

**LAPORAN TUGAS BESAR**

**MERANCANG DATABASE DENGAN MENGGUNAKAN BAHASA**

**PEMROGRAMAN SQL**



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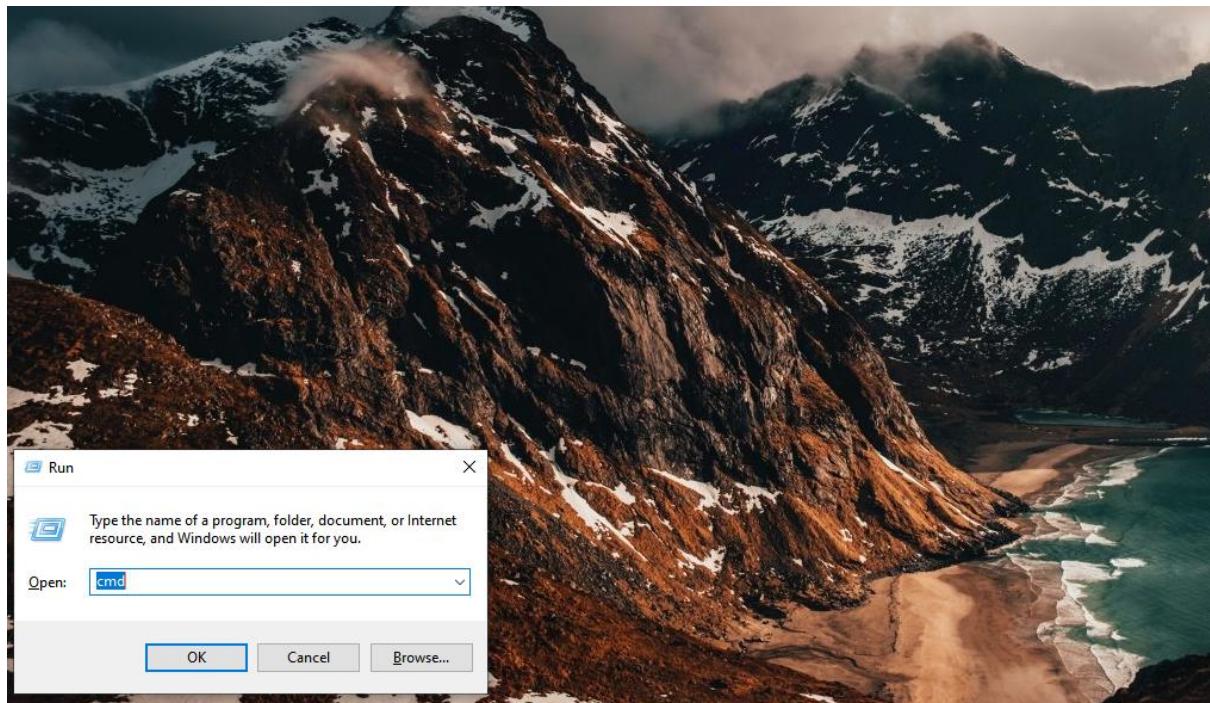
**PROGRAM DIPLOMA IV TEKNIK INFORMATIKA**

**POLITEKNIK POS INDONESIA**

**BANDUNG**

**2020**

## 1. Membuka cdm



## 2. Membuka mysql pada laptop

A screenshot of a Windows Command Prompt window titled 'Command Prompt - mysql -u root'. The window displays the MySQL monitor interface. The user has run the command 'create database poltekpos;' and the output shows 'Query OK, 1 row affected (0.004 sec)'. The user then runs 'show databases;' and the output lists several databases: 'information\_schema', 'jasa\_laundry', 'javadatabase', 'javalaundry', 'kuliah', 'mysql', and 'performance\_schema'.

```
Command Prompt - mysql -u root
Microsoft Windows [Version 10.0.18363.900]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\yunia>cd...
C:\>cd/xampp/mysql/bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 45
Server version: 10.4.11-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database poltekpos;
Query OK, 1 row affected (0.004 sec)

MariaDB [(none)]> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| jasa_laundry   |
| javadatabase   |
| javalaundry    |
| kuliah         |
| mysql          |
| performance_schema |
+-----+
```

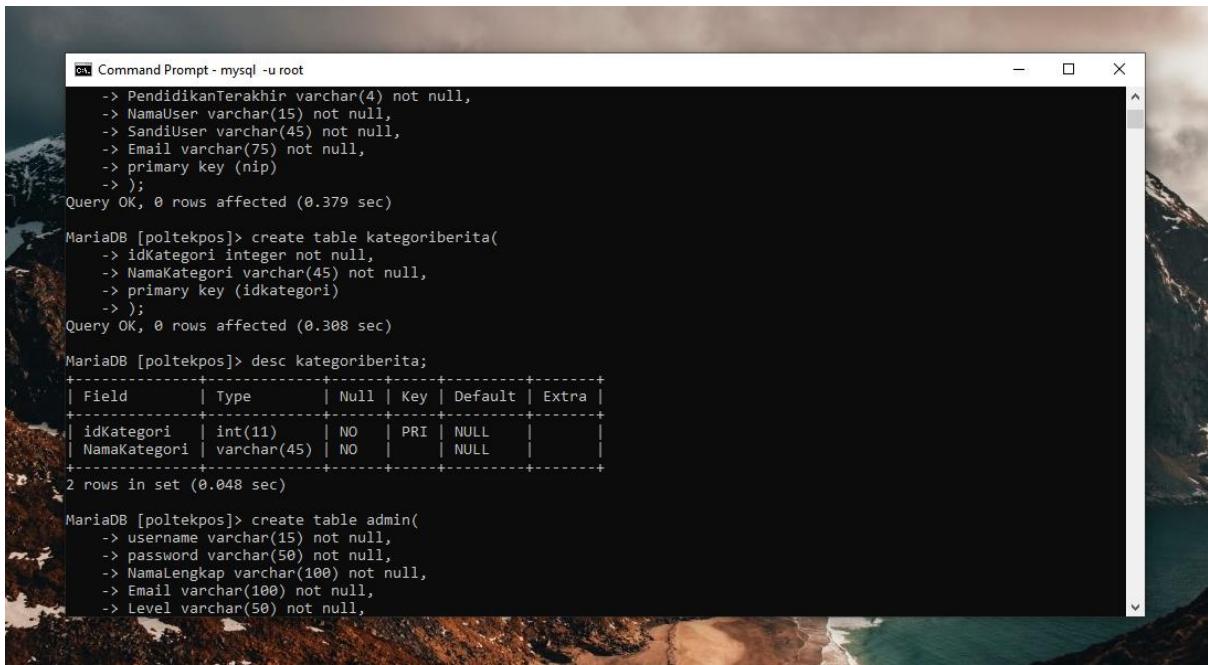
### 3. Membuat table dari database

```
mysql> use poltekpos;
Database changed
MariaDB [poltekpos]> create table mahasiswa(
    -> Nim varchar(20) not null,
    -> Nama varchar(45) not null,
    -> TempatLahir varchar(30) not null,
    -> TanggalLahir date not null,
    -> Agama varchar(10) not null,
    -> Jeniskelamin varchar(10) not null,
    -> KodeProgramStudi varchar(10) not null,
    -> Jenjang varchar(4) not null,
    -> Angkatan varchar(5) not null,
    -> TanggalMasuk date not null,
    -> NamaUser varchar(15) not null,
    -> SandiUser varchar(45) not null,
    -> Email varchar(75) not null,
    -> Biaya integer not null,
    -> Status varchar(20) not null,
    -> primary key (nim)
    -> );
Query OK, 0 rows affected (0.388 sec)

MariaDB [poltekpos]> desc mahasiswa;
+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+
```

```
mysql> use poltekpos;
Database changed
MariaDB [poltekpos]> create table dosen(
    -> Nip varchar(20) not null,
    -> Nama varchar(45) not null,
    -> TempatLahir varchar(30) not null,
    -> TanggalLahir date not null,
    -> Agama varchar(20) not null,
    -> Jeniskelamin varchar(4) not null,
    -> Status varchar(10) not null,
    -> PendidikanTerakhir varchar(4) not null,
    -> NamaUser varchar(15) not null,
    -> SandiUser varchar(45) not null,
    -> );
Query OK, 0 rows affected (0.109 sec)

MariaDB [poltekpos]> desc dosen;
+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+
```

