NAMA = Muhammad Hafizh Ramadhan

NIM = 2017103583

KELAS = 04PBIF

1.) **Buatlah user dengan username kampus dan password k1234 dan login menggunakan username dan password tersebut. (Bobot 10%).**

```
SQL> create user kampus
  2  identified by k1234;

User created.

SQL> Grant create table, create session, unlimited tablespace to kampus;

Grant succeeded.

SQL> connect kampus
Enter password:
Connected.
SQL>
```

2.) **Buatlah table sesuai dengan ketentuan berikut: (Bobot 40%):**

```
SQL> Create table mahasiswa(
  2  NIM number(10) Not null primary key,
  3  NamaMahasiswa varchar2(100) Not null,
  4  Alamat varchar2(200) Not null,
  5  Jk char(1) Not null);

Table created.

SQL> Create table dosen(
  2  KodeDosen char(4) Not null Primary key,
  3  NamaDosen varchar2(100) Not null,
  4  Alamat varchar(200) Not null);

Table created.

SQL> Create table matakuliah(
  2  KodeMatkul char(4) Not null Primary key,
  3  NamaMatkul varchar2(100) Not null,
  4  KodeDosen char(4) Not null,
  5  Constraint fk_dosen foreign key(KodeDosen) references dosen(KodeDosen));

Table created.

SQL> Create table kelas(
  2  KodeKelas char(5) Not null Primary key,
  3  NIM number(10) not null,
  4  KodeMatkul char(4) Not null,
  5  HariPerkuliahan varchar(10) Not null,
  6  Constraint fk_NIM foreign key(NIM) references mahasiswa(NIM),
  7  Constraint fk_matkul foreign key(KodeMatkul) references matakuliah(KodeMatkul));

Table created.
```

3.) **Isi semua table dengan ketentuan masing-masing table 3 record dan tampilkan semua record dari masing-masing table (Bobot 20%)**

MAHASISWA

```
SQL> Insert all
  2  Into mahasiswa values(2017103583,'hafizh','griya bukit jaya','L')
  3  Into mahasiswa values(2017103586,'arif','klapa gading','L')
  4  Into mahasiswa values(2017013588,'septia','wanaherang','P')
  5  Select 1 from dual;

3 rows created.
```

```
SQL> select * from mahasiswa;

       NIM
----------
NAMAMAHASISWA
--------------------------------------------------------------------------------
ALAMAT
--------------------------------------------------------------------------------
J
-
2017103583
hafizh
griya bukit jaya
L


       NIM
----------
NAMAMAHASISWA
--------------------------------------------------------------------------------
ALAMAT
--------------------------------------------------------------------------------
J
-
2017103586
arif
klapa gading
L


       NIM
----------
NAMAMAHASISWA
--------------------------------------------------------------------------------
ALAMAT
--------------------------------------------------------------------------------
J
-
2017013588
septia
wanaherang
P


SQL>
```

DOSEN

```
SQL> Insert all
  2  Into dosen values('IF01','wawo','bekasi')
  3  Into dosen values('IF02','tedi','sunter_kelapa_gading')
  4  Into dosen values('IF03','dwipo','bogor')
  5  Select 1 from dual;

3 rows created.
```

```
SQL> select * from dosen;

KODE
----
NAMADOSEN
--------------------------------------------------------------------------------
ALAMAT
--------------------------------------------------------------------------------
IF01
wawo
bekasi

IF02
tedi
sunter_kelapa_gading

KODE
----
NAMADOSEN
--------------------------------------------------------------------------------
ALAMAT
--------------------------------------------------------------------------------

IF03
dwipo
bogor


SQL>
```

MATKUL

```
SQL> Insert all
  2  Into matakuliah values('UM01','mtk dasar','IF02')
  3  Into matakuliah values('UM02','algoritma','IF01')
  4  Into matakuliah values('UM03','jaringan','IF03')
  5  Select 1 from dual;

3 rows created.
```

```
SQL> select * from matakuliah;

KODE
----
NAMAMATKUL
--------------------------------------------------------------------------------
KODE
----
UM01
mtk dasar
IF02

UM02
algoritma
IF01

KODE
----
NAMAMATKUL
--------------------------------------------------------------------------------
KODE
----

UM03
jaringan
IF03


SQL>
```

