```
1: #!/bin/bash
 2:
 3: echo $'\n'
 4: echo '\n\nWelcome to the Hospital Patient Management System. Please select
    one of the options below:\n\n'
 5: echo '1: Drop Tables'
6: echo '2: Create Tables'
7: echo '3: Populate Tables'
8: echo '4: Queries'
9: echo 'E: Quit'
10:
11: read input
12:
13: while [ "$input" != "e" ] && [ "$input" != "E" ];
14: do
15:
        if [ "$input" = "1" ]; then
16:
            echo 'You have chosen option 1'
17:
            ./drop tables.sh
        elif [ "$input" = "2" ]; then
18:
19:
            echo 'You have chosen option 2'
20:
            ./create table.sh
        elif [ "$input" = "3" ]; then
21:
            echo 'You have chosen option 3'
22:
23:
            ./populate tables.sh
        elif [ "$input" = "4" ]; then
24:
25:
            echo 'Choose a Query to Execute'
26:
            ./queries.sh
27:
        else
28:
            echo 'Invalid Input'
29:
        fi
30:
        echo $'\n'
31:
        echo '1: Drop Tables'
32:
        echo '2: Create Tables'
33:
34:
        echo '3: Populate Tables'
35:
        echo '4: Special Queries'
36:
        echo 'E: Quit'
37:
38:
        read input
39:
40: done
```

```
1: #!/bin/bash
 2:
 3: export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib
 5: echo "set linesize 200
 6: drop table insurance;
 7: drop table claim;
 8: drop table billed;
 9: drop table medicine;
10: drop table pro_cedure;
11: drop table governs;
12: drop table handles;
13: drop table appointment;
14: drop table follow;
15: drop table schedule;
16: drop table uses;
17: drop table equipment;
18: drop table room;
19: drop table manages;
20: drop table medical_entry;
21: drop table medical_record;
22: drop table attends;
23: drop table staff;
24: drop table patient;
25: exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)(I
```

```
1: #!/bin/bash
 2:
 3: export LD LIBRARY PATH=/usr/lib/oracle/12.1/client64/lib
 5: echo "set linesize 200
 6:
 7: CREATE TABLE staff(
        staff name VARCHAR(25) NOT NULL,
 8:
        emp id NUMBER PRIMARY KEY,
 9:
10:
        gender VARCHAR(10),
11:
        salary NUMBER,
12:
        qulifications VARCHAR(25),
13:
        phone number NUMBER,
14:
        address VARCHAR(50),
15:
        special VARCHAR(50) NOT NULL
16: );
17:
18: CREATE TABLE patient(
19:
        p name VARCHAR(25),
20:
        patient id NUMBER PRIMARY KEY,
21:
        gender VARCHAR(10),
22:
        admission_date DATE,
23:
        discharge date DATE,
24:
        address VARCHAR(50),
25:
26: );
27:
28: CREATE TABLE attends(
        emp_id NUMBER REFERENCES staff(emp id),
29:
30:
        patient id NUMBER REFERENCES patient(patient id),
        PRIMARY KEY (emp id, patient id)
31:
32: );
33:
34: CREATE TABLE medical record (
        record number NUMBER PRIMARY KEY,
35:
36:
        patient_id NUMBER REFERENCES patient(patient_id)
37: );
38:
39: CREATE TABLE medical entry (
40:
        entry number NUMBER,
        record number NUMBER REFERENCES medical record(record number),
41:
42:
        entry description VARCHAR(100),
        PRIMARY KEY(entry_number, record_number)
43:
44: );
45:
46: CREATE TABLE manages (
47:
        record number NUMBER REFERENCES medical record (record number),
48:
        emp id NUMBER REFERENCES staff(emp id)
49: );
50:
```

```
51: CREATE TABLE room(
         room number NUMBER PRIMARY KEY,
 52:
 53:
         room type VARCHAR(25)
 54: );
 55:
 56: CREATE TABLE equipment (
         equipment id NUMBER PRIMARY KEY.
