

LOYOLA HIGH SCHOOL, PATNA-10

INFORMATICS PRACTICES

PRACTICAL ASSIGNMENT FILE

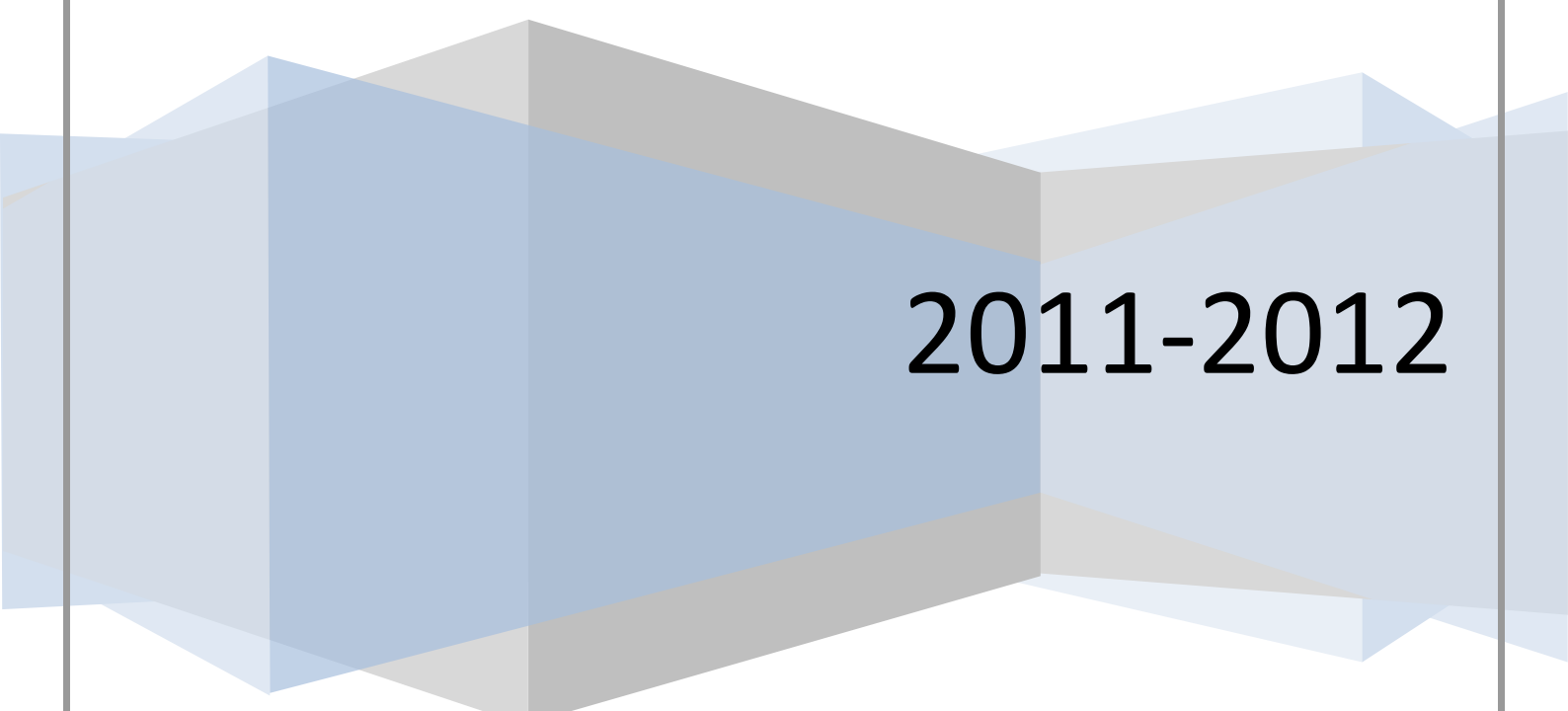
AISSCE-2012

BY:-

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CLASS:- 12 A

BOARD'S ROLL NO :-



2011-2012

PRACTICAL ASSIGNMENT -1

Q:- Design an application using class and object and methods to check a given number is prime ,palindrome or perfect.

➤ Designing components:-

The image shows a Java Swing application window with a light gray background. At the top left, there is a label "Enter a number" followed by a white text input field. Below this, there is a label "Select any" followed by a rounded rectangular container. Inside this container, there are three radio button options: "Prime number", "perfect number", and "Palindrone". At the bottom of the window, there are three buttons: "CHECK", "CLEAR", and "EXIT", each with a light gray background and a thin border.

➤ Property settings:-

Controls	Property	Settings
jLabel1	Name	jLabel1
	Text	Enter a number
jTextField1	Name	tf1
	Text	“ ”
jPanel1	Name	pnl 1
	Border	Titled
	Title	Select any
jRadiobutton1	Name	rdb1
	Text	Prime Number
	Button group	bg1
jRadiobutton2	Name	rdb 2
	Text	Perfect Number
	Button group	bg1
jRadiobutton3	Name	rdb3
	Text	Palindrome
	Button group	bg1
jButtongroup1	Name	bg1
jButton1	Name	btn1
	Text	CHECK
jbutton2	Name	btn2
	Text	CLEAR
jButton3	Name	btn3
	Text	EXIT

➤ Coding:-

➤ Importing classes:-

```
import javax.swing.JOptionPane;
```

➤ Coding for making the panel inactive when no input is given by the user:-

```
private void forNoText(java.beans.PropertyChangeEvent evt) {  
String a=tf1.getText();  
if (a.equals(""))  
    pnl1.setEnabled(false);  
}
```

➤ coding on "CHECK" button:-

```
private void btnActionPerformed(java.awt.event.ActionEvent  
evt) {  
try{  
    String a=tf1.getText();  
if (a.equals(""))  
    pnl1.setEnabled(false);  
    checkNo obj=new checkNo();  
    int b=Integer.parseInt(tf1.getText());  
if(rdb1.isSelected()==true)  
    obj.checkPrime(b);  
if(rdb2.isSelected()==true)  
    obj.checkPerfect(b);  
    if(rdb3.isSelected()==true)  
        obj.checkPalindrone(b);  
  
}
```

```
catch(Exception e)
{JOptionPane.showMessageDialog(null,"please check if number
entered for observation is an integer");}
}
```

➤ coding on “CLEAR” button:-

```
private void btn2ActionPerformed(java.awt.event.ActionEvent
evt) {
tf1.setText("");
rdb1.setSelected(true);
rdb2.setSelected(false);
rdb3.setSelected(false);
}
```

➤ coding on “exit” button:-

```
private void btn3ActionPerformed(java.awt.event.ActionEvent
evt) {
System.exit(0);
}
```

