Holiday Homework, 2017-18
Class: XI
Subject : Informatics Practices

Q1.

Ms. Rakhi works in an International Bank as an IT Head. She designed a simple interest calculator program as shown below:

The interest rate is given based on the account type as shown below:

ACCOUNT TYPE	INTEREST RATE %
SAVING	4 %
RECURRING DEPOSIT	6 %
FIXED DEPOSIT	8 %

i. Write the code required for 'INTEREST RATE' button to display interest rate as per the above given criteria.
ii. Write the code required for 'SI' button to calculate and display 'Simple Interest' based on the given formulae:
    SI=(amount*interest_rate*duration)/100;
iii. Write the code required for 'CLEAR ALL' to clear all the textfields.

Q2. What will be displayed in jTextField1 and jTextField2 after the following code is executed:

```
 int num = 35 , num1 = 46 ;
jTextField1.setText( num + num1 + " " ) ;
jTextField1.setText( " " + num + num1 ) ;
```
Q3. Raman has typed the following code:

```
int ch=Integer.parseInt(jTextField1.getText());
 switch(ch)
{
        case 1:jTextField2.setText("Service");
        case 2: jTextField2.setText("Complaint");
        case 3: jTextField2.setText("Operator");
```

```
        break;
                default: jTextField2.setText("Not a valid entry");
    }
```

On entering the value 1, 2 or 3, he is getting the same output. Mention the possible reason for the same.

Q4. In a java program Rajat wants to use a variable to store the quantity of an item which may be in whole numbers or decimals. Write a suitable java statement to declare the variable for the above mentioned purpose.

Q5. Given a String object named 'code' having value as "908" stored in it. What will be result of the following?

JOptionPane.showMessageDialog(null, " " +(code.length( )+ Integer.parseInt(code)));

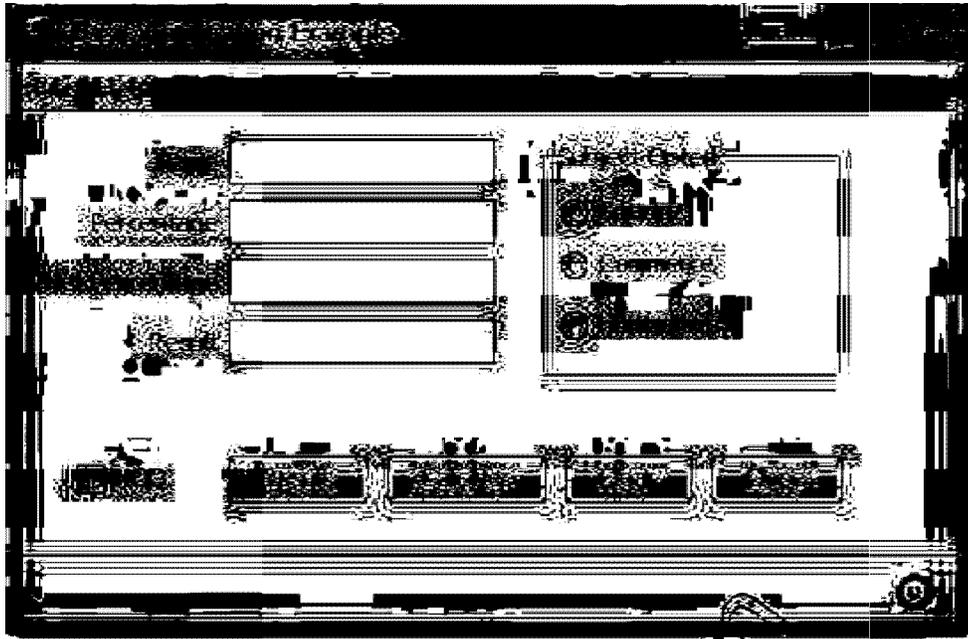Q6. RajMahal Hotel computerized its Billing System. Given below the data entry screen through which bill amount is calculated.

