Guru Gobind Singh Public School

Sector : V/B, Bokaro Steel City

Assignment

Subject: Informatics Practices (065)
Class: XII

1. In a database STUDENT,there is a table RESULT with the following contents:

Table: RESULT

Rengo	Name	Marks	Section	Classteacher	Admno
10004	Mohit	90	A	Ms.Nathni	Z101
10211	Mukta	85	B	Mr.Gokhle	Z109
10923	Mona	92	B	Mr.Gokhle	Z120
10313	Sana	80	A	Ms.Nathni	Z234

(i)Identify the attributes, Which can be chosen as Candidate Keys in the table RESULT.
(ii) Write SQL Query to change the marks of Mukta to common to 95 in the table RESULT.
(iii) Show the name and Admno of those student whose name starts with 'M'.
(iv) Show the marks, Regno and section of that students whose classteacher name ends with 'e';

2. Write SQL query of following table structure **(Q.no. i to Q.no. v)**

Relation : student

Code	Student Name	Department	Year	sex
FYBE45	Raman Verma	Computer Science	Final year	M
SYBE23	Rupa	Electronics	Second year	F
SYBE27	Tamim Mahmud	Mechanical	Second Year	M
TYBE76	Ysmin	Computer science	Third Year	F
TYBE74	Gurmeet Kaur	Electronics	Third Year	F

(i) to display name and code of students of third year.
(ii) to display name, code and year of students of computer science department.
(iii) to display name, code department and year of all female students.
(iv) to count number of final year students from table student.
(v) to display details of all computer science female students. .

3. Answer the question (i) and (v) based on following table:

Table: FACULTY

FNO	FNAME	AGE	DEPARTMENT	GRADE
111	Moksha	40	Biology	A
123	Malini	35	Maths	A
125	Akshit	43	English	B
130	Nishant	27	Maths	B

(i) Identify the primary Key in the table Faculty.

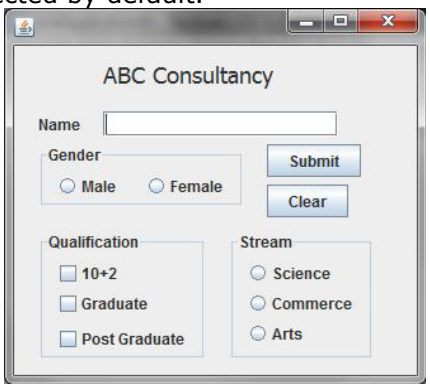
(ii) Write SQL Command to change the Grade of Nisant to “A”.

(iii) Show age and FNO of that whose age >36 and DEPARTMENT is English

(iv) Write SQL command to add a field of marks in above table.

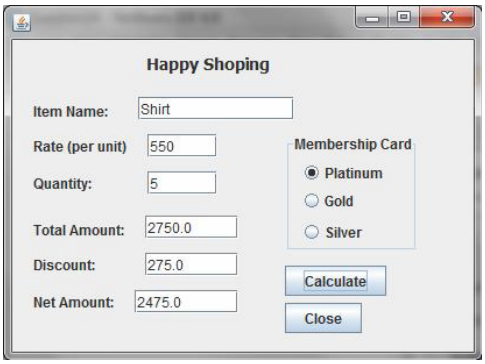
(v) Delete the record of that whose grade is not belonging to ‘A’

4. ABC Consultancy is a placement organization, assists job seekers. The Entry form has to be designed to facilitate the Registration Process with following features.
1. When Submit button is pressed, the following things should happen.
(a) If Post Graduate is checked, the 10+2 and Graduate checkboxes should also get selected automatically.
(b) If Graduate is checked, the 10+2 checkboxes should also get selected.
(c) A Message Box with “Hello Mr. ….. you are registered” or “Hello Miss… ….. you are registered” as per Gender of candidate. When Clear Button is pressed, all the text boxes, check boxes gets cleared, and Male and Science option is selected by default.