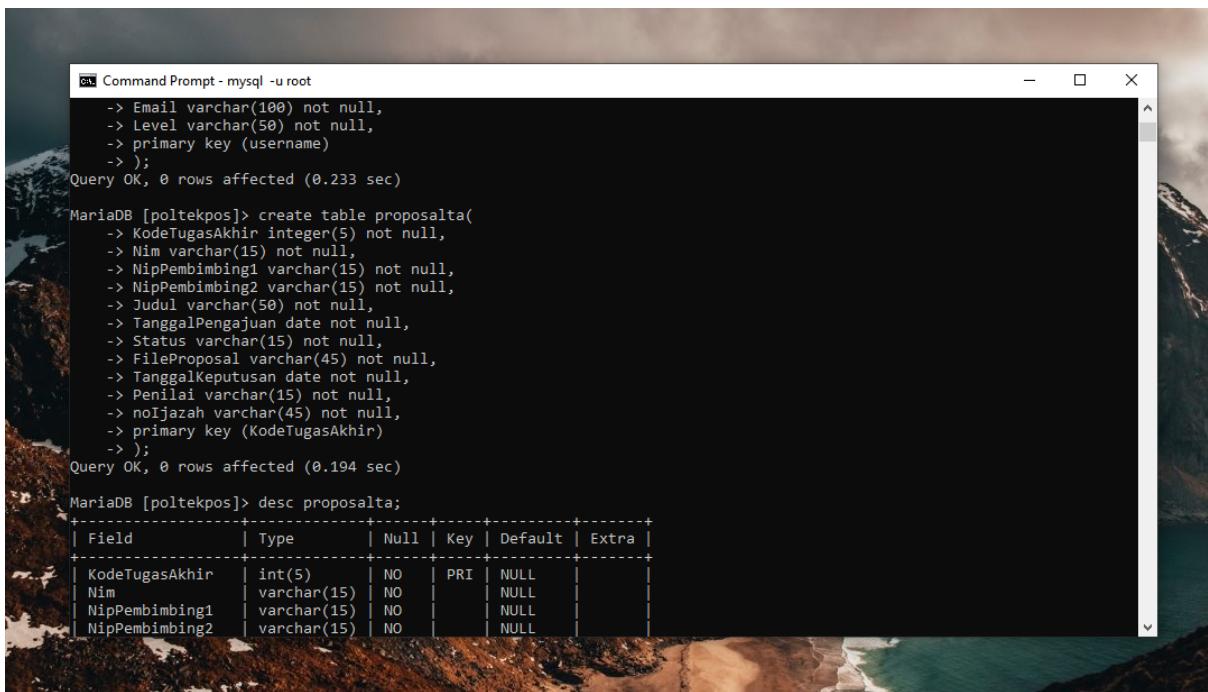


```
Command Prompt - mysql -u root
--> PendidikanTerakhir varchar(4) not null,
--> NamaUser varchar(15) not null,
--> SandiUser varchar(45) not null,
--> Email varchar(75) not null,
--> primary key (nip)
--> );
Query OK, 0 rows affected (0.379 sec)

MariaDB [poltekpos]> create table kategoriberita(
--> idKategori integer not null,
--> NamaKategori varchar(45) not null,
--> primary key (idkategori)
--> );
Query OK, 0 rows affected (0.308 sec)

MariaDB [poltekpos]> desc kategoriberita;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| idKategori | int(11) | NO | PRI | NULL |
| NamaKategori | varchar(45) | NO | | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.048 sec)

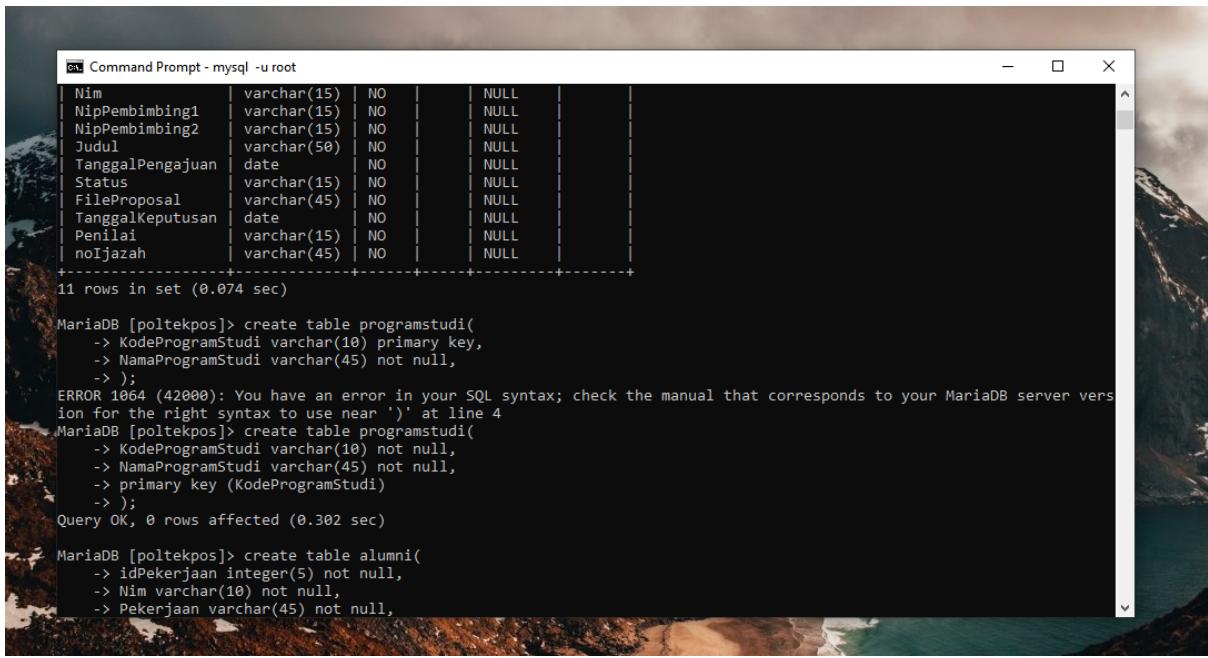
MariaDB [poltekpos]> create table admin(
--> username varchar(15) not null,
--> password varchar(50) not null,
--> NamaLengkap varchar(100) not null,
--> Email varchar(100) not null,
--> Level varchar(50) not null,
```



```
Command Prompt - mysql -u root
--> Email varchar(100) not null,
--> Level varchar(50) not null,
--> primary key (username)
--> );
Query OK, 0 rows affected (0.233 sec)

MariaDB [poltekpos]> create table proposalta(
--> KodeTugasAkhir integer(5) not null,
--> Nim varchar(15) not null,
--> NipPembimbing1 varchar(15) not null,
--> NipPembimbing2 varchar(15) not null,
--> Judul varchar(50) not null,
--> TanggalPengajuan date not null,
--> Status varchar(15) not null,
--> FileProposal varchar(45) not null,
--> TanggalKeputusan date not null,
--> Penilai varchar(15) not null,
--> noIjazah varchar(45) not null,
--> primary key (KodeTugasAkhir)
--> );
Query OK, 0 rows affected (0.194 sec)

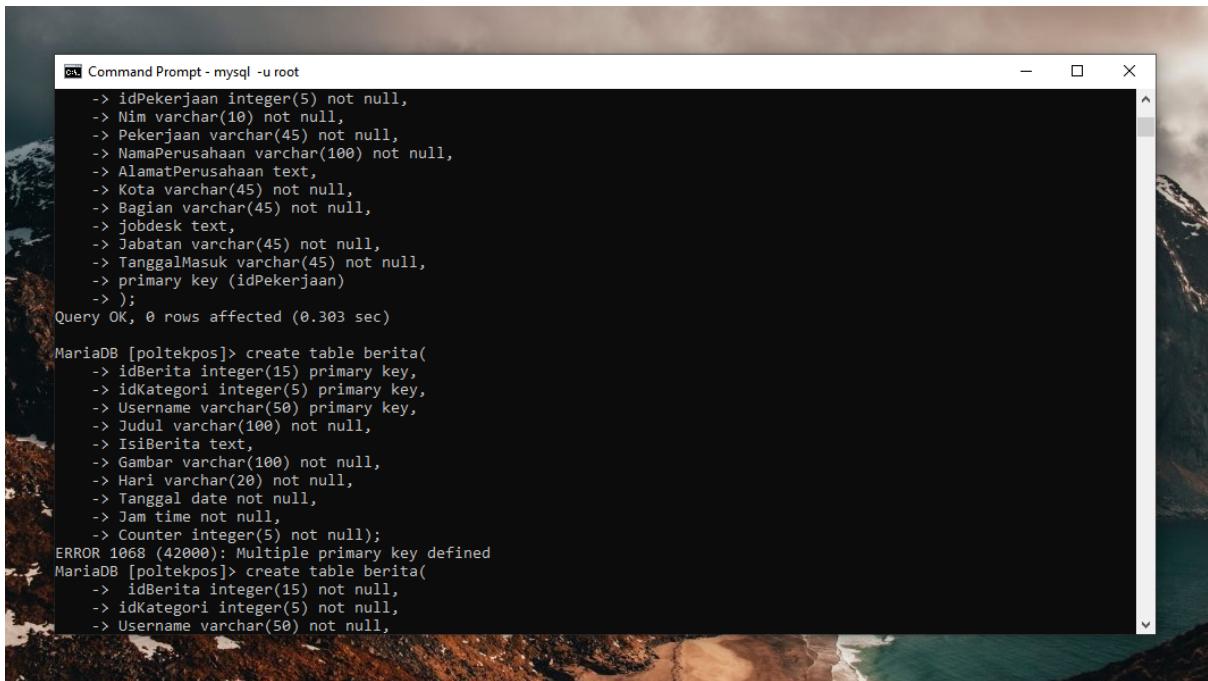