KELAS

```
SQL> Insert all
  2  Into kelas values('AR001','2017013588','UM03','senin')
  3  Into kelas values('AL002','2017103586','UM01','rabu')
  4  Into kelas values('AR002','2017103583','UM02','kamis')
  5  Select 1 from dual;

3 rows created.
```

```
SQL> select * from kelas;

KODEK        NIM KODE HARIPERKUL
----- ---------- ---- ----------
AR001 2017013588 UM03 senin
AL002 2017103586 UM01 rabu
AR002 2017103583 UM02 kamis

SQL>
```

4.) Gunakan perintah DML untuk soal berikut: (Bobot 15%)

A. Tambahkan 1 buah record untuk setiap table

```
SQL> insert into mahasiswa values(2017103500,'reza','bogor','L');

1 row created.

SQL> insert into dosen values('IF04','hendri','utan kayu');

1 row created.

SQL> insert into matakuliah values('UM04','Sistem Operasi','IF04');

1 row created.

SQL> insert into kelas values('AL004','2017103500','UM04','kamis');

1 row created.
```

B. Hapus record di table Kelas untuk hariperkuliahan “Rabu”

```
KODEK        NIM KODE HARIPERKUL
----- ---------- ---- ----------
AL002 2017103586 UM01 rabu
AR002 2017103583 UM02 kamis
AL004 2017103500 UM04 kamis
```

```
SQL> delete from kelas where hariperkuliahan = 'rabu';

1 row deleted.

SQL> select * from kelas;

KODEK        NIM KODE HARIPERKUL
----- ---------- ---- ----------
AR002 2017103583 UM02 kamis
AL004 2017103500 UM04 kamis

SQL>
```

C. Ubah Alamat di dosen -> AlamatDosen

```
SQL> alter table dosen rename column Alamat to AlamatDosen;

Table altered.

SQL> desc dosen;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 KODEDOSEN                                 NOT NULL CHAR(4)
 NAMADOSEN                                 NOT NULL VARCHAR2(100)
 ALAMATDOSEN                               NOT NULL VARCHAR2(200)

SQL>
```

5.) Tampilkan query berikut ini: (Bobot 15%)

A. Tampilkan KodeKelas, NamaMahasiswa, NamaDosen, NamaMataKuliah, HariPerkuliahan dengan menggunakan Query Relasional

```
SQL> SELECT k.KodeKelas,m.NamaMahasiswa,d.NamaDosen,t.NamaMatkul,k.HariPerkuliahan
  2  FROM kelas k,mahasiswa m,dosen d,matakuliah t
  3  where m.NIM = k.NIM AND d.KodeDosen = t.KodeDosen AND t.kodeMatkul = k.KodeMatkul;
```

```
KODEK
-----
NAMAMAHASISWA
--------------------------------------------------------------------------------
NAMADOSEN
--------------------------------------------------------------------------------
NAMAMATKUL
--------------------------------------------------------------------------------
HARIPERKUL
----------
AL002
arif
tedi
mtk dasar
rabu


KODEK
-----
NAMAMAHASISWA
--------------------------------------------------------------------------------
NAMADOSEN
--------------------------------------------------------------------------------
NAMAMATKUL
--------------------------------------------------------------------------------
HARIPERKUL
----------
AR002
hafizh
wawo
algoritma
kamis


KODEK
-----
NAMAMAHASISWA
--------------------------------------------------------------------------------
NAMADOSEN
--------------------------------------------------------------------------------
NAMAMATKUL
--------------------------------------------------------------------------------
HARIPERKUL
----------
AL004
reza
hendri
Sistem Operasi
kamis
```

B. Tampilkan nilai tertinggi untuk nim

```
       NIM
----------
2017013588
2017103500
2017103583
2017103586

SQL> select max(NIM) from mahasiswa;

  MAX(NIM)
----------
2017103586

SQL>
```

C. Tampilkan jumlah record di table Kelas

```
SQL> select count(*) from kelas;

  COUNT(*)
----------
         3

SQL>
```