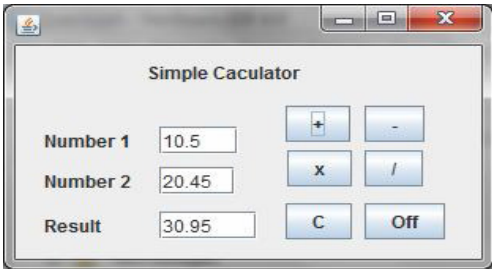


5. The Entertainment Paradise- A theater in Delhi wants to develop a computerized Booking System. The proposed Interface is given below. The theater offers different types of seats. The Ticket rates are- Stalls- Rs. 625/-, Circle- Rs.750/-, Upper Class- Rs.850/- and Box- Rs.1000/-. A discount is given 10% of total amount if tickets are purchased on Cash. In case of credit card holders 5% discount is given

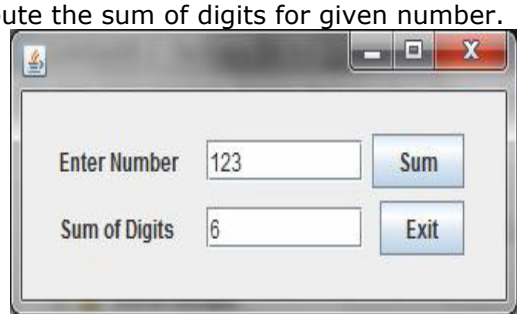
6. Develop a Billing application for Happy Shoping- A retail chain involved in sales of Readymade garments. The happy Shoping offers discount to its members holding Platinum, Gold and Silver card. The 10% discount is given to Platinum card, 8% to Gold Card and 5% to Silver Card holders on sales amount.



7 Develop a simple Calculator application as per given screen snapshot, to implement +, -, x and / operations. The text boxes get cleared when ‘C’ button is clicked.



8 Develop an application to compute the sum of digits for given number.



9 Rewrite the following fragment using switch:

```
if (ch== 'E')
   e++ ;
if (ch== 'W')
   w++ ;
if (ch== 'N')
   n++ ;
if (ch== 'S')
   s++ ;
else
   unknown++ ;
```

10 How many times the following loops will execute?

(a)
```
x = 5 ; y = 50 ;
while(x <= y){
x = y/x ;
. . . . . . . . . .
}
```

(b)
```
int m = 10, n= 7;
while(m % n >= 0) {
. . . . . .
m = m + 1;
n = n + 2;
. . . . . . . . . . }
```

11 Given the following code fragment:

```
i=2;
do{
System.out.println ("")+i);
i += 2;
} while (i < 51);
jOptionPane.showMessageDialog( null, "Thank you" );
```

Rewrite the above code using a while loop.

12 Given the following code fragment :

```
i = 100 ;
while (i > 0)
System.out.print ln( i--);
jOptionPane.showMessageDialog( null, "Thank you" );
```

Rewrite the above code using a do…while loop.

13 Rewrite following while loop into a for loop

```
int stripes = 0;
while (stripes <= 13) {
```

```
if (stripes %2 == 2)
System.out.print ln("Colour code Red");
else
System.out.print ln("Colour code Blue");
stripes = stripes + 1;
}
```

14 Find the output of the following code fragments ?

a)
```
int s = 14;
 if(s<20)
System.out.print("Under");
  else
System.out.print("Over");
System.out.print ln("the limit");
```

(b)
```
int s = 14;
 if(s<20)
 System.out.print("Under");
        else {
 System.out.print("Over");
 System.out.print ln("the limit");
        }
```

(c)
```
int s = 94;
 If (s < 20) {
 System.out.print("Under");
  }
else {
System.out.print("Over");
  }
System.out.print ln("the limit");
```

15 What will be the output of the following code fragment when the value of ch is
(a) 'A' (b) 'B' (c) 'D' (d) 'F'

```
switch (ch) {
    case 'A' : System.out.print ln ("Grade A");
    case 'B' : System.out.print ln ("Grade B");
    case 'C' : System.out.print ln ("Grade C");
    break;
    case 'D' : System.out.print ln ("Grade D");
    default : System.out.print ln ("Grade F");
}
```