 58:
         room number NUMBER REFERENCES room(room number),
 59:
         price NUMBER,
         description VARCHAR(100)
60:
61: );
62:
63: CREATE TABLE uses
         equipment id NUMBER REFERENCES equipment(equipment id),
65:
         emp_id NUMBER REFERENCES staff(emp_id),
 66:
         PRIMARY KEY (equipment id, emp id)
 67: );
 68:
 69: CREATE TABLE schedule(
        s id NUMBER PRIMARY KEY,
71:
         emp id NUMBER REFERENCES staff(emp id),
72:
         start time TIMESTAMP,
73:
74: );
75:
76: CREATE TABLE follow (
         emp id NUMBER REFERENCES staff(emp id),
 78:
         s id NUMBER REFERENCES schedule(s id),
79:
         PRIMARY KEY(emp id, s id)
80: );
81:
82: CREATE TABLE appointment (
 83:
         a id NUMBER PRIMARY KEY,
 84:
         app date TIMESTAMP NOT NULL,
 85:
         patient id NUMBER REFERENCES patient(patient id)
86: );
 87:
 88: CREATE TABLE handles (
         emp id NUMBER REFERENCES staff(emp id),
 89:
90:
         appointment_id NUMBER REFERENCES appointment(a_id),
91:
         PRIMARY KEY(emp id, appointment id)
92: );
93:
94: CREATE TABLE governs (
95:
         emp id NUMBER REFERENCES staff(emp id),
96:
         room number NUMBER REFERENCES room(room number),
97:
         PRIMARY KEY (emp id, room number)
98: );
99:
100: CREATE TABLE pro_cedure (
```

```
101:
        p_id NUMBER PRIMARY KEY,
102:
        p type VARCHAR(25),
103:
104: );
105:
106: CREATE TABLE medicine(
        m id NUMBER PRIMARY KEY,
108:
        price NUMBER,
        dosage VARCHAR(25),
109:
110:
        m name VARCHAR(25)
111: );
112:
113: CREATE TABLE billed (
114:
        bill_id NUMBER PRIMARY KEY,
115:
         patient_id NUMBER REFERENCES patient(patient_id),
         procedure_id NUMBER REFERENCES pro_cedure(p_id),
116:
117:
         medicine_id NUMBER REFERENCES medicine(m_id),
118:
         app id NUMBER REFERENCES appointment(a id) NOT NULL
119: );
120:
121: CREATE TABLE claim(
         claim_number NUMBER PRIMARY KEY,
122:
         bill_id NUMBER REFERENCES billed(bill_id)
123:
124: );
125:
126: CREATE TABLE insurance(
127: provider name VARCHAR(25),
         insurance_number NUMBER PRIMARY KEY,
128:
129:
         phone_number NUMBER,
         address VARCHAR(50)
130:
131: );
132:
133: exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
```

```
1: #!/bin/bash
2:
3: export LD LIBRARY PATH=/usr/lib/oracle/12.1/client64/lib
5: echo "set linesize 200
6:
7: insert into staff values('John Doe', 1, 'male', 200000, 'degree', 416, 'XX
   Place Drive', 'neuroseurgeon');
8: insert into staff values('Jane Albert', 2, 'female', 210000, 'degree',
   4161234566, '45 Study Drive', 'technician');
9: insert into staff values ('Michael Toon', 3, 'male', 80000, 'diploma',
   8974561234, '15 Library Avenue', 'receptionist');
10: insert into staff values ('Emily Blake', 4, 'female', 95000, 'diploma',
    6458921678, '125 Desert Road', 'nurse');
11: insert into staff values('Lydia Chen', 5, 'female', 65000, 'doctoral degree',
     5684359635, '7 Best Drive', 'technologist');
12:
13: insert into patient values('Sara', 1, 'female', date '2020-09-12', date
    '2020-09-17', '123 Anywhere Drive', '4169876543');
14: insert into patient values ('David James', 2, 'male', date '2020-06-11', date
    '2020-07-12', '456 Lily Drive', '4164536785');
15: insert into patient values('Joe Lad', 3, 'male', date '2020-02-14', date
    '2020-02-14', '789 Fall Drive', '4164890785');
16:
17: insert into attends values(1,1);
18: insert into attends values(2,2);
20: insert into medical_record values(1,1);
21: insert into medical_record values(3,2);
22: insert into medical record values(2,3);
23:
24: insert into medical entry values(1, 1, 'Check up');
25: insert into medical_entry values(2, 1, 'Broken Nose');
26: insert into medical_entry values(1, 2, 'Check up');
27: insert into medical_entry values(1, 3, 'Withdrawl');
28:
29: insert into manages values(3,2);
30: insert into manages values(1,3);
31:
32: insert into room values(1, 'recovery');
33: insert into room values(2, 'surgery');