Rate	Breakfast		Lunch	Dinner
Veg	100		200	300
Non Veg	200		400	500

a. Write the code for calculate button to calculate amount as per the rate specified in the table, service tax (12% of amount) . Total bill amount=total + service tax.
b. Write the code to clear all textfields, uncheck checkbox and set Veg as the default option
c. Write the code to exit the application. Use ConfirmDialog with the following message "Are you sure you want to Exit "If only user presses Yes button then application should be closed.
d. Write the code to make textfields tfAmount, tfBillAmount non editable.

Q7. ABC School uses the following interface built in java to check the eligibility of a student for a particular stream from science, commerce and humanities. The user first enters the total percentage and selects the desired stream by selecting the appropriate option button. An additional 5% is marks is given to students of NCC.

Write Java Code for the following
a) On the Action event of the close button the application gets closed.
b) On the Action event of the clear button all the text fields and the check boxes get cleared.
c) On Action event of the button 'Calc Percentage' Net percentage of the student is calculated and displayed in the appropriate text filed. Net percentage is same as that of the actual percentage if the student doesn't opts for NCC otherwise 5% is added to actual percentage.
d) On Action Event of the button 'Result', the application checks the eligibility of the students. And display result in the appropriate text field. Minimum percentage for science is 70, for commerce 60 and for humanities 40.

Q8. XYZ Pens Company sells each pen at the cost of < 25.00. The Programmer has developed a GUI application as shown below :

The number of pens bought are entered by the user. The Amount is Number of Pens * 25.00

If a person buying pens is a 'Special Customer', 5% is given on the amount, otherwise no discount is given. Amount to be paid = Amount – Discount

Write code in Java to do the following :

    (i)   When Calculate button is clicked the Amount, Discount and Amount to be Paid are calculated and should be displayed in appropriate text fields.

    (ii)   When Clear button is clicked, all the Textfields and Checkbox are cleared.

    (iii)   When Stop button is clicked, the application is closed.

Q9. Rewrite the following program code using if else if statement

```
String remarks;
int num = Integer.parseInt(jTextField1.getText());
switch (num)
{
        case 0: remarks = "You have not won any points."; break;

        case 1: remarks = " You have won one point"; break;

        case 2: remarks = " You have won two points"; break;

        default: remarks = " All the best";

}
```

Q10. Write the value of z after execution of following code :

```
int j;
int z; j=4;
z = (4*++j)%3;
```

Q 11.   int a=2, b=3,z;

z= a++ * ++b /2 -5 * a + b;

 Find the value of a,b,z

Q 12.   int x=1,y=2;

x+= --x + y++ %5– x +--y;

find the value of x,y.

Q13 .int a=2,b=1,c=7;

 b- = a-- + ++b * 7+ c++%2;

find the value of a,b,c

Q14. What will be the content of the jTextArea1 after executing the following code :

```
INT n = 89;
jTextAreal.setText(Integer.toString(++n));
```

Q15. Mr. Rangaswami works at a Recreation analyst. He has created the following GUI.

When a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water Park or not is entered. Entry fees is < 500 per person. The person can choose to play at Water Park by selecting the checkbox. Rides of Water Park will cost < 250 extra per person.
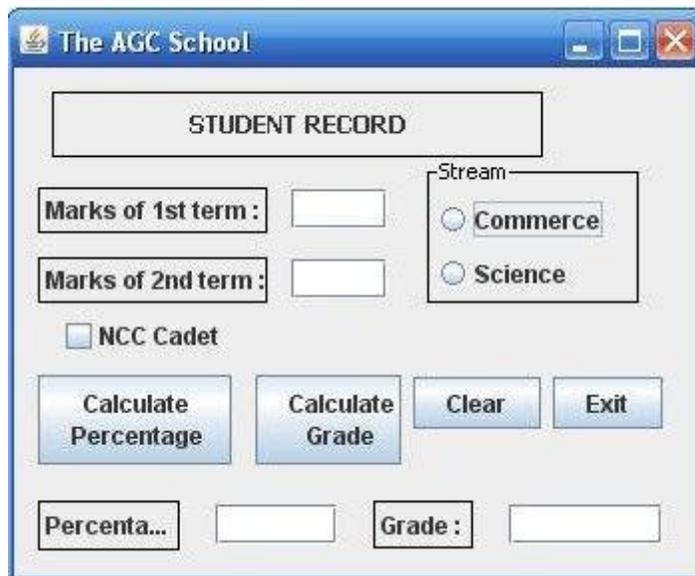
Help him to write code for the following :