MariaDB [poltekpos]> desc proposalta;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| KodeTugasAkhir | int(5) | NO | PRI | NULL |
| Nim | varchar(15) | NO | | NULL |
| NipPembimbing1 | varchar(15) | NO | | NULL |
| NipPembimbing2 | varchar(15) | NO | | NULL |
+-----+-----+-----+-----+-----+
```



```
Command Prompt - mysql -u root
+-----+-----+-----+-----+
| Nim   | varchar(15) | NO    | NULL  |
| NipPembimbing1 | varchar(15) | NO    | NULL  |
| NipPembimbing2 | varchar(15) | NO    | NULL  |
| Judul  | varchar(50)  | NO    | NULL  |
| TanggalPengajuan | date    | NO    | NULL  |
| Status  | varchar(15)  | NO    | NULL  |
| FileProposal | varchar(45) | NO    | NULL  |
| TanggalKeputusan | date    | NO    | NULL  |
| Penilai  | varchar(15)  | NO    | NULL  |
| noIjazah | varchar(45) | NO    | NULL  |
+-----+-----+-----+-----+
11 rows in set (0.074 sec)

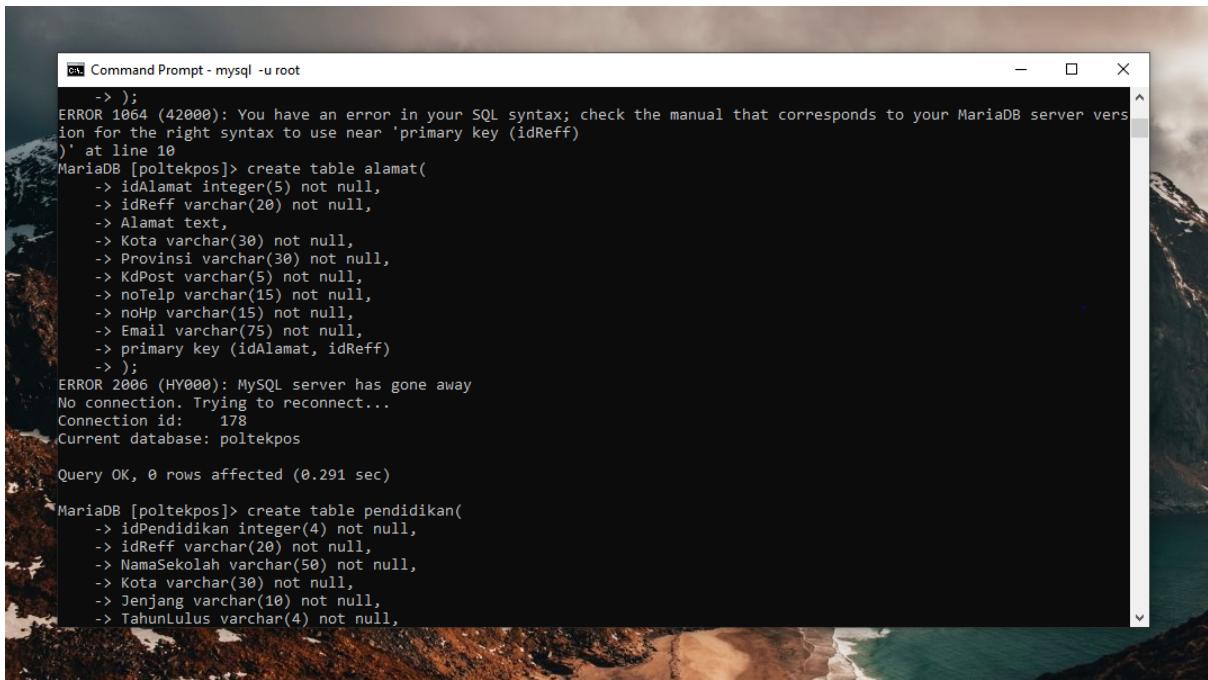
MariaDB [poltekpos]> create table programstudi(
-> KodeProgramStudi varchar(10) primary key,
-> NamaProgramStudi varchar(45) not null,
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near ')' at line 4
MariaDB [poltekpos]> create table programstudi(
-> KodeProgramStudi varchar(10) not null,
-> NamaProgramStudi varchar(45) not null,
-> primary key (KodeProgramStudi)
-> );
Query OK, 0 rows affected (0.302 sec)

MariaDB [poltekpos]> create table alumni(
-> idPekerjaan integer(5) not null,
-> Nim varchar(10) not null,
-> Nama varchar(10) not null,
-> Pekerjaan varchar(45) not null,
```



```
Command Prompt - mysql -u root
-> idPekerjaan integer(5) not null,
-> Nim varchar(10) not null,
-> Pekerjaan varchar(45) not null,
-> NamaPerusahaan varchar(100) not null,
-> AlamatPerusahaan text,
-> Kota varchar(45) not null,
-> Bagian varchar(45) not null,
-> jobdesk text,