16 Predict the output of following code fragments:

(a)
```
int i, j, n;
n=0; i=1;
do {
n++; i++;
} while (i<=5);
```

(b)
```
int i=1, j=0, n=0;
 while (i<4) {
  for(j=1; j<=i; j++) {
   n+=1;
     }
   i=i+1;
     }
   System.out.print ln(n);
```

(c)
```
int i=3, n=0;
while (i<4) {
n++; i--;
}
System.out.print ln(n);
```

(d)
```
int j=1, s=0;
 while(j<10) {
  System.out.print(j+ "+");
  s=s+j;
   j=j+j%3;
    }
 System.out.print ln("="+s);
```

17 Find out errors if any;

(a)
```
m=1;
n=0;
for(;m+n<19;++n)
System.out.print ln("Hello \n");
m=m+10; }
```

(b)
```
while(ctr !=10) ; {
 ctr=1;
sum=sum + a;
ctr=ctr + 1;
}
```

18 How are private members different from public members of a class?

19 Define Inheritance? Why it is an important concept of in object Oriented Languages.

20 How does the visibility mode control the access of members in the derived class? Explain with Examples

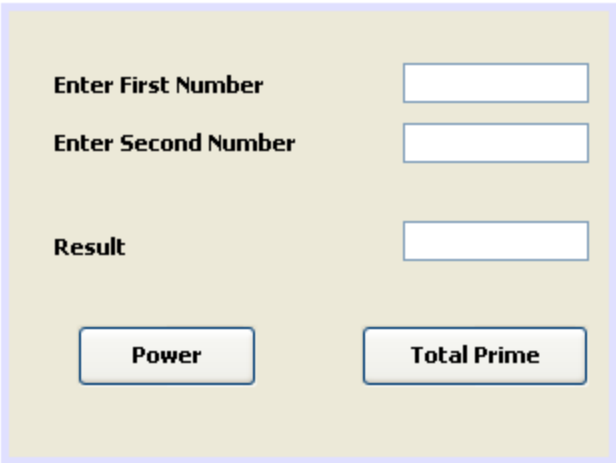
21 How are protected members different from public and private members of a class?

22 Define an abstract class and abstract methods.

23 What do you mean by Method Overloading? What conditions to fulfilled to overload a method?

24 Explain different types of type conversion with suitable example.

25 Write a function under command button Power to find a^b and under command button Prime to find the total no of prime values between first and second number.



26

a.
```
int j=1,s=0;
while(j<10)
{
System.out.print(j+"+");
s=s+j;
j=j+j%3;
}
System.out.print("="+s);
```

b.
```
int val1=2,val2=3;
for(int i=1;i<=3;i++)
{
System.out.println(" "+val1++ +","+ --val2);
System.out.println(" "+val2-- +","+ ++val1);
}
```

c.
```
long n=7654321;
long rev=0,rv=1;
do {
long r=n%10;
rev*=10;
if(r%2>0)   rev=(rev*10)+r;
else { System.out.println(" "+ r +":" + (rv*r/10));
}
n=n/10;
}while(n>0);
```

```
System.out.println("→" + rev);
```

27 a. What is showConfirmDialog ( ) method of JOptionPane class do ?
b.What is showInputDialog ( ) method of JOptionPane class do ?
c.What is the difference between a dialog created with JDialog and a dialog created with JOptionPane?
d.What are the various type of dialog options supported by JOptionPane?
e.Name four methods associated with JOption dialog.

28 Develop a GUI application to input a number and check whether it is prime or not.

29 Develop a GUI application to input a number and display its table.

30 Develop a GUI application to input a number and display its factorial.

31 Develop a GUI application to input a number and display it in reverse order.

32. Develop a GUI application to accept a string and display it in reverse order.

33. Develop a GUI application to accept a string and count the no of uppercase character in it.

34. Develop a GUI application to input a year and check whether it is leap year or not.

35. Write a program in java to display Fibonacci series.