1. create database bicycles;

use bicycles;

create table customer (custid int primary key,

email varchar(100) not null,

name varchar(50) not null,

phone varchar(10) unique,

referrerid int);

create table bicycle\_model (modelno int primary key, manufacturer varchar(50), style varchar(50));

create table bicycle (bicycleid int primary key,

date\_purchased date not null,

color varchar(20) not null,

custid int not null,

modelno int not null,

foreign key (custid) references customer (custid) on delete cascade

foreign key (modelno) references bicycle\_model (modelno) on delete cascade);

create table service (start\_date date, bicycleid int, end\_date date, foreign key (bicycleid) references bicycle (bicycleid) on delete cascade);

1. primary key : custid in table customer, modelno in table bicycle\_model, bicycleid in table bicycle

foreign key : custid in table bicycle, modelno in table bicycle, bicycleid in table service

insert into customer values

(1234, ‘abc@gmail.com’, ‘Helen’, ‘9012345678’, 3423),

(2343, ‘bcd@gmail.com’, ‘Harry’, ‘9856123466’, 4523),

(2013, ‘afd@gmail.com’, ‘Henry’, ‘9834567890’, 6534),

(2015, ‘fgd@gmail.com’, ‘Jake’, ‘9845673456’, 5463),

(3598, ‘hg@gmail.com’, ‘John’, ‘9123456789’, 7825);

Insert into bicycle values

(20, ‘2002-12-12’, ‘red’, 1234, 45),

(21, ‘2003-02-26’, ‘black’, 2343, 46),

(29, ‘2005-11-07’, ‘white’, 1234, 56),

(32, ‘2009-12-09’, ‘grey’, 2013, 42),

(31, ‘2012-12-12’, ‘black’, 3598, 76);

Insert into bicycle\_model values

(45, ‘Honda’, ‘Activa’),

(42, ‘Mahindra’, ‘Bike’),

(76, ‘Honda’, ‘Scooty’),

(45, ‘Hero’, ‘Bike’),

(56, ‘Honda’, ‘Sport’);

Insert into service values

(‘2009-05-09’, 20, ‘2009-10-12’),

(‘2010-12-18’, 21, ‘2011-01-19’),

(‘2012-07-18’, 31, ‘2012-09-12’),

(‘2015-09-09’, 21, ‘2015-11-11’),

(‘2016-11-16’, 20, ‘2016-12-29’);

1. Select \* from customer where custid in (Select custid from bicycle where modelno in(select Modelno from bicycle\_model where manufacturer=‘Honda’));
2. Select \* from bicycle\_model where modelno in (select modelno from bicycle where custid in (select custid from customer where referrerid=3423));
3. select bm.manufacturer from bicycle b, bicyclemodel bm where bi.modelno=bm.modelno and bi.color="red";
4. select modelno from bicycle where bicycleid in (select distinct bicycleid from service);