(i) On the click of command button 'Calculate', textfield for 'Entry Fees' should display Entry
     Fees per person x Number of people
     If 'Water Park' checkbox is selected, textfield for 'Water Park Charges' should
     display Water Park Charges per person x Number of people. Textfield for 'Total
     Amount' should display sum of Entry Fees and Water Park Charges for all the people
     in the group.
(ii) Write Java code to clear all Textboxes on the click of 'Clear' button.
(iii) Write Java code to close the application on the click of 'Exit' button.

Q16. Read the following case study and answer the questions that follow :
Mr. Vidyarthi works in AGC School as a programmer. In order to develop a student
record application, he has created the following GUI in NetBeans.

The school offers two different streams, commerce and science, with different grading
criteria. The school also offers incentive to the NCC cadets in the form of a 3%
increment in percentage for all the NCC cadets. The grading criteria for two streams is
given below :

Stream	Percentage	Grade
Commerce	>=80 60-79 <60	A B C
Science	>=75 50-74 <50	A B C

(i) Write the code for the following :
  A. Write the code for "Exit" button to terminate the application.
  B. Write the code for "Clear" button to clear all the text fields and check box.
(ii) Write the code for "Calculate Percentage" button to calculate the percentage after finding the total marks of first term and second term (assuming that both marks are out of 100). Also ensure that NCC Cadets get an increment of 3% in their percentage.
(iii) Write the code for "Calculate Grade" button to calculate the grade depending on the stream selected according to the criteria given above.Q20. Given below the form for Maturity amount calculator:

Q17.

(a) Write sample code for calculate button to display rate of interest as per rate given in the table and calculate maturity amount.

(MaturityAmt = amount+amount*duration*rate_of_Interest*12)

Bank	Rate of Interest	Customer Type
SBI	9%	For SR citizen give extra 2% discount
ICICI	8.5%	
HDFC	8%	

(b) Write sample code for clear button to clear all entries and selection.
(c) Write code for close button to close an application.

Q18.Give any two properties of TextField control in java.

Q19. Virus software Hut has developed the following Interface as shown below.

```
┌─────────────────────────────────────────────────────┐
│              Virus S/w Hut                           │
│   Name of customer    ┌──────────────┐               │
│                       └──────────────┘               │
│                                                      │
│   Bill amount         ┌──────────────┐               │
│                       └──────────────┘               │
│                                                      │
│       O Cash      O Credit Card      O Cheque        │
│   ┌─────────────────────────────────────┐            │
│   │         Calculate Discount          │            │
│   └─────────────────────────────────────┘            │
│   Discount        ┌──────────────────┐               │
│                   └──────────────────┘               │
│                                                      │
│   Net Amount      ┌──────────────────┐               │
│                   └──────────────────┘               │
│                             ┌─────────┐              │
│                             │  Stop   │              │
│                             └─────────┘              │
└─────────────────────────────────────────────────────┘
```

If Bill amount is > 10,000 than discount is as follow

Payment Mode	Discount
Cost	15 %
Credit Card	N/L
Cheque	10 %

i.   Write the code to make the TextFields for Discount & Net Amount in editable.
ii. Write code to Calculate Discount as per the criteria and discount and net amount should displayed in TextField.
iii. Write code to close the interface.

Q20. What are these methods used for ?
   (i) IsSelected()   (ii) setSelected( )

Q21. What will be the output of the following code :
   System.out.println("Output 1 = " + 7.5 + 2.5);
   System.out.println("Output 2 = " + 7.5 / 2.5);

Q22. What is wrong with the following java statements :
   (i) int c = (a + b) / 4.2;   (ii) m + 5 = n;

Q23. How is NULL value different from 0 (zero) value?
Q24. Is a string containing a single character same as a char? Justify.
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