

Problem Solving using Java

Q1. Write codes in java those accepts a number in jTextField1 and displays the sum of all the digits of that number in jTextField2. **4**

OR

Write a program in Java to find the sum of digits of a number.

Q2. The following interface is used to calculate the net salary of a person after deducting the tax from the gross based upon the selection from the available radiobutton options (10%, 20% and 30%). The click event of the button will display the tax and the net salary. **4**

(b) Write codes to deselect all the radio buttons. **2**

SQL Queries

3. Write commands in SQL for the following:

(a) Write a SQL query to create a relation Domino" **1**

Field	Data Type	Size	Constraint
PizzaID	varchar	10	Primary key
PizzaName	varchar	15	Not Null
Price	int	5	Not Null
CustID	int	5	Not Null

(b) SQL insert the

record in the above relation: **1**

P101, Basic,250, 1150

Write statement to following

(c) Write query to show the details of Pizzas whose Price is greater than 150. **1**

(d) Write query to show the details of all Pizzas whose Name contains 'p' anywhere in the name. **1**

(e) Consider the following two relations: **1**

Relation "PizzaHut"

PizzaID	PizzaName	Price
P155	Basic	200
P500	Super	350
P999	Magic	400

Relation "Order"

PizzaID	CustID	CustCity
P155	C101	BAIJNATH
P999	C780	YOL

Write a SQL statement to find PizzaID, CustID and CustCity of those customers who have placed an order:

Problem Solving using Java

- Q1. Write Java codes those accept a number in jTextField1 and displays the reverse of that number in jTextField2. **4**
- Q2. The following interface is used to calculate the net salary of a person after deducting the tax from the gross based upon the selection from the available radiobutton options (10%, 20% and 30%). The click event of the button will display the tax and the net salary. **4**

- (b) Write codes to deselect all the radio buttons. **2**

SQL Queries

3. Write commands in SQL for the following:

- (a) Write a SQL query to create a relation "Train" **1**

Field	Data Type	Size	Constraint
TrainId	int	5	Primary key
TrainName	Varchar	15	Not Null
Source	varchar	20	Not Null
Destination	varchar	10	Not Null

(b) SQL insert the record in the above relation: **1**
12751, "Rajdhani", "Delhi", "Mumbai"

Write statement to following

- (c) Write query to show the details of Trains whose Source is "Delhi" in ascending order of their Destination. **1**

(d) Write query to show details of Trains whose name contains 'R' anywhere. **1**

(e) Consider the following two relations:

1

Relation "Passenger"

PID	PName
1001A	Rimsha
1002B	Atul
1003C	Akshay
1004D	Kavita

Relation "Booking"

PID	BookingID	BookingDate
1001A	T115	2017-06-12
1003C	T189	2017-08-11
1004D	T450	2018-01-18

Write SQL statement to find PName and BookingID of those passengers who have made a booking:

Q1 (a) What a program in Java to find the sum of all the even numbers between 1 to 20 using any loop statement? **4**

Q2 Consider the following MOBILE RECHARGE SYSTEM and answer the questions associated with it **6**

MOBILE RECHARGE SYSTEM

Mobile No Select Connection Type

Amount 2G

Discount 3G

Net Amount

Suggested names for different controls:

Mobile No - jTfMobile

Amount - jTfAmount

Discount - jTfDiscount

Net Amount - jTfNet

2G - jRb2G

3G - jRb3G

Calculate - jBtnCalculate

Exit - jBtnExit

(a) Write code to do the following

4

When user will press the Calculate Button (named `jBtnCalculate`) the Discount and Net Amount should be calculated based on the criteria given below and displayed on their respective TextFields (`jTfDiscount` , `jTfNet`)

Criteria for Discount Calculation

If user selects 2G Radio Button then the discount is

“7 %(Percent) of the Amount”

If user selects 3G Radio Button then the discount is

“ 11 %(Percent) of the Amount”

Criteria for Net Amount

Net Amount = Amount –Discount

(b) Write the code in Java to close the application whenever, user will click on the Exit Button.