35: insert into equipment values(1, 1, 99, 'Used for MRI Sacn');
37: insert into uses values(1,3);
38:
39: insert into schedule values(1, 1, TO_DATE('2020-08-04 12:00:00', 'YYYY/MM/DD
   HH:MI:SS'), TO_DATE('2020-08-04 3:00:00', 'YYYY/MM/DD HH:MI:SS'));
40: insert into schedule values(2, 2, TO_DATE('2020-09-05 08:00:00', 'YYYY/MM/DD
   HH:MI:SS'), TO_DATE('2020-09-05 12:00:00', 'YYYY/MM/DD HH:MI:SS'));
```

```
41: insert into schedule values(3, 1, TO_DATE('2020-04-06 10:00:00', 'YYYY/MM/DD
    HH:MI:SS'), TO DATE('2020-04-06 12:00:00', 'YYYY/MM/DD HH:MI:SS'));
42:
43: insert into follow values(1,1);
44: insert into follow values(2,2);
46: insert into appointment values(1, TO DATE('2020-08-04 12:00:00', 'YYYY/MM/DD
    HH:MI:SS'), 3);
47: insert into appointment values(2, TO DATE('2020-04-06 10:00:00', 'YYYY/MM/DD
    HH:MI:SS'), 1);
48: insert into appointment values(3, TO_DATE('2020-09-05 12:00:00', 'YYYY/MM/DD
   HH:MI:SS'), 2);
49:
50: insert into handles values(2,1);
51: insert into handles values(4,2);
52: insert into handles values(2, 3);
53:
54: insert into governs values(1, 1);
55: insert into governs values(2, 2);
56:
57: insert into pro_cedure values(1, 'heart surgery', 5000);
58: insert into pro_cedure values(2, 'therapy', 8000);
59:
60: insert into medicine values(1, 10, '10mg', 'tylenol');
61: insert into medicine values(2, 27, '50mg', 'advil');
62: insert into medicine values(3, 100, '100mg', 'insulin');
64: insert into billed values(1, 3, 1, NULL, 1);
65: insert into billed values(2, 1, 2, NULL, 2);
66:
67: insert into claim values(1, 2);
68: insert into claim values(2, 1);
69:
70: insert into insurance values('Sunlife',1,4157891234,'67 Bank Drive');
71: insert into insurance values('Moonlife',2,456789123,'98 Wall Street');
72:
73: exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.rverson.ca)(
```

```
#!/bin/bash
 1:
 2:
 3:
      export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib
 4:
 5: echo '1. View Staff Table'
 6: echo '2. View Patient Table'
      echo '3. View Attends Table'
 7:
      echo '4. View Medical Record Table'
 9:
      echo '5. View Medical Entry Table'
      echo '6. View Mangaes Table'
10:
      echo '7. View Room Table'
11:
12:
      echo '8. View Equipment Table'
      echo '9. View Uses Table'
13:
14:
      echo '10. View Schedule Table'
15:
     echo '11. View Follows Table'
16:
      echo '12. View Appointment Table'
17:
      echo '13. View Handles Table'
18:
      echo '14. View Governs Table'
19:
      echo '15. View Procedure Table'
20:
      echo '16. View Medicine Table'
      echo '17. View Billed Table'
21:
22:
      echo '18. View Claim Table'
23:
      echo '19. View Insurance Table'
      echo '20. View Medical Record w/ Patient Name'
24:
25:
      echo '21. View Schedule w/ Staff Name'
26:
      echo '22. View Patient Bills'
27:
28:
      read input
29:
30:
      if [ "$input" = "1" ]; then
31:
         echo "set linesize 200
         select * from staff;
32:
          exit" | sqlplus64 -s
33:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
34:
35:
        elif [ "$input" = "2" ]; then
36:
         echo "set linesize 200
37:
         select * from patient;
          exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
39:
        elif [ "$input" = "3" ]; then
40:
         echo "set linesize 200
41:
42:
         select * from attends;
          exit" | sqlplus64 -s
43:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
44:
45:
        elif [ "$input" = "4" ]; then
         echo "set linesize 200
46:
47:
         select * from medical_record;
```

```
exit" | sqlplus64 -s
48:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
49:
50:
        elif [ "$input" = "5" ]; then
         echo "set linesize 200
51:
         select * from medical_entry;
52:
          exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
54:
        elif [ "$input" = "6" ]; then
55:
         echo "set linesize 200
56:
57:
         select * from manages;
          exit" | sqlplus64 -s
58:
   "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
59:
        elif [ "$input" = "7" ]; then
60:
         echo "set linesize 200
61:
62:
         select * from room;
          exit" | sqlplus64 -s
63:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
64:
        elif [ "$input" = "8" ]; then
65:
         echo "set linesize 200
66:
         select * from equipment;
67:
         exit" | sqlplus64 -s
68:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
69:
        elif [ "$input" = "9" ]; then
70:
         echo "set linesize 200
71:
72:
         select * from uses;
          exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
74:
        elif [ "$input" = "10" ]; then
75:
         echo "set linesize 200
76:
77:
         select * from schedule;
78:
          exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
79:
80:
        elif [ "$input" = "11" ]; then
         echo "set linesize 200
81:
82:
         select * from follow;
          exit" | sqlplus64 -s
83:
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
84:
        elif [ "$input" = "12" ]; then
85:
         echo "set linesize 200
86:
87:
         select * from appointment;
          exit" | sqlplus64 -s
    "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
```

```
89:
         elif [ "$input" = "13" ]; then
 90:
          echo "set linesize 200
 91:
 92:
          select * from handles;
           exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
 94:
 95:
         elif [ "$input" = "14" ]; then
          echo "set linesize 200
 96:
 97:
          select * from governs;
           exit" | sqlplus64 -s
 98:
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
 99:
100:
         elif [ "$input" = "15" ]; then
101:
          echo "set linesize 200
102:
          select * from pro cedure;
103:
           exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
104:
         elif [ "$input" = "16" ]; then
105:
          echo "set linesize 200
106:
          select * from medicine;
107:
           exit" | sqlplus64 -s
108:
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
109:
110:
         elif [ "$input" = "17" ]; then
          echo "set linesize 200
111:
          select * from billed;
112:
113:
           exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
114:
         elif [ "$input" = "18" ]; then
115:
          echo "set linesize 200
116:
117:
          select * from claim;
           exit" | sqlplus64 -s
118:
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
119:
         elif [ "$input" = "19" ]; then
120:
          echo "set linesize 200
121:
122:
          select * from insurance;
           exit" | sqlplus64 -s
123:
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
124:
125:
         elif [ "$input" = "20" ]; then
126:
          echo "set linesize 200
          SELECT medical_record.record_number, patient.p_name
127:
128:
           FROM medical_record, patient
129:
           WHERE medical_record.patient_id = patient.patient_id
130:
           ORDER BY medical_record.patient_id ASC;
131:
           exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
```

```
132:
133:
        elif [ "$input" = "21" ]; then
        echo "set linesize 200
134:
135:
         SELECT schedule.s_id, staff.staff_name
          FROM schedule, staff
136:
137:
          WHERE staff.emp_id = schedule.emp_id
          ORDER BY schedule.s_id ASC;
138:
          exit" | sqlplus64 -s
139:
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
140:
         elif [ "$input" = "22" ]; then
141:
         echo "set linesize 200
142:
143:
         SELECT billed.bill_id, claim.claim_number, patient.p_name
144:
          FROM billed, patient, claim
145:
          WHERE billed.patient id = patient.patient id AND claim.bill id =
          ORDER BY billed.bill_id;
146:
           exit" | sqlplus64 -s
     "mratnaya/06273101@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(Host=oracle.scs.ryerson.ca)
148:
149:
        else
150:
         echo 'Error Incorrect Input'
151:
152:
      fi
```