Practical 3

```
show databases;
use Abhi;
show tables;

create table _master(
   product_no int,
   description varchar(20),
   profit_per float,
   unit_measure varchar(10),
   quantity int,
   reorder int,
   sell_price float,
   cost_price float,
   primary key(product_no)
);

create table customer(
   cust_no int,
   cust_name varchar(20),
   cust_add varchar(20),
   phone_no int,
   primary key(cust_no)
);
create table capital(
   cap_no int,
   cap_name varchar(20),
   state_no int,
   primary key(cap_no)
);

create table state(
   state_no int,
   state_name varchar(20),
   state_code int,
   capital varchar(20),
   primary key(state_no)
);

insert into capital
values('01','MH','01');
insert into capital
values('02','RAJ','02');
insert into capital
values('03','GOA','03');
insert into capital
values('04','GUJ','04');
insert into capital
values('05','KAR','05');

insert into state
values('01','MH','01','MUM');
insert into state
values('02','RAJ','02','JAI');
insert into state
values('03','GOA','03','PAN');
insert into state
values('04','GUJ','04','SUR');
insert into state
values('05','KAR','05','BAN');

select * from capital;
select * from state;

select capital.cap_no, state.state_no
from capital inner join state
on capital.cap_no = state.state_no;

update state set state_no = '78'
where state_no = '1';
update state set state_no = '58'
where state_no = '2';
update state set state_no = '46'
where state_no = '3';
update state set state_no = '489'
where state_no = '4';
update state set state_no = '458'
where state_no = '5';

insert into state
values('05','MP','05','BHO');

select capital.cap_no, state.state_no
from capital inner join state
on capital.cap_no = state.state_no;

select capital.cap_no, state.state_no
from capital left join state
on capital.cap_no = state.state_no;

select capital.cap_no, state.state_no
from capital left join state
on capital.cap_no =
state.state_name;

select capital.cap_no, state.state_no
from capital right join state
on capital.cap_no = state.state_no;

select capital.cap_no,
capital.cap_name, state.capital,
state.state_no
from capital inner join state
on capital.cap_no = state.state_no;

select capital.cap_no,
capital.cap_name, state.capital,
state.state_no
from capital left join state
on capital.cap_no = state.state_no;

select capital.cap_no,
capital.cap_name, state.capital,
state.state_no
from capital right join state
on capital.cap_no = state.state_no;

select capital.cap_no,
capital.cap_name, state.capital,
state.state_no
from capital left join state
on capital.cap_no = state.state_no
union
select capital.cap_no,
capital.cap_name, state.capital,
state.state_no
from capital right join state
on capital.cap_no = state.state_no;

select * from capital c1, state s1
where c1.cap_no = s1.state_no;

select * from capital c1, state s1
where c1.cap_no != s1.state_no;

select * from state
where state_no = (select state_no
from state where state_name =
'MH');

select * from state
where state_no = (select state_no
from state where state_name =
'GUJ');

select * from state
where state_no = (select
capital.state_no from capital where
cap_name = 'MH');

select * from state
where state_no = (select
capital.state_no from capital where
cap_name = 'GUJ');

select * from state
where state_no = (select
capital.state_no from capital where
cap_name = 'RAJ');

select * from state
where state_no = (select
capital.state_no from capital where
cap_name = 'KAR');
```

practical 5

```
use Abhi;

create table marks(
   roll_no int,
   name varchar(20),
   total_marks varchar(20)
);
create table result(
   roll_no int,
   name varchar(20),
   class varchar(20)
);
INSERT INTO marks (id, name, total_marks) VALUES
('1', 'Abhi', '1400'),
('2', 'Piyush', '980'),
('3', 'Hitesh', '880'),
('4', 'Ashley', '820'),
('5', 'Partik', '740'),
('6', 'Patil', '640');

delimiter //

create procedure proc_result(in marks int, out class
char(20))
begin
   if (marks < 1500 && marks > 990) then
      set class = 'Distinction';
   end if;

   if (marks < 989 && marks > 890) then
      set class = 'First Class';
   end if;

   if (marks < 889 && marks > 825) then
      set class = 'Higher Second Class';
   end if;

   if (marks < 824 && marks > 750) then
      set class = 'Second Class';
   end if;

   if (marks < 749 && marks > 650) then
      set class = 'Passed';
   end if;

   if (marks < 649) then
      set class = 'Fail';
   end if;
end;
//
create function final_result3(R1 int)
returns int
begin
   declare fmarks integer;
   declare grade varchar(20);
   declare stud_name varchar(20);

   select marks.total_marks, marks.name
   into fmarks, stud_name
   from marks
   where marks.roll_no = R1;

   call proc_grade(fmarks, @grade);

   insert into result values(R1, stud_name, @grade);

   return R1;
end;
//
select final_result3(2);
//
select final_result3(3);
//
select final_result3(4);
//
select final_result3(5);
//
select * from result;
//
```