➤ creating class for above program:-

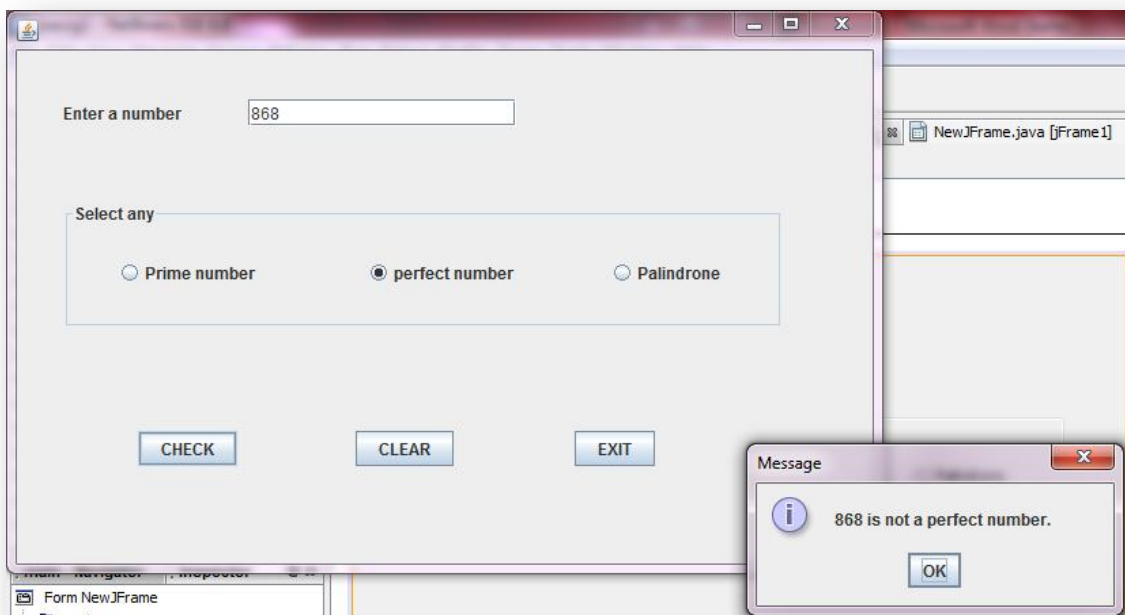
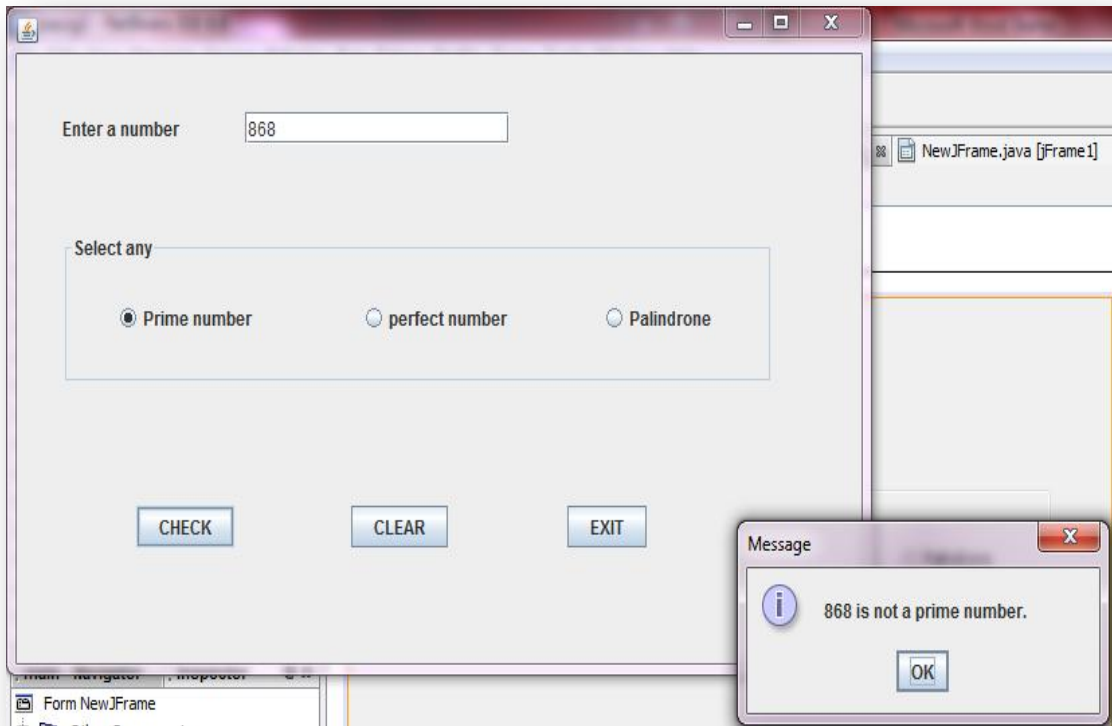
```
public class checkNo{
public void checkPrime(int a)
{
int p=0;int z;
for(int i=1;i<=a;i++)
{
if(a%i==0)
p++;
}
if(p==2)
JOptionPane.showMessageDialog(null,""+a+" is a prime
number. ");
}
```

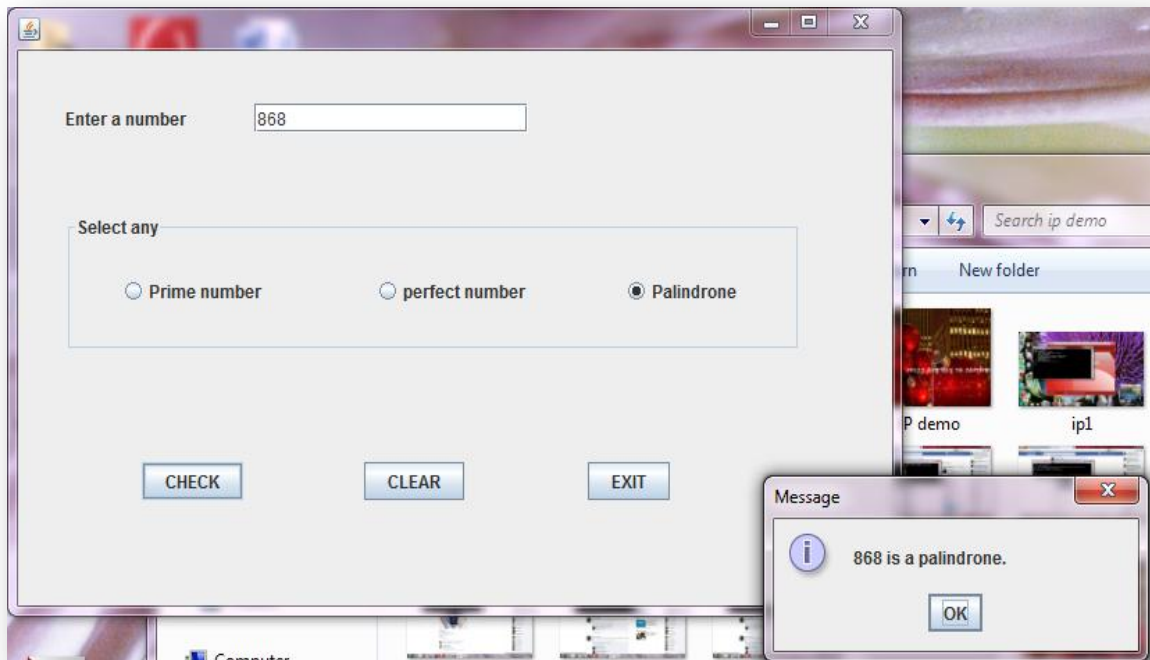
```

else
    JOptionPane.showMessageDialog(null, ""+a+" is not a prime
number. ");
}
public void checkPerfect(int a)
{
int p=0;
for(int i=1;i<a;i++)
{
if(a%i==0)
    p++;
}
if(p==a)
    JOptionPane.showMessageDialog(null, ""+a+" is a perfect
number. ");
else
    JOptionPane.showMessageDialog(null, ""+a+" is not a perfect
number. ");
}
public void checkPalindrone(int n)
{
int r=0;int rev=0;
int m=n;int q=n;
while(q>0) {
r=q%10;
rev=rev*10+r;
q=q/10;
}
if(rev==m)
    JOptionPane.showMessageDialog(null, ""+n+" is a
palindrone. ");
else
    JOptionPane.showMessageDialog(null, ""+n+" is not a
palindrone. ");
}}

```

❖ Output :-





PRACTICAL ASSIGNMENT-2

Q:- Design a notepad application using NetBeans IDE where users can do append a text, insert new text, replace text, cut, copy and paste.

❖ Designing components:-

The image shows a Java Swing window titled "your notepad". The window has a light gray background and a thin orange border. At the top left, there is a panel with four labels and corresponding input fields: "write text here", "where to insert", "replace from", and "replace till". Below this panel is a large text area labeled "your notepad". To the right of the text area is a button labeled "CLEAR ALL". At the bottom of the window, there is a row of six buttons: "APPEND", "INSERT", "REPLACE", "CUT", "COPY", and "PASTE".