-> Jabatan varchar(45) not null,
-> TanggalMasuk varchar(45) not null,
-> primary key (idPekerjaan)
-> );
Query OK, 0 rows affected (0.303 sec)

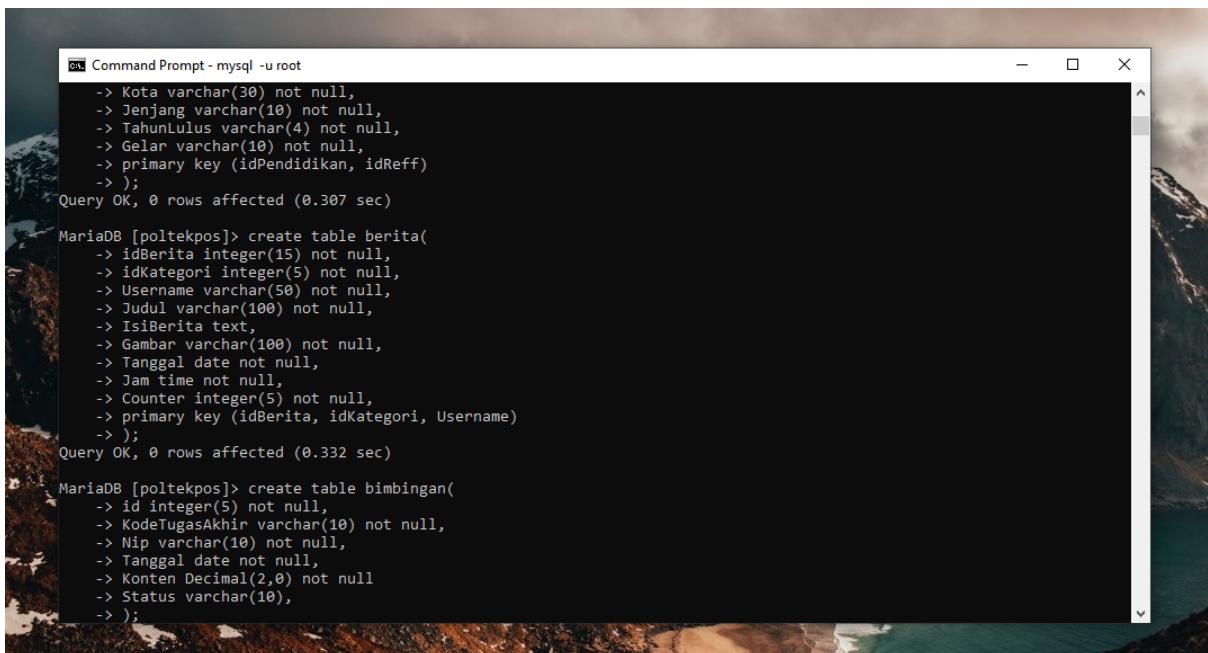
MariaDB [poltekpos]> create table berita(
-> idBerita integer(15) primary key,
-> idKategori integer(5) primary key,
-> Username varchar(50) primary key,
-> Judul varchar(100) not null,
-> IsiBerita text,
-> Gambar varchar(100) not null,
-> Hari varchar(20) not null,
-> Tanggal date not null,
-> Jam time not null,
-> Counter integer(5) not null);
ERROR 1068 (42000): Multiple primary key defined
MariaDB [poltekpos]> create table berita(
-> idBerita integer(15) not null,
-> idKategori integer(5) not null,
-> Username varchar(50) not null,
```



```
Command Prompt - mysql -u root
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'primary key (idReff)
)' at line 10
MariaDB [poltekpos]> create table alamat(
-> idAlamat integer(5) not null,
-> idReff varchar(20) not null,
-> Alamat text,
-> Kota varchar(30) not null,
-> Provinsi varchar(30) not null,
-> KdPost varchar(5) not null,
-> noTelp varchar(15) not null,
-> noHp varchar(15) not null,
-> Email varchar(75) not null,
-> primary key (idAlamat, idReff)
-> );
ERROR 2006 (HY000): MySQL server has gone away
No connection. Trying to reconnect...
Connection id: 178
Current database: poltekpos

Query OK, 0 rows affected (0.291 sec)

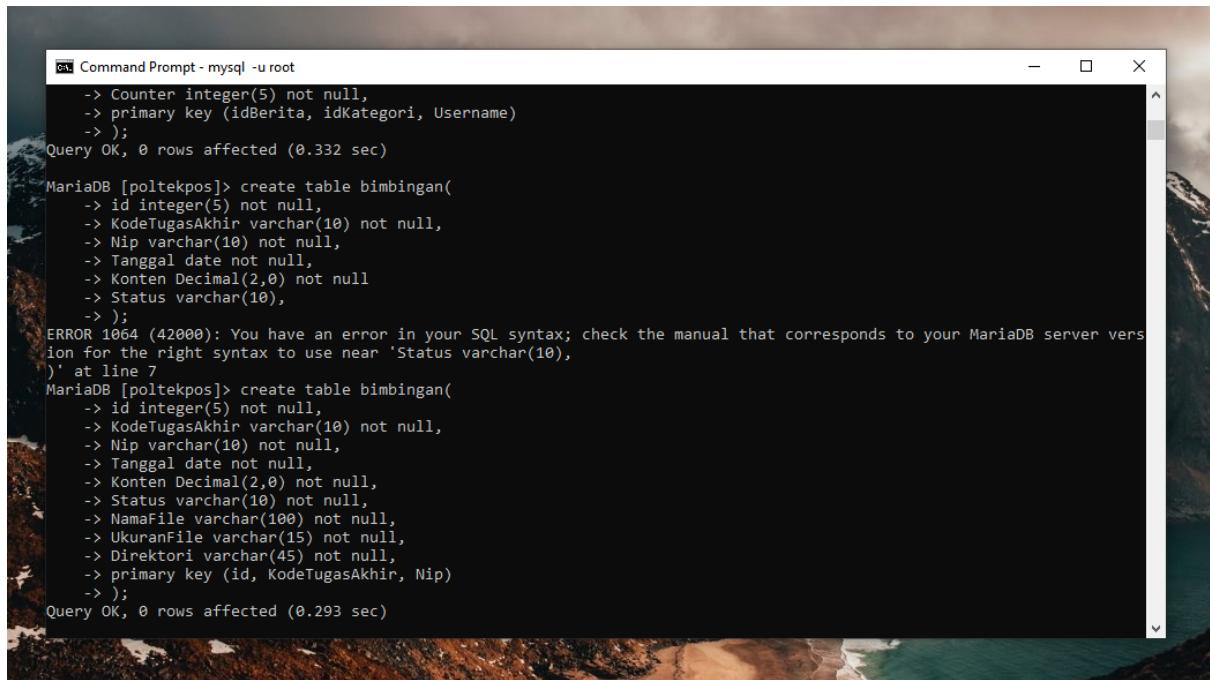
MariaDB [poltekpos]> create table pendidikan(
-> idPendidikan integer(4) not null,
-> idReff varchar(20) not null,
-> NamaSekolah varchar(50) not null,
-> Kota varchar(30) not null,
-> Jenjang varchar(10) not null,
-> TahunLulus varchar(4) not null,
```



```
Command Prompt - mysql -u root
-> );
-> Kota varchar(30) not null,