2

Q3 (a) Consider the following table and write the SQL commands for the questions (i – iv):

4

Table Name : Software

Name	Type	Price	Date_Of_Purchase	Company
Java	Language	Null	2014-01-12	Oracle
Office	Writing	3000	2014-06-16	Microsoft
Kaspersky	Antivirus	500	2013-08-12	Kaspersky
MySQL	Database	Null	2015-01-18	Mysql
Windows8	OS	5000	2012-05-06	Microsoft

- i) Write SQL command to list those softwares where price is greater than 4000.
- ii) Write SQL command to list those softwares whose names starts with “K”.
- iii) Write SQL command to list those softwares whose price is Null.
- iv) Write SQL command to list those softwares whose Date_Of_Purchase is 2015-01-18;

(b) Consider the following relations

1

Relation Name : Customer

CustID	City
5000	Nurpur
4567	Ropar
3421	Patiala
8765	Ambala
4532	Kurali

Relation Name : GasBooking

CustID	Rate	Date_Of_Booking
4567	390	2014-16-09
3421	745	2013-17-05
4532	420	2012-11-01

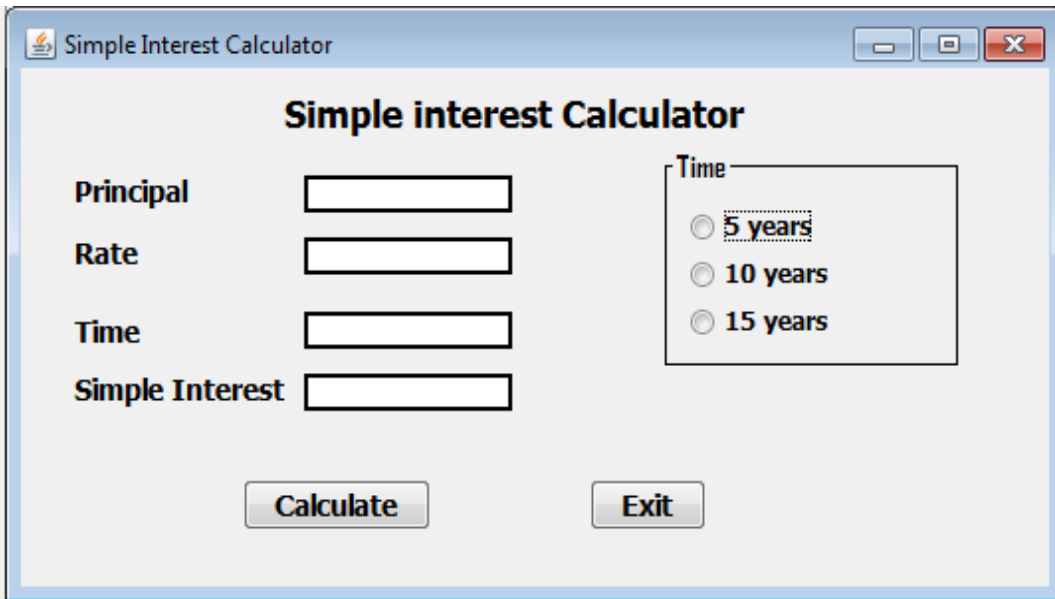
- i) Write the SQL statement to display CustID and City of those customers who have made a Gas Booking.

Problem Solving using Java

Q1. Write a code in java that accepts a number in jTextField1 and displays the product of each digit of the number in jTextField2. **4**

Q2. Read the following case study and answer the question that follows:

Develop a GUI application to calculate Simple Interest as per following layout:



(a) Write a code when Calculate button (jButton1) is clicked to accept Principal (JTextField1) and rate (jTextField2). Time is displayed in jTextField3 according to radio button selected by the user.

Simple Interest is calculated as $(\text{Principal} * \text{rate} * \text{time})/100$ and displayed in jTextField4.

4

(b) Write a code when Exit button (jButton2) is clicked to close the form. **2**

SQL Queries

3. Write commands in SQL for the following:

(a) Write a SQL query to create a relation "Customer" **1**

Field	Data Type	Size	Constraint
CustId	int	5	Primary key
CustName	char	15	Not Null
CustAddress	varchar	20	
CustPhone	int	10	

(b) Write a SQL query to insert the following record:

1

12751, "Sample Kumar", "B25 ICH Road", 9999911111

To list customer name and customer phone of all the customers in ascending order of their Customer Name.

1

(d) To list customer name, Address and phone of all the customers in which the Customer Name contains 'n'.

1

(e) Consider the following two relations: **1**

Relation "Student"

StudID	StudName
1001	Ritu
1002	Seema
1003	Atul
1004	Shaishav

Relation "Library"

StudID	BookID	BookName
1001	B115	IP
1002	B189	CS
1003	B450	IP

Write the SQL statement to find the StudName and BookName of those students who have issued a book from library: