email | VARCHAR2(50) |
| Gender | Char(1) |
| MaritalStatus (FK) | foreign key referencing the tbmstatus |
| Occupation | VARCHAR2(20) |
| Status | Char(5) |

tbPDisease

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Patientid (FK) (PK) | DiseaseID (PK) (FK) | Disease | MedID (FK) | MedType |
| 1 |  |  | Y | Anti |
| 2 | 2 | STD | N |  |
| 3 |  |  | N |  |
| 4 | 4 | Heart Disease | N |  |
| 5 |  |  | N |  |
| 6 | 6 | Other | N |  |
| 7 |  |  | N |  |
| 8 |  |  | Y | Anti |
| 9 | 1 | Diabetes | Y | Anti |
| 10 | 2 | STD | Y | Anti |
| 11 | 3 | Allergy | N |  |
| 12 | 4 | Heart Disease | N |  |
| 13 | 5 | Hepatitis | N |  |
| 14 | 6 | Other | Y | Anti |
| 15 |  |  | Y | Anti |
| 16 |  |  | N |  |
| 17 | 1 | Diabetes | N |  |
| 18 | 2 | STD | N |  |
| 19 | 3 | Allergy | N |  |
| 20 | 4 | Heart Disease | N |  |

|  |  |
| --- | --- |
| Patientid (FK) (PK) | Part of a composite primary key as well as a foreign key referencing the tbPatient |
| DiseaseID (PK) | Part of a composite primary key as well as a foreign key referencing the tbDisease |
| Disease | VARCHAR2(20) |
| MedID (FK) | foreign key referencing the tbMedication |
| MedType | VARCHAR2(20) |

tbPvisit

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Patientid  (FK) (PK) | VisitID (PK) | LastVisit | VisitDuration | NextVisit |
| 1 | 1 | 02/14/2014 | 1 | 11/17/2012 |
| 2 | 2 | 12/20/2010 | 1.5 | 03/20/2013 |
| 3 | 3 | 05/15/2012 | 0.5 | 12/25/2010 |
| 4 | 4 | 01/18/2012 | 1 | 01/09/2014 |
| 5 | 5 | 08/10/2012 | 1.5 | 08/18/2014 |
| 6 | 6 | 04/21/2014 | 0.5 | 07/06/2012 |
| 7 | 7 | 06/29/2013 | 1 | 03/10/2014 |
| 8 | 8 | 12/27/2011 | 1.5 | 03/31/2014 |
| 9 | 9 | 08/15/2013 | 0.5 | 11/02/2013 |
| 10 | 10 | 09/23/2011 | 1 | 04/22/2011 |
| 11 | 11 | 11/01/2013 | 1.5 | 05/28/2014 |
| 12 | 12 | 04/04/2011 | 0.5 | 02/15/2014 |
| 13 | 13 | 11/09/2011 | 1 | 06/12/2014 |
| 14 | 14 | 08/06/2012 | 1.5 | 09/03/2012 |
| 15 | 15 | 09/16/2014 | 0.5 | 11/26/2010 |
| 16 | 16 | 04/29/2012 | 1 | 07/29/2013 |
| 17 | 17 | 07/24/2013 | 1.5 | 09/01/2013 |
| 18 | 18 | 09/18/2011 | 0.5 | 05/07/2012 |
| 19 | 19 | 03/01/2014 | 1 | 04/21/2013 |
| 20 | 20 | 03/26/2014 | 1.5 | 01/28/2013 |

|  |  |
| --- | --- |
| Patientid  (FK) (PK) | Part of a composite primary key as well as a foreign key referencing the tbPatient |
| VisitID (PK) | primary key, use a sequencer, size 11 |
| VisitDuration (PK) | Number(2,1) |
| LastVisit | Date |
| NextVisit | Date |

tbPBill

|  |  |  |  |
| --- | --- | --- | --- |
| Patientid  (FK) (PK) | VisitID  (FK) (PK) | BillID (PK) | Price |
| 1 | 1 | 1 | 77.3 |
| 2 | 2 | 2 | 73.1 |
| 3 | 3 | 3 | 9.3 |
| 4 | 4 | 4 | 31.1 |
| 5 | 5 | 5 | 29.7 |
| 6 | 6 | 6 | 60.5 |
| 7 | 7 | 7 | 2 |
| 8 | 8 | 8 | 78 |
| 9 | 9 | 9 | 76.7 |
| 10 | 10 | 10 | 16.6 |
| 11 | 11 | 11 | 51.6 |
| 12 | 12 | 12 | 36.7 |
| 13 | 13 | 13 | 71.8 |
| 14 | 14 | 14 | 71.3 |
| 15 | 15 | 15 | 7.1 |
| 16 | 16 | 16 | 23.8 |
| 17 | 17 | 17 | 92.3 |
| 18 | 18 | 18 | 31.5 |
| 19 | 19 | 19 | 45.7 |
| 20 | 20 | 20 | 27.3 |

|  |  |
| --- | --- |
| Patientid  (FK) (PK) | Part of a composite primary key as well as a foreign key referencing the tbPatient |
| VisitID  (FK) (PK) | Part of a composite primary key as well as a foreign key referencing the tbPVisit |
| BillID (PK) | primary key, CHAR(4) |
| Price | NUMBER(10, 2), cannot be negative, default of 0.00 |

tbPrice

|  |  |  |
| --- | --- | --- |
| BillID  (PK) (FK) | Duration | Price |
| 1 | 0.5 | 35 |
| 2 | 1 | 65 |
| 3 | 1.5 | 95 |

|  |  |
| --- | --- |
| BillID  (PK) (FK) | Part of a composite primary key as well as a foreign key referencing the tbPBill |
| Duration | Number(2,1) |
| Price | NUMBER(10, 2), cannot be negative, default of 0.00 |

tbmstatus

|  |  |
| --- | --- |
| MaritalStatus (PK) | Mstatus |
| S | Single |
| M | Married |
| W | Widowed |
| D | Divorced |

|  |  |
| --- | --- |
| MaritalStatus (PK) | primary key, CHAR(8) |
| Mstatus | Char(1) |

tbDisease

|  |  |
| --- | --- |
| DiseaseID (PK) | Disease |
| 1 | Diabetes |
| 2 | STD |
| 3 | Allergy |
| 4 | Heart Disease |
| 5 | Hepatitis |
| 6 | Other |

|  |  |
| --- | --- |
| DiseaseID (PK) | Primary key, CHAR(2) |
| Disease | Diabetes |

tbMedication

|  |  |  |
| --- | --- | --- |
| MedID (PK) | Medication | MedType |
| Y | Yes | Char(20) |
| N | No | Null |

|  |  |
| --- | --- |
| MedID (PK) | Primary key, CHAR(2) |
| Medication | VARCHAR2(3) |
| MedType | VARCHAR2(20) |