-> Jenjang varchar(10) not null,
-> TahunLulus varchar(4) not null,
-> Gelar varchar(10) not null,
-> primary key (idPendidikan, idReff)
-> );
Query OK, 0 rows affected (0.307 sec)

MariaDB [poltekpos]> create table berita(
-> idBerita integer(15) not null,
-> idKategori integer(5) not null,
-> Username varchar(50) not null,
-> Judul varchar(100) not null,
-> IsiBerita text,
-> Gambar varchar(100) not null,
-> Tanggal date not null,
-> Jam time not null,
-> Counter integer(5) not null,
-> primary key (idBerita, idKategori, Username)
-> );
Query OK, 0 rows affected (0.332 sec)

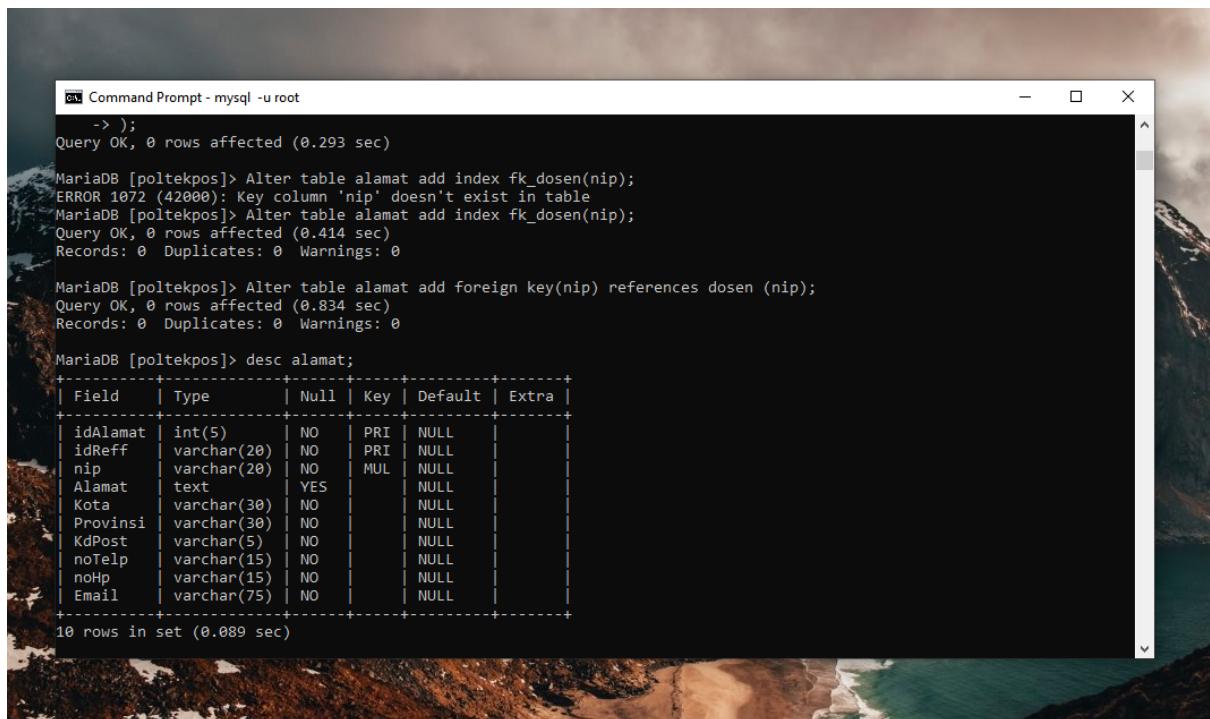
MariaDB [poltekpos]> create table bimbingan(
-> id integer(5) not null,
-> KodeTugasAkhir varchar(10) not null,
-> Nip varchar(10) not null,
-> Tanggal date not null,
-> Konten Decimal(2,0) not null
-> Status varchar(10),
-> );
```



```
Command Prompt - mysql -u root
-> Counter integer(5) not null,
-> primary key (idBerita, idKategori, Username)
-> );
Query OK, 0 rows affected (0.332 sec)

MariaDB [poltekpos]> create table bimbingan(
-> id integer(5) not null,
-> KodeTugasAkhir varchar(10) not null,
-> Nip varchar(10) not null,
-> Tanggal date not null,
-> Konten Decimal(2,0) not null
-> Status varchar(10),
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'Status varchar(10),
)' at line 7
MariaDB [poltekpos]> create table bimbingan(
-> id integer(5) not null,
-> KodeTugasAkhir varchar(10) not null,
-> Nip varchar(10) not null,
-> Tanggal date not null,
-> Konten Decimal(2,0) not null,
-> Status varchar(10) not null,
-> NamaFile varchar(100) not null,
-> UkuranFile varchar(15) not null,
-> Direktori varchar(45) not null,
-> primary key (id, KodeTugasAkhir, Nip)
-> );
Query OK, 0 rows affected (0.293 sec)
```