❖ Property setting:-

Component	Property	Settings
jPanel1	Name	Pnl1
	Border	BevelBorder
jTextfield1	Name	Text1
	Text	
jTextfield2	Name	Tpos
	Text	
jTextfield3	Name	Tstart
	Text	
jTextfield4	Name	Tend
	Text	
jLabel1	Name	jLabel1
	Text	Write text here
jLabel2	Name	jLabel2
	Text	Where to insert
jLabel3	Name	jLabel3
	Text	Replace from
JLabel4	Name	jLabel4
	Text	Replace till
jPanel2	Name	Pnl2
	Border	Titled
	Title	Your notepad
jTextarea1	Name	jScrollPane1
	Text	
jButton1	Name	Bttnappend
	Text	APPEND
jButton2	Name	Bttnreplace
	Text	REPLACE
jButton3	Name	Bttnpaste
	Text	PASTE
jButton4	Name	Bttncut
	Text	CUT
jButton5	Name	Bttninsert

	Text	INSERT
jButton6	Name	Bttncopy
	Text	COPY
jButton7	Name	Clear
	Text	CLEAR ALL

❖ Coding:-

➤ On APPEND button:-

```
private void
bttnappendActionPerformed(java.awt.event.ActionEvent evt) {
String txt=text1.getText();
ta1.append(txt);

}
```

➤ On INSERT button:

```
private void
bttninsertActionPerformed(java.awt.event.ActionEvent evt) {
String s=text1.getText();
int pos=Integer.parseInt(tpos.getText());
ta1.insert(s, pos);
}
```

➤ On REPLACE button:-

```
private void
bttnreplaceActionPerformed(java.awt.event.ActionEvent evt) {
String s=text1.getText();
int spos=Integer.parseInt(tstart.getText());
int epos=Integer.parseInt(tend.getText());
ta1.replaceRange(s, spos, epos);
}
```

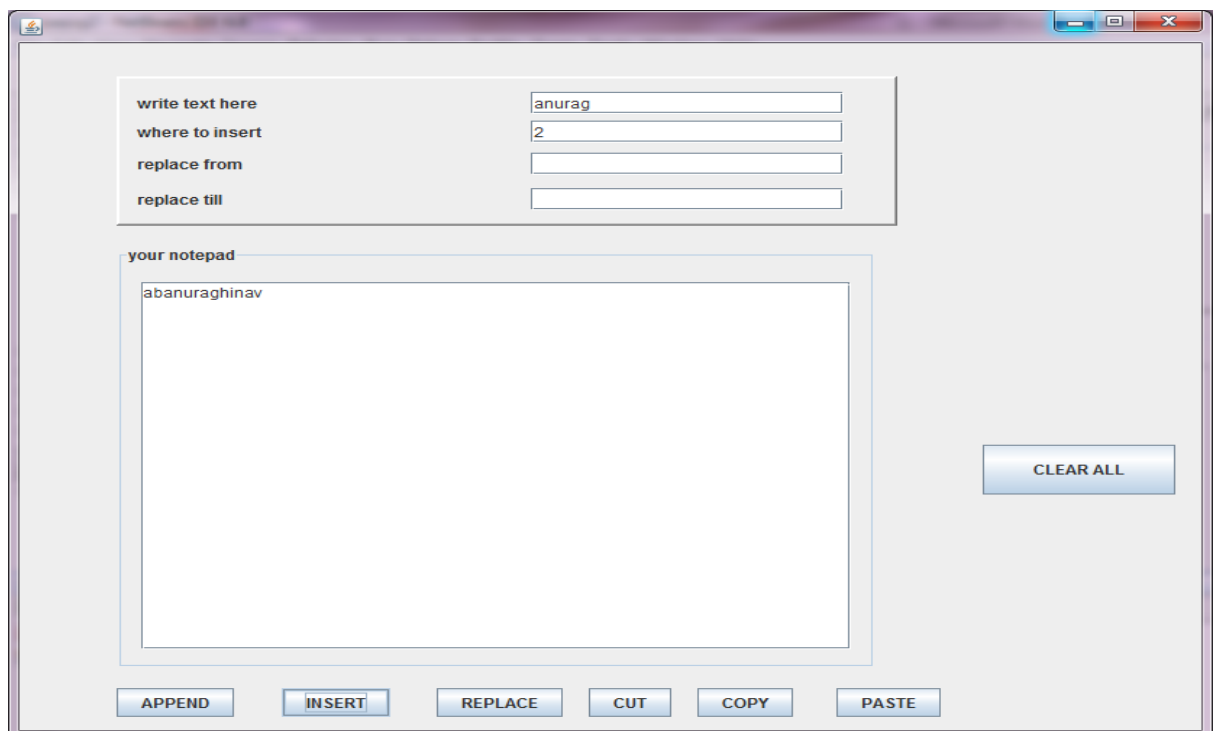
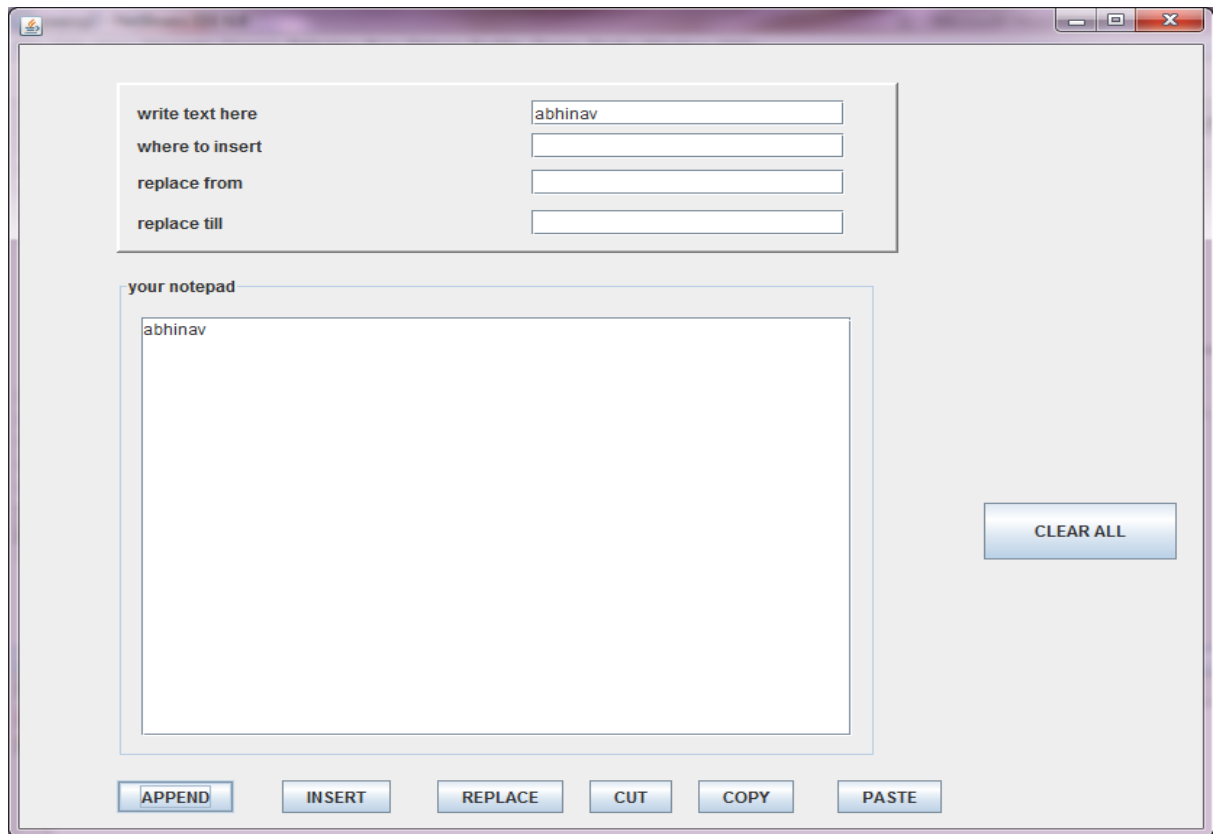
➤ **On CUT, COPY & PASTE buttons:-**