Practical 8

```
mongo
use Abhi;

db.createCollection('Student');

db.Student.insertMany([
  {'Rno':'1','Name':'Piyush','Class':'TE COMP'},
  {'Rno':'2','Name':'Abhi','Class':'TE COMP'},
  {'Rno':'3','Name':'Ashley','Class':'TE COMP'},
  {'Rno':'4','Name':'Hitesh','Class':'TE COMP'},
  {'Rno':'5','Name':'Pratik','Class':'TE COMP'},
  {'Rno':'6','Name':'Pratik','Class':'TE COMP'}
]);
db.Student.find();
db.Student.find().pretty();

db.Student.update({'Name':'Hitesh'},{$set:{'Name':'Henry'}
});

db.Student.remove({'ADD':'MP'});

db.Student.save({_id:ObjectId("5b8fad4ef00832a0a50b503
6"),"RNO":"1","NAME":"PIYUSH","CLASS":"TE
COMP","ADD":"MP"});

db.Student.find({$and:[{"Name":"Piyush"},{"Rno":"2"}]});
db.Student.find({$and:[{"Name":"Piyush"},{"Rno":"1"}]}).pr
etty();
db.Student.find({$or:[{"Name":"Piyush"},{"Rno":"2"}]}).pre
tty();
db.Student.find({$or:[{"Name":"Piyush"},{"Class":"TE
COMP"}]}).pretty();
db.Student.find({$nor:[{"Name":"Piyush"},{"Class":"TE
COMP"}]}).pretty();
db.Student.find({$nor:[{"Name":"Piyush"},{"Rno":"2"}]}).pr
etty();

db.Student.find({"Rno":{$not:{$lt:"3"}}}).pretty();
db.Student.find({"Rno":{$eq:"5"}}).pretty();
db.Student.find({"Rno":{$ne:"5"}}).pretty();
db.Student.find({"Rno":{$gt:"5"}}).pretty();
db.Student.find({"Rno":{$gte:"5"}}).pretty();
db.Student.find({"Rno":{$lt:"5"}}).pretty();
db.Student.find({"Rno":{$lte:"5"}}).pretty();
db.Student.find({"Rno":{$lt:"5",$gt:"2"}}).pretty();
db.Student.find({"Rno":{$lte:"5",$gte:"2"}}).pretty();
db.Student.find({"Rno":{$lte:"5",$gt:"2"}}).pretty();
db.Student.find({"Rno":{$lt:"5",$gte:"2"}}).pretty();
```

Practical 10

```
mongo
use Abhi;

db.createCollection('Journal');

db.Journal.insertMany([
{'book_id':1,'book_name':'JavacdOOP','amt':500,'status':'Availabl
e'},
{'book_id':1,'book_name':'JavaOOP','amt':400,'status':'Not
Available'},
{'book_id':1,'book_name':'Java','amt':300,'status':'Not
Available'},
{'book_id':2,'book_name':'Java','amt':300,'status':'Available'},
{'book_id':2,'book_name':'OPP','amt':200,'status':'Available'},
{'book_id':2,'book_name':'C+','amt':200,'status':'Available'},
{'book_id':3,'book_name':'C+','amt':150,'status':'Available'},
{'book_id':3,'book_name':'C++','amt':200,'status':'Not Available'},
{'book_id':4,'book_name':'OPP C++','amt':300,'status':'Not
Available'},
{'book_id':5,'book_name':'OPPC++','amt':400,'status':'Available'},
{'book_id':5,'book_name':'C++','amt':400,'status':'Available'},
{'book_id':5,'book_name':'C++ Java','amt':400,'status':'Not
Available'}
]);

var mapfunction = function() { emit(this.book_id, this.amt); };
var reducefunction = function(key, value) { return
Array.sum(value); };

db.Journal.mapReduce(mapfunction, reducefunction, { 'out':
'new' });

db.new.find().pretty();
```