4.

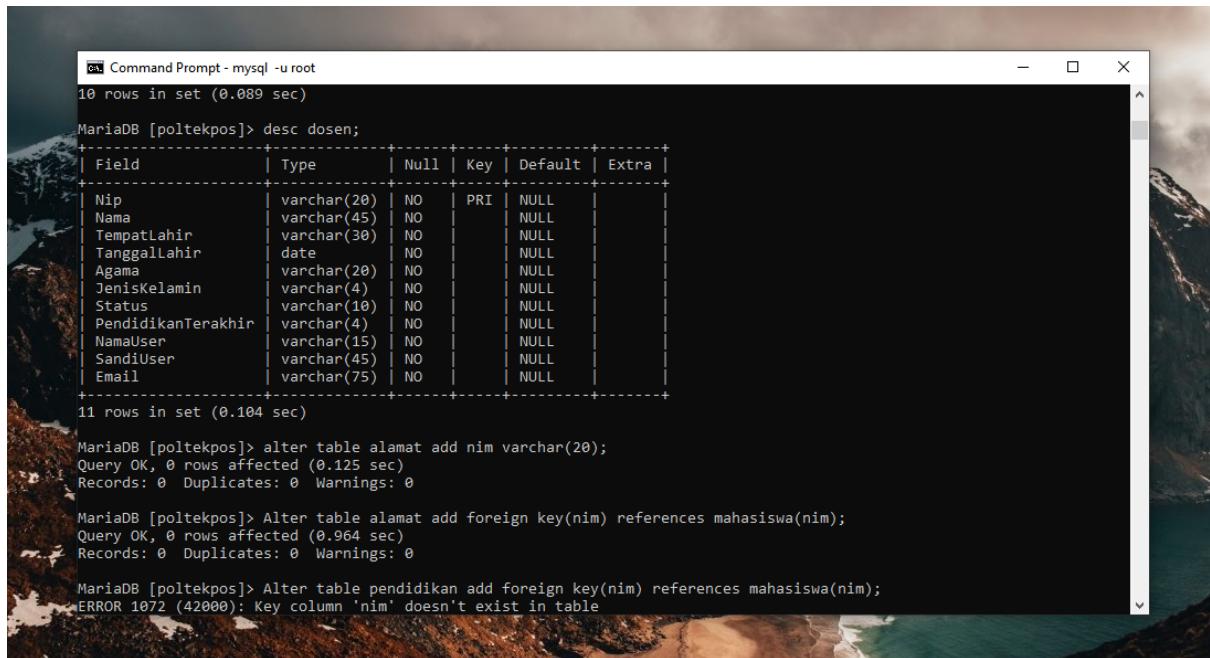


```
Command Prompt - mysql -u root
-> );
Query OK, 0 rows affected (0.293 sec)

MariaDB [poltekpos]> Alter table alamat add index fk_dosen(nip);
ERROR 1072 (42000): Key column 'nip' doesn't exist in table
MariaDB [poltekpos]> Alter table alamat add index fk_dosen(nip);
Query OK, 0 rows affected (0.414 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [poltekpos]> Alter table alamat add foreign key(nip) references dosen (nip);
Query OK, 0 rows affected (0.834 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [poltekpos]> desc alamat;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| idAlamat | int(5) | NO   | PRI  | NULL    |       |
| idReff  | varchar(20) | NO   | PRI  | NULL    |       |
| nip     | varchar(20) | NO   | MUL  | NULL    |       |
| Alamat  | text    | YES  |       | NULL    |       |
| Kota    | varchar(30) | NO   |       | NULL    |       |
| Provinsi | varchar(30) | NO   |       | NULL    |       |
| KdPost  | varchar(5)  | NO   |       | NULL    |       |
| noTelp  | varchar(15) | NO   |       | NULL    |       |
| noHp    | varchar(15) | NO   |       | NULL    |       |
| Email   | varchar(75) | NO   |       | NULL    |       |
+-----+-----+-----+-----+-----+
10 rows in set (0.089 sec)
```