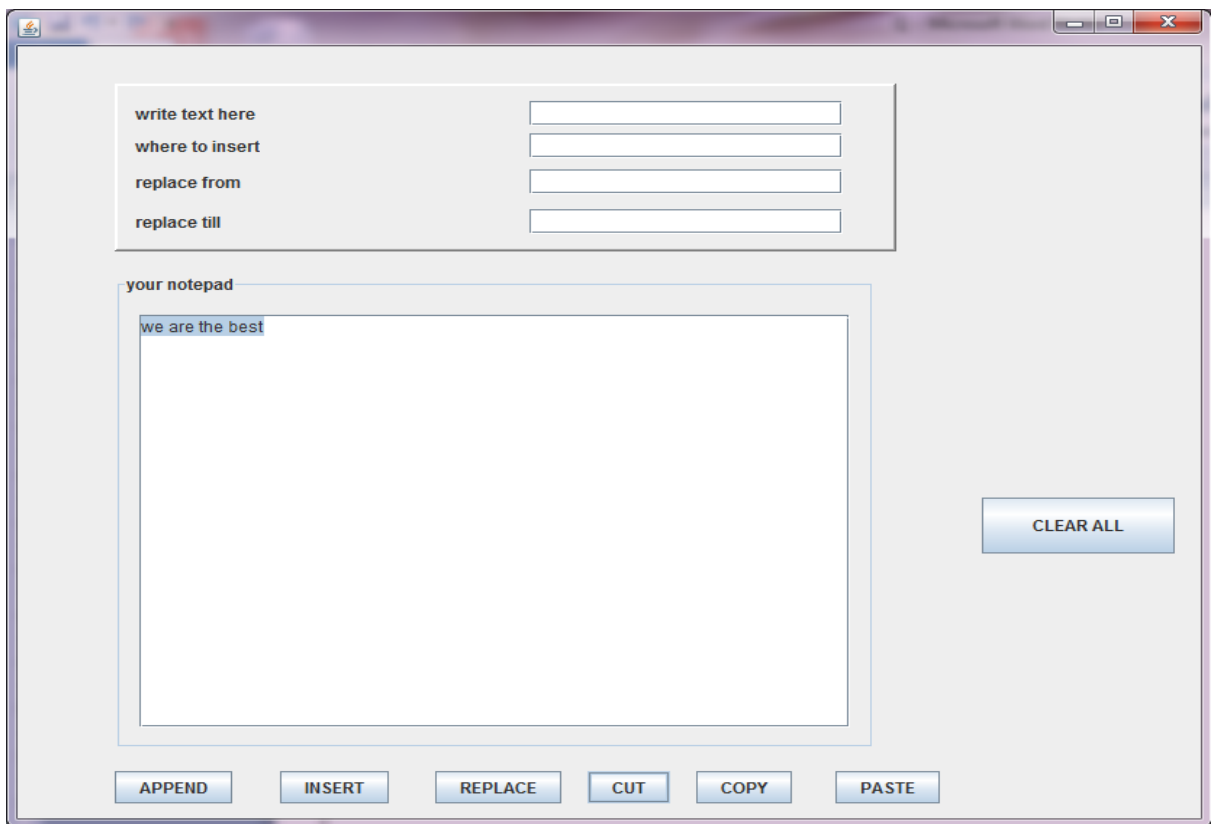
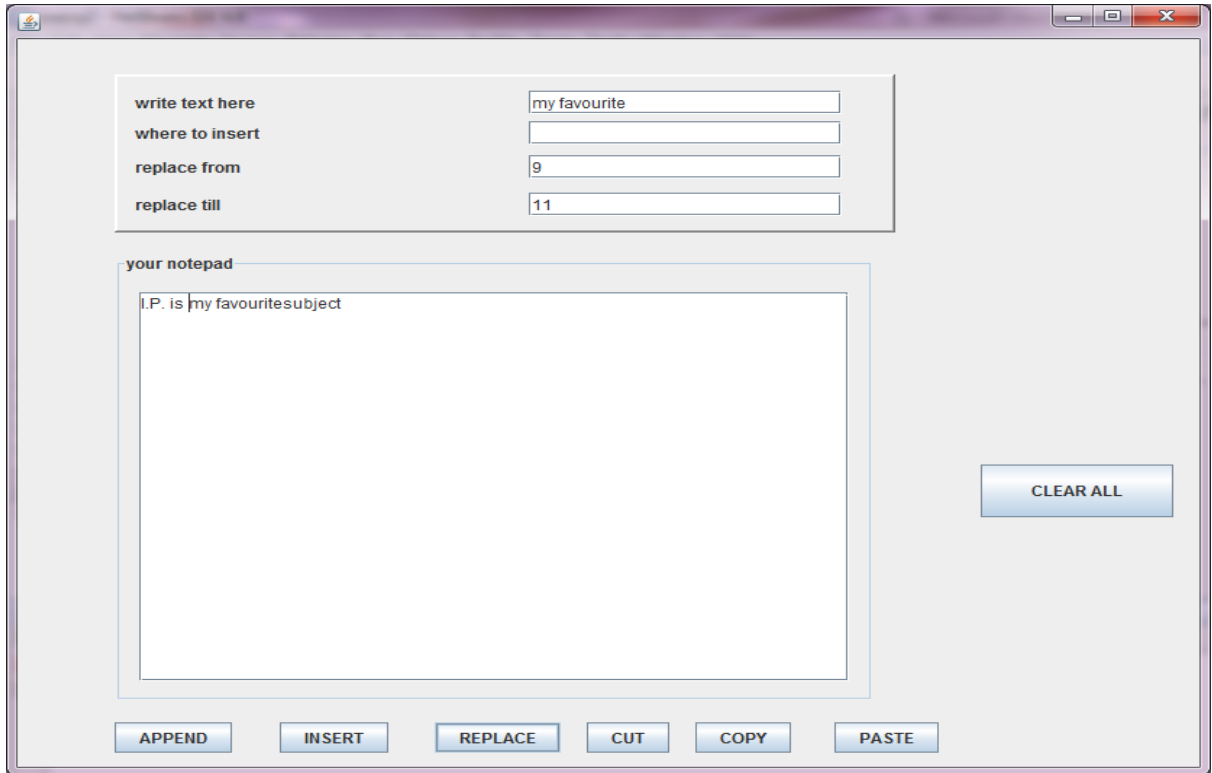
```
        private void  
        btnncutActionPerformed(java.awt.event.ActionEvent evt) {  
            ta1.cut();  
        }  
        private void  
        bttnccopyActionPerformed(java.awt.event.ActionEvent evt) {  
            ta1.copy();  
        }  
        private void  
        bttnnpasteActionPerformed(java.awt.event.ActionEvent evt) {  
            ta1.paste();  
        }
```

➤ **On clear all button:**

```
        private void  
        clearActionPerformed(java.awt.event.ActionEvent evt) {  
            text1.setText("");  
            tpos.setText("");  
            tstart.setText("");  
            tend.setText("");
```

❖ Output:-





PRACTICAL ASSIGNMENT-3

Q: -Design a data connectivity application that fetches data from EMP table and has an interface as given below: -

- ❖ The user should be able to choose any fields in the select list.
- ❖ The sort criterion should be decided by user for order by clause
- ❖ The filtering condition for where clause should be specified by user for job and/or deptno fields.
- ❖ As per the specified details the data should be fetched from EMP table and shown in tabular format.

❖ Designing components:-

The screenshot shows a Java Swing application window with a light gray background. It contains three main panels at the top:

- select field:** A panel containing a list box titled "select multiple fields" with the following items: Name, Job, Salary, Dept no., and Hire Date.
- sort criterion:** A panel with three radio buttons: "Salary", "Dept no.", and "hire date". To the right of these are two radio buttons: "Ascending order" and "descending order".
- filters:** A panel with two dropdown menus. The first is labeled "Job" and has "CEO" selected. The second is labeled "Deptno" and has "00H" selected.

Below these panels is a "fetch data" button. At the bottom of the window is a table with 4 columns and 5 rows. The columns are labeled "Title 1", "Title 2", "Title 3", and "Title 4".

❖ Property setting:-

Component	Property	Settings
jLabel1	Name	jLabel1
	Text	Job
jLabel2	Name	jLabel2
	Text	Deptno
jPanel1	Name	jPanel2
	Border	Titled
	Title	Select field
jPanel2	Name	jPanel2
	Border	Titled
	Title	Sort criterion
jPanel3	Name	jPanel3
	Border	Titled
	Title	Filters
jRadiobutton1	Name	rbsalary
	Text	Salary
	Button group	buttonGroup1
jRadiobutton2	Name	rbdesc
	Text	Descending order
	Button group	buttonGroup1

jRadiobutton3	Name	Rbasc
	Text	Ascending order
	Button group	buttonGroup1
jRadiobutton4	Name	Rbdeptno
	Text	Dept no
	Button group	buttonGroup2
jRadiobutton5	Name	rbhdate
	Text	Hire date
	Button group	buttonGroup2
jRadiobutton6	Name	rbfetchdata
	Text	Fetch data
jList1	Name	Istemployee
	Table model	Name Job Salary Dept no. Hire Date
jComboBox1	Name	Combojob
	Model	CEO Member(B.O.D) Head of dept. Manager Engineer Consultant Clerk Peon
jComboBox2	Name	combodeptno
	Model	00H C001 C002 C003 C004 C005
jTable1	Name	tableempl
	Model	
jButtongroup1	Name	buttonGroup1
jButtongroup2	Name	buttonGroup2