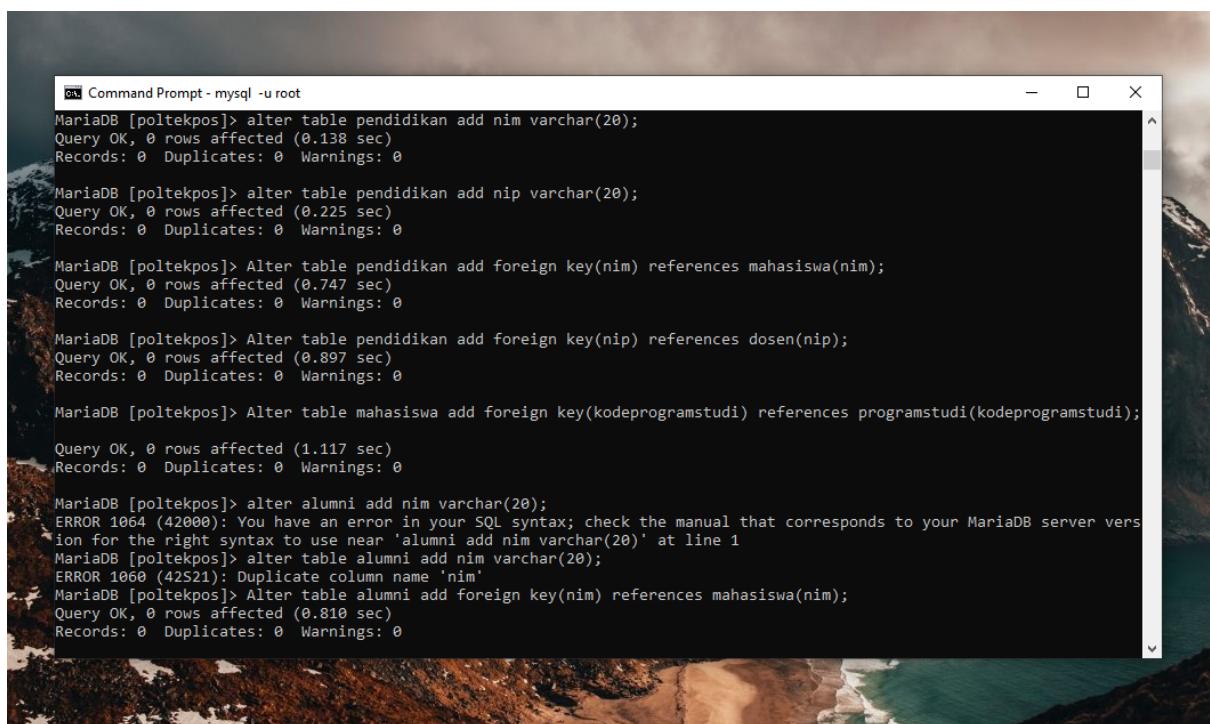


```
MySQL [poltekpos]> desc dosen;
+-----+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Nip   | varchar(20) | NO  | PRI | NULL    |       |
| Nama  | varchar(45)  | NO  |     | NULL    |       |
| TempatLahir | varchar(30) | NO  |     | NULL    |       |
| TanggalLahir | date    | NO  |     | NULL    |       |
| Agama | varchar(20)  | NO  |     | NULL    |       |
| JenisKelamin | varchar(4)  | NO  |     | NULL    |       |
| Status | varchar(10)  | NO  |     | NULL    |       |
| PendidikanTerakhir | varchar(4) | NO  |     | NULL    |       |
| NamaUser | varchar(15)  | NO  |     | NULL    |       |
| SandiUser | varchar(45)  | NO  |     | NULL    |       |
| Email  | varchar(75)   | NO  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.104 sec)

MySQL [poltekpos]> alter table alamat add nim varchar(20);
Query OK, 0 rows affected (0.125 sec)
Records: 0  Duplicates: 0  Warnings: 0

MySQL [poltekpos]> Alter table alamat add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.964 sec)
Records: 0  Duplicates: 0  Warnings: 0

MySQL [poltekpos]> Alter table pendidikan add foreign key(nim) references mahasiswa(nim);
ERROR 1072 (42000): Key column 'nim' doesn't exist in table
```



```
MySQL [poltekpos]> alter table pendidikan add nim varchar(20);
Query OK, 0 rows affected (0.138 sec)
Records: 0  Duplicates: 0  Warnings: 0

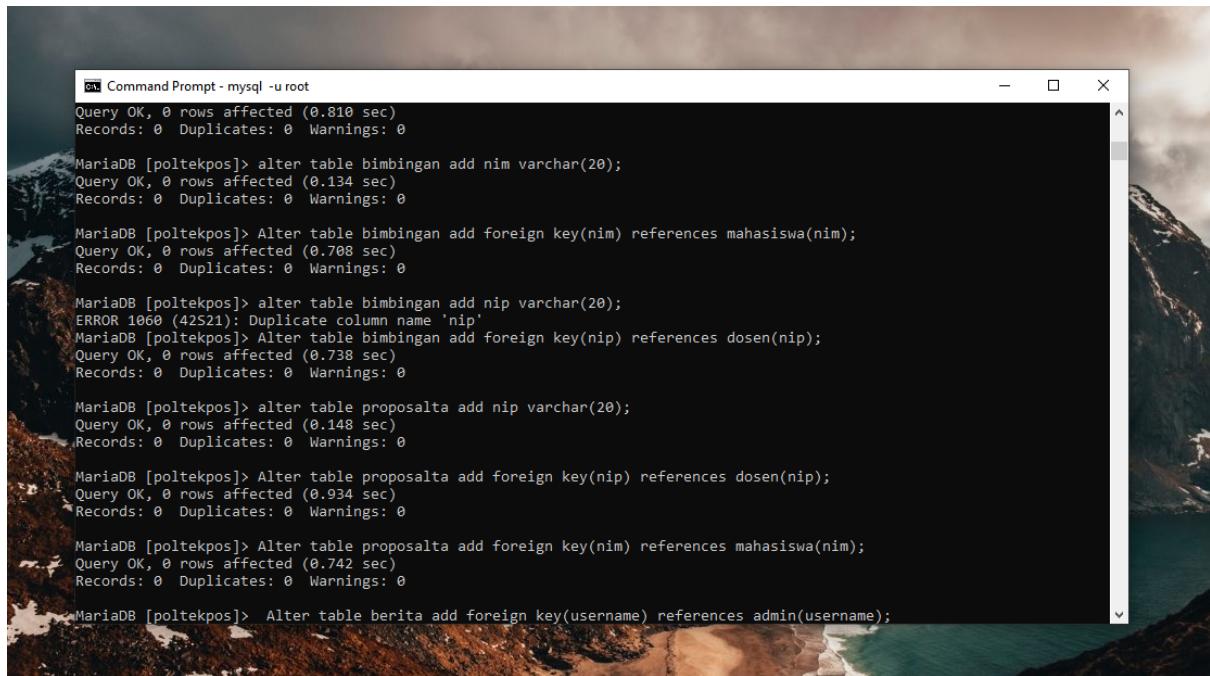
MySQL [poltekpos]> alter table pendidikan add nip varchar(20);
Query OK, 0 rows affected (0.225 sec)
Records: 0  Duplicates: 0  Warnings: 0

MySQL [poltekpos]> Alter table pendidikan add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.747 sec)
Records: 0  Duplicates: 0  Warnings: 0

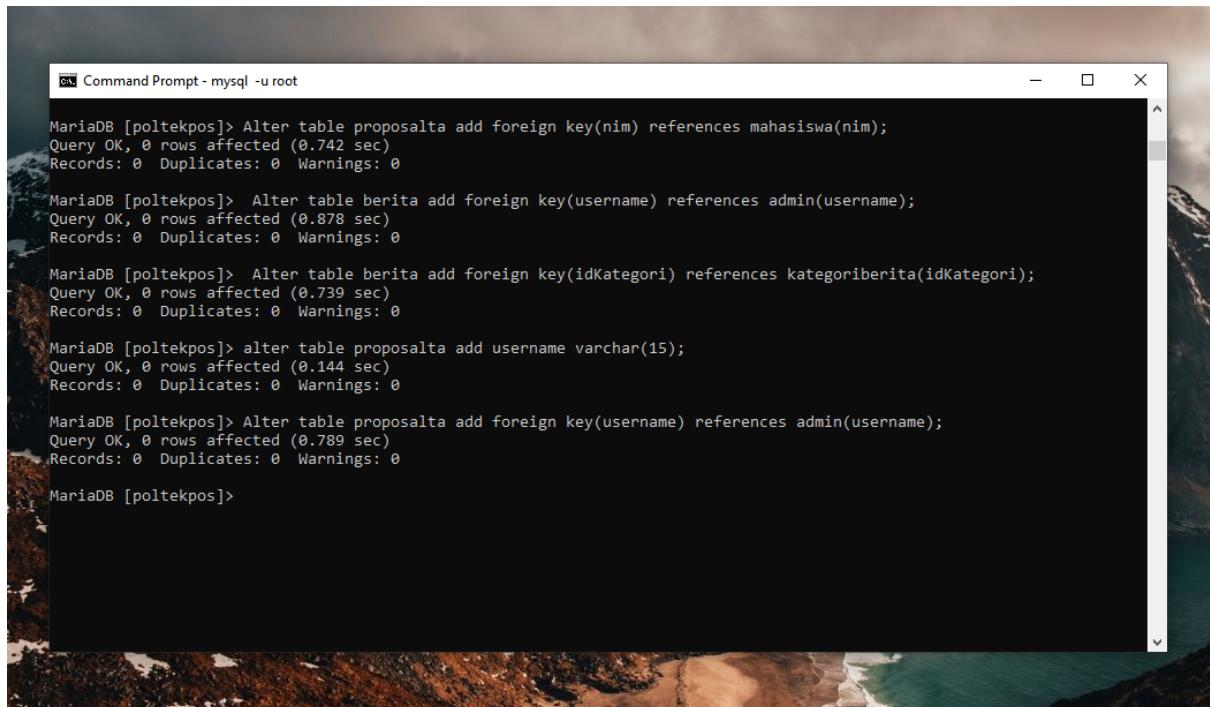
MySQL [poltekpos]> Alter table pendidikan add foreign key(nip) references dosen(nip);
Query OK, 0 rows affected (0.897 sec)
Records: 0  Duplicates: 0  Warnings: 0

MySQL [poltekpos]> Alter table mahasiswa add foreign key(kodeprogramstudi) references programstudi(kodeprogramstudi);
Query OK, 0 rows affected (1.117 sec)
Records: 0  Duplicates: 0  Warnings: 0

MySQL [poltekpos]> alter alumni add nim varchar(20);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'alumni add nim varchar(20)' at line 1