❖ Coding:-

➤ Importing classes:-

```
import javax.swing.JOptionPane;
```

```
import java.sql.*;
```

```
import javax.swing.table.DefaultTableModel;
```

➤ Coding on “fetch data”

```
Object efld[]=lstemployee.getSelectedValues();

int l=efld.length;

String qr="SELECT";

int i;

String f=(String)efld[0];

qr=qr+f;

for(i=1;i<l;i++) {

String fl=(String)efld[i];

qr=qr+", "+fl;

} // TODO add your handling code here:

qr=qr+"FROM EMPL";

String flt1,flt2;

flt1=(String)combojob.getSelectedItem();

flt2=(String)combodeptno.getSelectedItem();

if(flt1.compareTo("ANY")!=0&&flt2.compareTo("ANY")!=0) {

qr=qr+"WHERE JOB="+flt1+"";

qr=qr+"AND deptno="+flt2;}

else if(flt1.compareTo("ANY")!=0)

qr=qr+"WHERE JOB="+flt1+"";

else if(flt2.compareTo("ANY")!=0)

qr=qr+"WHERE JOB="+flt2+"";

if(rbsalary.isSelected()==true)

qr=qr+"ORDER BY SALARY";
```

```
else if(rbdeptno.isSelected()==true)
    qr=qr+"ORDER BY deptno";
if(rbhdate.isSelected()==true)
    qr=qr+"ORDER BY HIREDATE";
if(rbasic.isSelected()==true)
    qr=qr+"asc ";
if(rbdesc.isSelected()==true)
    qr=qr+"desc ";
DefaultTableModel dm=(DefaultTableModel)tableempl.getModel();
try{
Class.forName("java.sql.Driver");
Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3308/empl
oyee","root","sanjay");
Statement stmt=con.createStatement();
ResultSet rs=stmt.executeQuery(qr);
int empnostr=0;
String enamestr="";
String jobstr="";
int mgrstr=0;
Date hdatestr=null;
float salstr=0;
float commstr=0;
int deptnostr=0;
```

```
while(dm.getRowCount()>0)
    dm.removeRow(0);
while(rs.next()){
for(i=0;i<1;++i){
String f1=(String)efld[i];
if(f1.compareToIgnoreCase("Empno")==0)
    empnostr=rs.getInt("empno");
else if(f1.compareToIgnoreCase("Ename")==0)
    enamestr=rs.getString("ename");
else if(f1.compareToIgnoreCase("job")==0)
    jobstr=rs.getString("job");
else if(f1.compareToIgnoreCase("mgr")==0)
    mgrstr=rs.getInt("mgr");
else if(f1.compareToIgnoreCase("hiredate")==0)
    hdatestr=rs.getDate("hiredate");
else if(f1.compareToIgnoreCase("sal")==0)
    salstr=rs.getFloat("sal");
else if(f1.compareToIgnoreCase("comm")==0)
    commstr=rs.getFloat("comm");
else if(f1.compareToIgnoreCase("deptno")==0)
    deptnostr=rs.getInt("deptno");
}
```

```
dm.addRow(new
Object[] {empnostr, enamestr, jobstr, mgrstr, hdatestr, salstr, commstr,
deptnostr} );
}

rs.close();

stmt.close();

con.close();
}

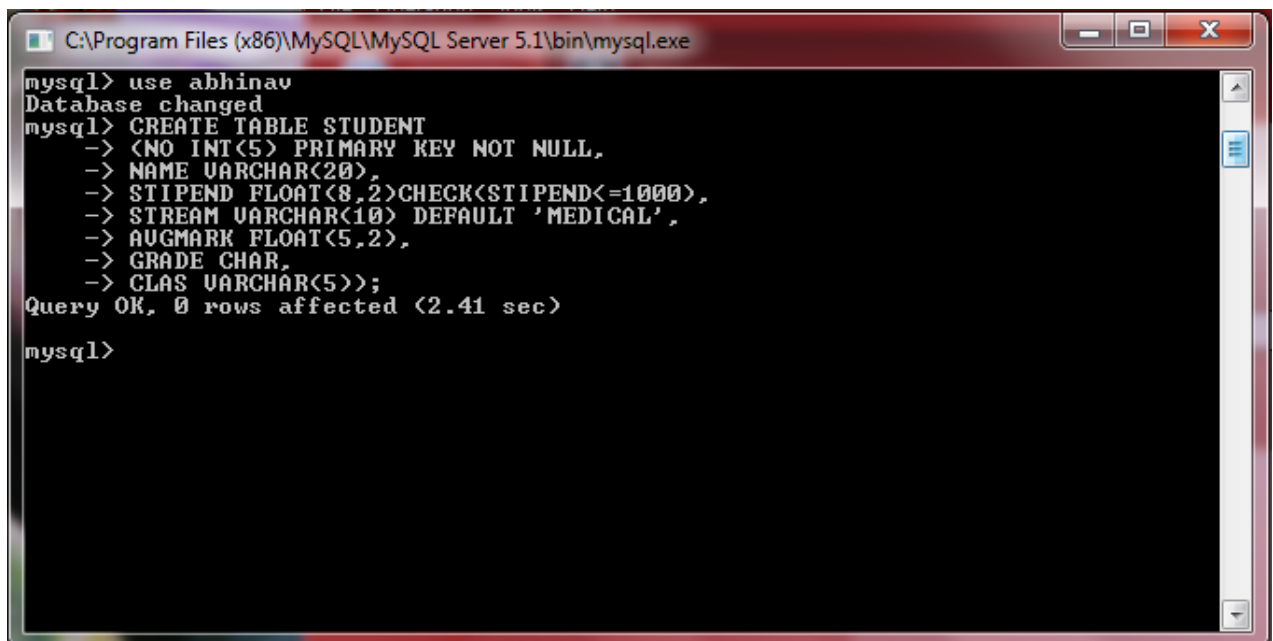
catch(Exception e) {
JOptionPane.showMessageDialog(null, "Error in connectivity");
}
```

PRACTICAL ASSIGNMENT-4

Table: STUDENT

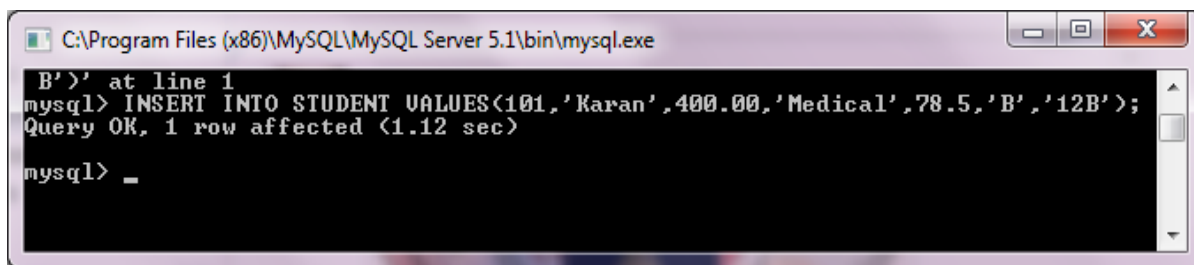
ADM No	Name	Stipend	Stream	Avgmark	Grade	Class
101	Karan	400.00	Medical	78.5	B	12B
102	Divakar	450.00	Commerce	89.2	A	11C
103	Divya	300.00	Commerce	68.6	C	12C
104	Arun	350.00	Humanities	73.1	B	12C
105	Sabina	500.00	Nonmedical	90.6	A	11A
106	John	400.00	Medical	75.4	B	12B
107	Robert	250.00	Humanities	64.4	C	11A
108	Rubina	450.00	Nonmedical	88.5	A	12A
109	Vikas	500.00	Nonmedical	92.0	A	12A
110	Mohan	300.00	Commerce	67.5	C	12C

a) Create above table:



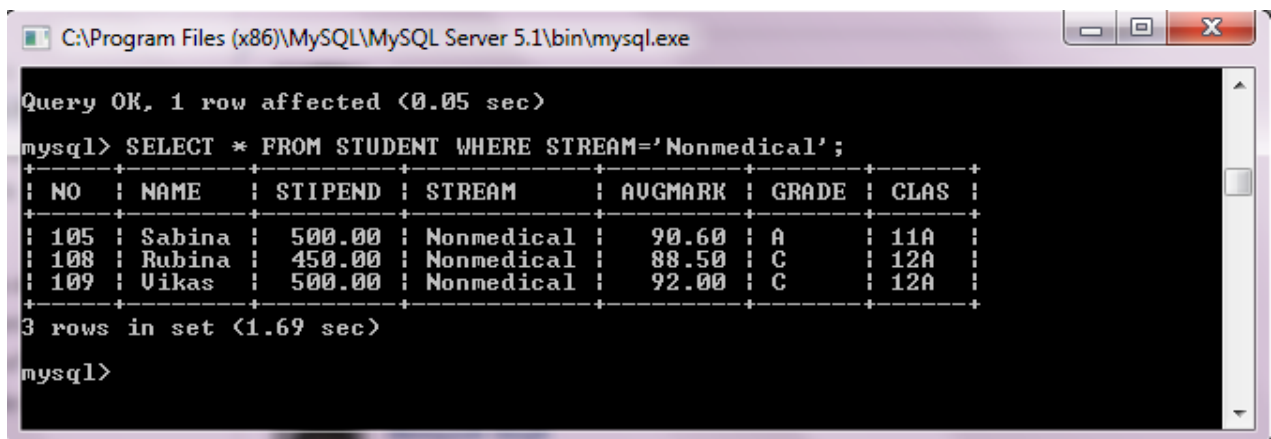
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> use abhinav
Database changed
mysql> CREATE TABLE STUDENT
-> (NO INT(5) PRIMARY KEY NOT NULL,
-> NAME VARCHAR(20),
-> STIPEND FLOAT(8,2)CHECK(STIPEND<=1000),
-> STREAM VARCHAR(10) DEFAULT 'MEDICAL',
-> AUGMARK FLOAT(5,2),
-> GRADE CHAR,
-> CLAS VARCHAR(5));
Query OK, 0 rows affected (2.41 sec)
mysql>
```

b) Insert value in the above table:



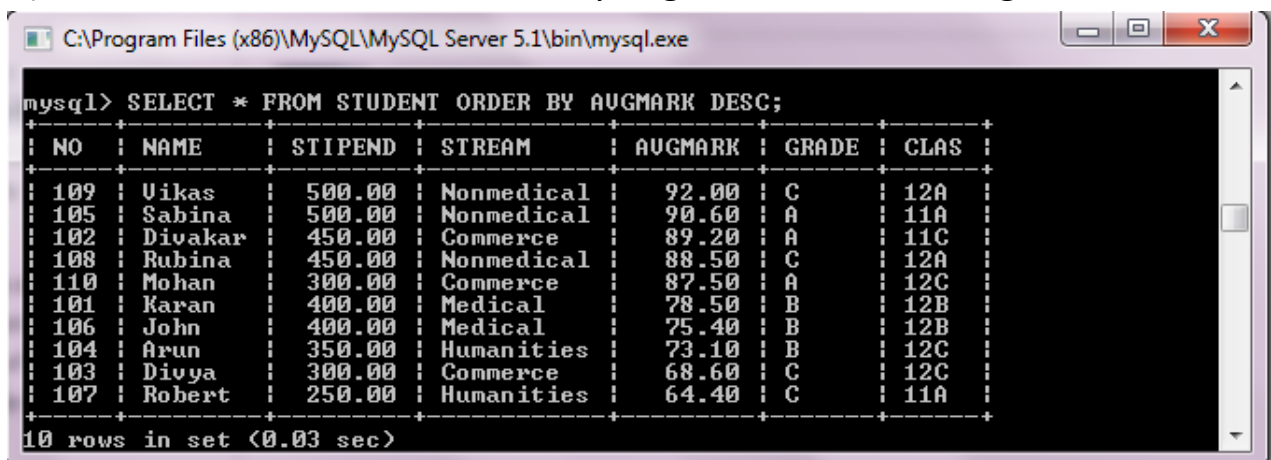
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> INSERT INTO STUDENT VALUES(101,'Karan',400.00,'Medical',78.5,'B','12B');
Query OK, 1 row affected (1.12 sec)
mysql> _
```

c) Select all the nonmedical stream students from STUDENT :-



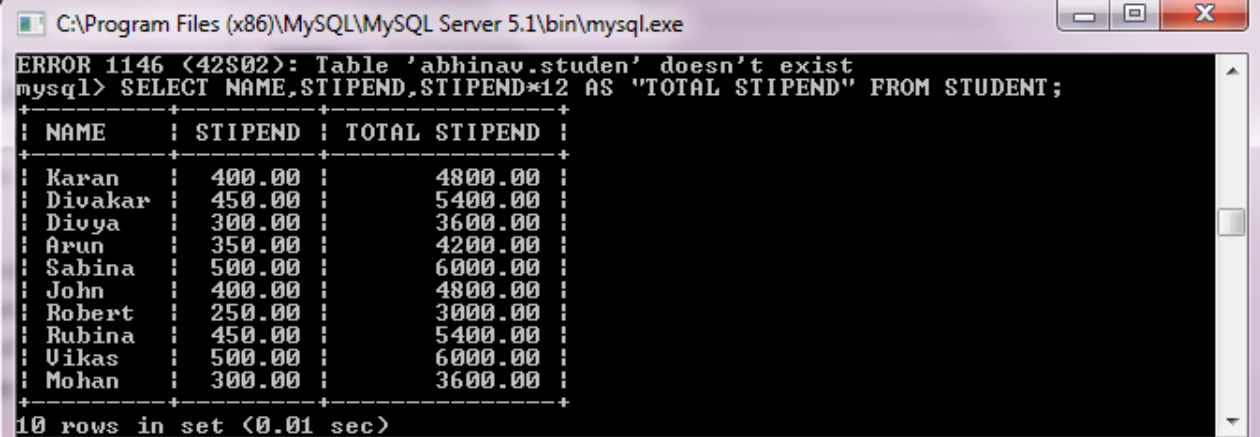
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
Query OK, 1 row affected (0.05 sec)
mysql> SELECT * FROM STUDENT WHERE STREAM='Nonmedical';
+----+-----+-----+-----+-----+-----+-----+
| NO | NAME  | STIPEND | STREAM | AUGMARK | GRADE | CLAS |
+----+-----+-----+-----+-----+-----+-----+
| 105 | Sabina | 500.00 | Nonmedical | 90.60 | A | 11A |
| 108 | Rubina | 450.00 | Nonmedical | 88.50 | C | 12A |
| 109 | Vikas  | 500.00 | Nonmedical | 92.00 | C | 12A |
+----+-----+-----+-----+-----+-----+-----+
3 rows in set (1.69 sec)
mysql>
```

d) List all the students sorted by avgmark in descending order:-



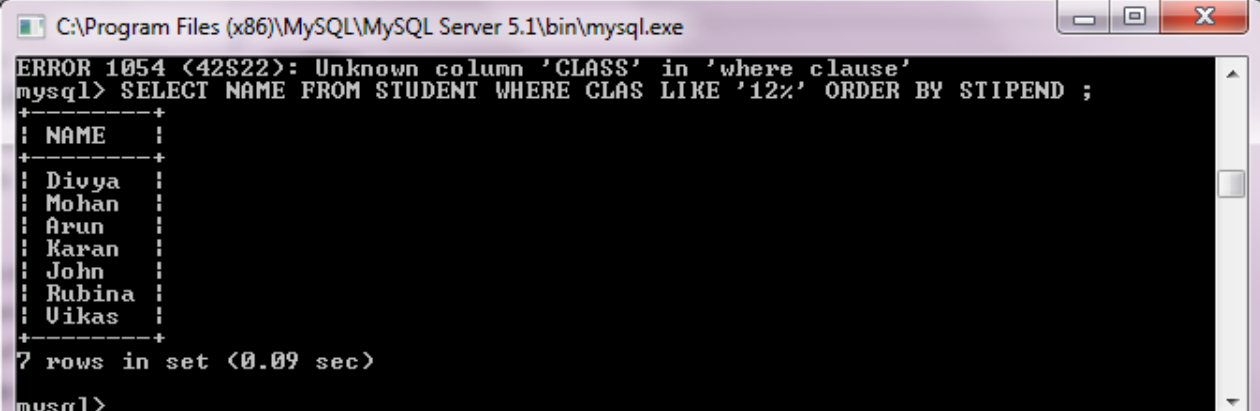
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> SELECT * FROM STUDENT ORDER BY AUGMARK DESC;
+----+-----+-----+-----+-----+-----+-----+
| NO | NAME  | STIPEND | STREAM | AUGMARK | GRADE | CLAS |
+----+-----+-----+-----+-----+-----+-----+
| 109 | Vikas  | 500.00 | Nonmedical | 92.00 | C | 12A |
| 105 | Sabina | 500.00 | Nonmedical | 90.60 | A | 11A |
| 102 | Divakar | 450.00 | Commerce | 89.20 | A | 11C |
| 108 | Rubina | 450.00 | Nonmedical | 88.50 | C | 12A |
| 110 | Mohan  | 300.00 | Commerce | 87.50 | A | 12C |
| 101 | Karan  | 400.00 | Medical | 78.50 | B | 12B |
| 106 | John   | 400.00 | Medical | 75.40 | B | 12B |
| 104 | Arun   | 350.00 | Humanities | 73.10 | B | 12C |
| 103 | Diya   | 300.00 | Commerce | 68.60 | C | 12C |
| 107 | Robert | 250.00 | Humanities | 64.40 | C | 11A |
+----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.03 sec)
```

e) Display a report listing name, stipend and amount of stipend received in a year assuming that the stipend is paid every month:-