MySQL [poltekpos]> alter table alumni add nim varchar(20);
ERROR 1060 (42S21): Duplicate column name 'nim'
MySQL [poltekpos]> Alter table alumni add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.810 sec)
Records: 0  Duplicates: 0  Warnings: 0
```



```
Command Prompt - mysql -u root
Query OK, 0 rows affected (0.810 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> alter table bimbingan add nim varchar(20);
Query OK, 0 rows affected (0.134 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table bimbingan add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.708 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> alter table bimbingan add nip varchar(20);
ERROR 1060 (42S21): Duplicate column name 'nip'
MariaDB [poltekpos]> Alter table bimbingan add foreign key(nip) references dosen(nip);
Query OK, 0 rows affected (0.738 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> alter table proposalta add nip varchar(20);
Query OK, 0 rows affected (0.148 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table proposalta add foreign key(nip) references dosen(nip);
Query OK, 0 rows affected (0.934 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table proposalta add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.742 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table berita add foreign key(username) references admin(username);
```



```
Command Prompt - mysql -u root
MariaDB [poltekpos]> Alter table proposalta add foreign key(nim) references mahasiswa(nim);
Query OK, 0 rows affected (0.742 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table berita add foreign key(username) references admin(username);
Query OK, 0 rows affected (0.878 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table berita add foreign key(idKategori) references kategoriberita(idKategori);
Query OK, 0 rows affected (0.739 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> alter table proposalta add username varchar(15);
Query OK, 0 rows affected (0.144 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]> Alter table proposalta add foreign key(username) references admin(username);
Query OK, 0 rows affected (0.789 sec)
Records: 0  Duplicates: 0  Warnings: 0
MariaDB [poltekpos]>
```

## 5. Hasil Relasi