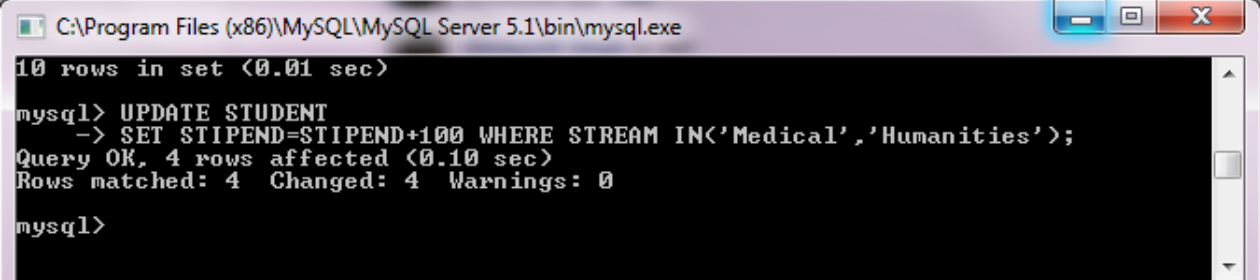
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
ERROR 1146 (42S02): Table 'abhinav.studen' doesn't exist
mysql> SELECT NAME,STIPEND,STIPEND*12 AS "TOTAL STIPEND" FROM STUDENT;
+-----+-----+-----+
| NAME      | STIPEND | TOTAL STIPEND |
+-----+-----+-----+
| Karan     | 400.00  | 4800.00       |
| Divakar   | 450.00  | 5400.00       |
| Divya     | 300.00  | 3600.00       |
| Arun      | 350.00  | 4200.00       |
| Sabina    | 500.00  | 6000.00       |
| John      | 400.00  | 4800.00       |
| Robert    | 250.00  | 3000.00       |
| Rubina    | 450.00  | 5400.00       |
| Uikas     | 500.00  | 6000.00       |
| Mohan     | 300.00  | 3600.00       |
+-----+-----+-----+
10 rows in set (0.01 sec)
```

f) List the names of those students who are in class 12 sorted by stipend:-



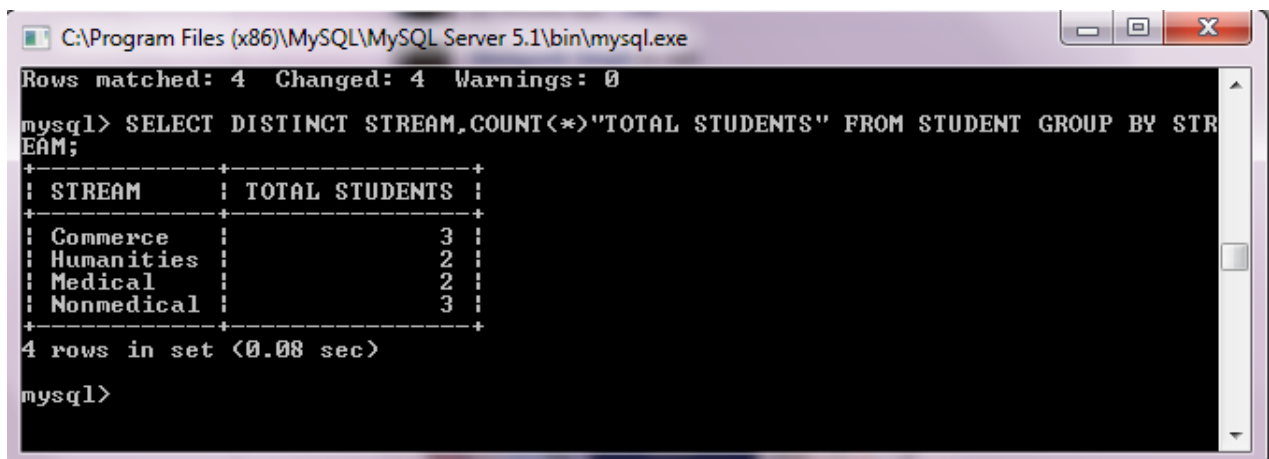
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
ERROR 1054 (42S22): Unknown column 'CLASS' in 'where clause'
mysql> SELECT NAME FROM STUDENT WHERE CLAS LIKE '12%' ORDER BY STIPEND ;
+-----+
| NAME |
+-----+
| Divya |
| Mohan |
| Arun  |
| Karan |
| John  |
| Rubina |
| Uikas |
+-----+
7 rows in set (0.09 sec)
mysql> _
```

g) Increase all the stipends by 100 of all medical and humanities students:-



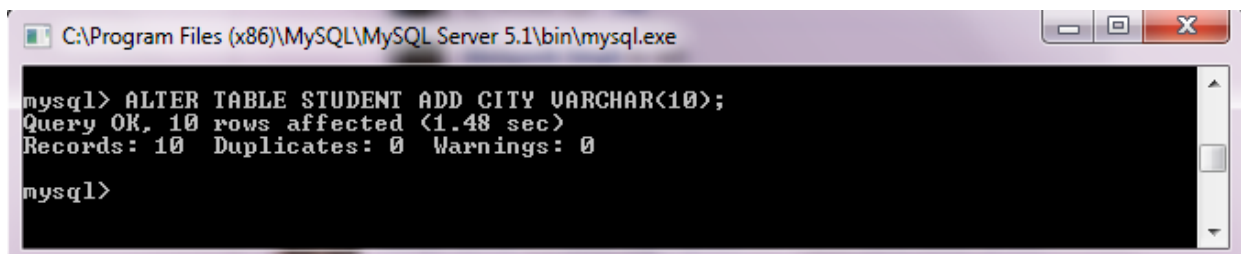
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
10 rows in set (0.01 sec)
mysql> UPDATE STUDENT
-> SET STIPEND=STIPEND+100 WHERE STREAM IN('Medical','Humanities');
Query OK, 4 rows affected (0.10 sec)
Rows matched: 4 Changed: 4 Warnings: 0
mysql>
```

h) Display total students in all streams:-



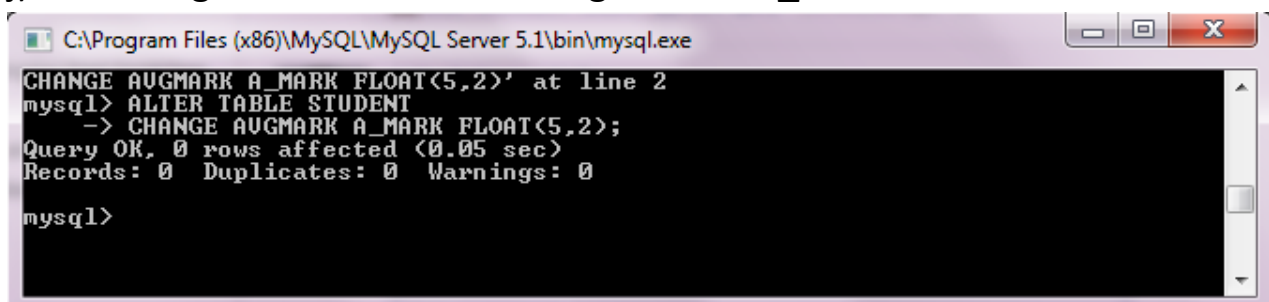
```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
Rows matched: 4  Changed: 4  Warnings: 0
mysql> SELECT DISTINCT STREAM,COUNT(*)"TOTAL STUDENTS" FROM STUDENT GROUP BY STR
EAM;
+-----+-----+
| STREAM | TOTAL STUDENTS |
+-----+-----+
| Commerce | 3 |
| Humanities | 2 |
| Medical | 2 |
| Nonmedical | 3 |
+-----+-----+
4 rows in set (0.08 sec)
mysql>
```

i) Add a column city to the given table:-



```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> ALTER TABLE STUDENT ADD CITY VARCHAR(10);
Query OK, 10 rows affected (1.48 sec)
Records: 10 Duplicates: 0 Warnings: 0
mysql>
```

j) Change the field name of avgmark to A_mark:-



```
C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
CHANGE AUGMARK A_MARK FLOAT(5,2)' at line 2
mysql> ALTER TABLE STUDENT
-> CHANGE AUGMARK A_MARK FLOAT(5,2);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql>
```

PRACTICAL ASSIGNMENT-5

Write My Sql query to create following tables as given details, where one table "programmer" has all the details of different programmers and another table "Company" has all the details of different companies those hired different programmers:-

PROGRAMMER

ID	Pname	Lang
101	A.kumar	C++
102	Manish	.net
103	Amber	Java

COMPANY

Co_ID	CName	ProgID	Place
C104	Def Pvt.Ltd	102	Delhi
C111	PF Ltd.	101	Mumbai
C078	Base soft. Ltd	103	Manglore
C891	UTL Ltd.	101	Kolkata
C555	Ambas Pvt. Ltd.	102	Manglore

- i) Display the programmer name,language,company name those are employee of manglore based company

```
Select p.pname,p.lang,c.cname from programmer p,company c
where c.place=' manglore' and p.id=c.progid;
```

- ii) Display all company's details with their programmer's name

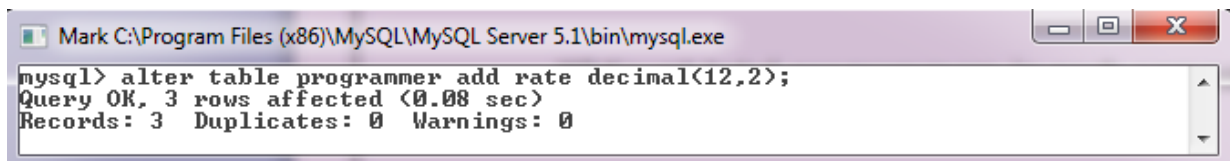
```
Select c.*,p.pname from programmer p,company c
where p.id=c.progid;
```

- iii) Count total programmers in each company

```
Select distinct p.pname,count(p.*)as "total
programmers" from programmer p,company c group by
c.cname and p.id=c.progid;
```

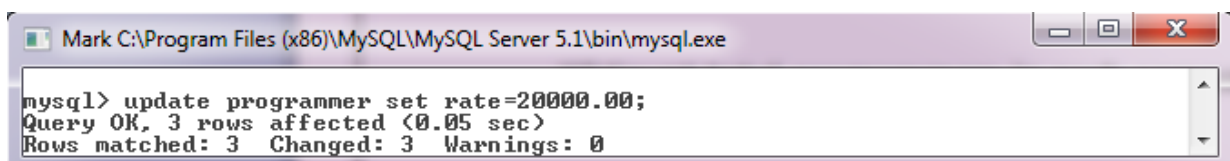
- iv) Give outputs of the following queries:-

- (a) ALTER TABLE PROGRAMMER ADD RATE DECIMAL(12,2);



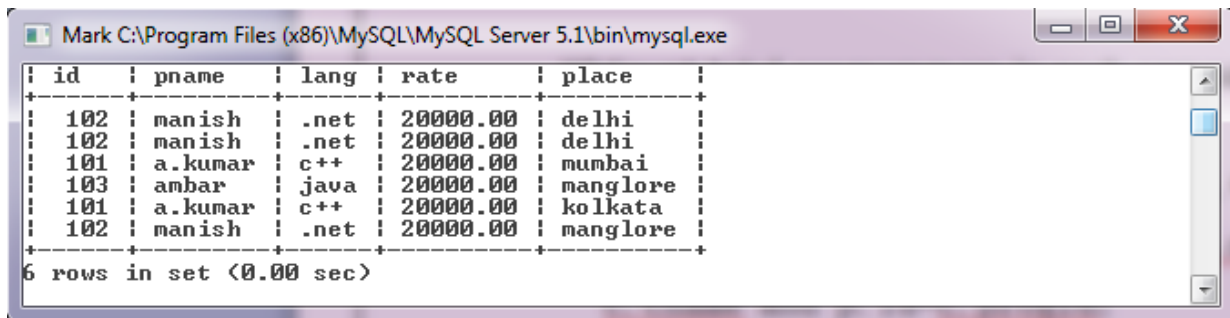
```
Mark C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> alter table programmer add rate decimal(12,2);
Query OK, 3 rows affected (0.08 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

- (b) UPDATE PROGRAMMER SET RATE=20000.00;



```
Mark C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe
mysql> update programmer set rate=20000.00;
Query OK, 3 rows affected (0.05 sec)
Rows matched: 3 Changed: 3 Warnings: 0
```

(c) SELECT P.*, C.PLACE FROM PROGRAMMER P,COMPANY C
WHERE P.ID=C.ProgID;

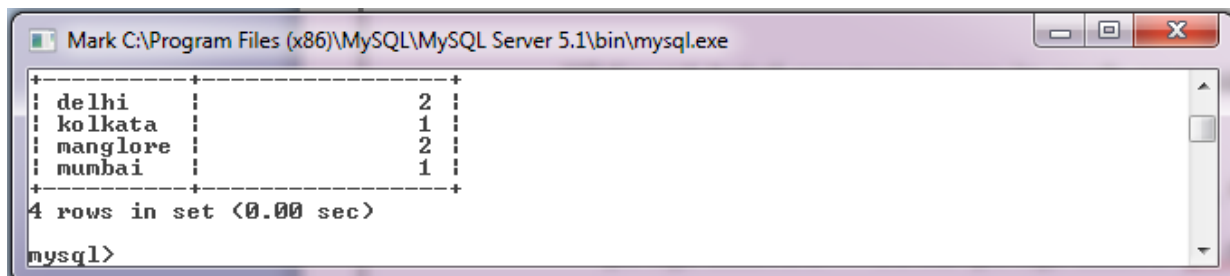


Mark C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe

id	pname	lang	rate	place
102	manish	.net	20000.00	delhi
102	manish	.net	20000.00	delhi
101	a.kumar	c++	20000.00	mumbai
103	ambar	java	20000.00	manglore
101	a.kumar	c++	20000.00	kolkata
102	manish	.net	20000.00	manglore

6 rows in set (0.00 sec)

(d) SELECT Distinct place, count(*) “Total
Companies” FROM COMPANY GROUP BY PLACE;



Mark C:\Program Files (x86)\MySQL\MySQL Server 5.1\bin\mysql.exe

place	count(*)
delhi	2
kolkata	1
manglore	2
mumbai	1

4 rows in set (0.00 sec)

mysql>

CERTIFICATE

THIS IS TO CERTIFY THAT

MASTER ABHINAV ANURAG

OF CLASS XII-A

ROLL NO _____

HAS PERFORMED THESE ASSIGNMENTS

WITH

GREAT EFFORT.

I WISH HIM SUCCESS IN HIS LIFE.

PLACE :-

DATE :-

PLACE :-

DATE :-

TEACHER'S SIGNATURE

INVIGILATOR'S SIGNATURE

OBJECTIVE

The main objective of this practical assignment file is just to ensure that each and every has come across the expanse of the course very deftfully.

These practical assignments cover all the aspects and concepts which we should have got while studying i.p throughout the year.

It includes the assignments related to:-

- ❖ Basic software development
- ❖ Multiple radiobutton handling
- ❖ Making classes
- ❖ Handling various string functions
- ❖ Database connectivity
- ❖ Various aspects of database handling

This practical assignment file is perfect for giving a finishing touch to our syllabus.

Enjoy browsing through this file. . .

Conclusion

After doing these practical assignments, one can conclude that java is a very interesting language to learn as nothing but pure brain is used while doing its coding.

This assignment file has really helped us to give the finishing touch to the subject for class 12th.

