MySQL Exercise 2

1. Select from any table a number and determine whether it is within a given range (for example, between 1 and 10)
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. 2. Select from any table three positive integers representing the sides of a triangle, and determine whether they form a valid triangle. Hint: In a triangle, the sum of any two sides must always be greater than the third side.

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1. Check if a given a year is a leap year. The condition is:- year should be (divisible by 4 and not divisible by 100) or (divisible by 4 and divisible by 400.). The year should be Selected from some table.
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4. Write a program that Selects from any table two character strings. Your program should then determine if one character string exists inside another character string.

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MySQL Exercise 3

1. Write a program containing a loop that iterates from 1 to 1000 using a variable I, which is incremented each time around the loop. The program should output the value of I every hundred iterations (i.e., the output should be 100, 200, etc.).
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2. Write a program that examines all the numbers from 1 to 999, displaying all those for which the sum of the cubes of the digits equal the number itself.

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1. Write a program that Selects from any table a minimum and maximum value for a radius, along with an increment factor, and generates a series of radii by repeatedly adding the increment to the minimum until the maximum is reached. For each value of the radius, compute and display the circumference, area, and volume of the sphere. (Be sure to include both the maximum and the minimum values.).

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1. A palindrome is a word that is spelled the same forward and backward, such as level, radar, etc. Write a program to Selects from any table a five letter word and determine whether it is a palindrome.
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3. Modify the above program to Select from any table a variable length word. This requires determining how many characters are read in.
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MySQL Exercise 4 1.

The CUSTOMER table of a state electricity board consists of the following fields:- Meter Number Varchar 4 Meter Type Char 1 Previous Reading Int 5 Current Reading Int 5 Customer Type Char 1 Last Bill payment Char 1 (values could be ‘Y’ or ‘N’) There are two types of meters viz. 3- phase or 1-phase coded as ‘T’ or ‘S’ respectively. There are 4 types of customers viz. Agricultural Industrial, Commercial and Residential with codes ‘A’ , ‘I’, ‘C’ and ‘R’ respectively. Formulae:- Units used = Current Reading – Previous Reading Rate =Rs.1/ 1.25/ 1.50/ 1.30 for A/I/C/R respectively. Amount = rate\*units used Surcharge = 5% for single phase 10% for 3 phase Excise = 30% of (amount +Surcharge) Net = Amount +Surcharge + Excise Write a block to calculate the bill for each customer. The program should insert the Meter no., Units used, Rate, Amount, Surcharge, Excise duty and Net for each customer into some other suitable table. Also, at the end, it should insert the total Amount, Surcharge, Excise and Net into some other table.

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MySQL Exercise 5

1. Write a stored function to take three parameters, the sides of a triangle. The sides of the triangle should be accepted from the user. The function should return a Boolean value:- true if the triangle is valid, false otherwise. A triangle is valid if the length of each side is less than the sum of the lengths of the other two sides. Check if the dimensions entered can form a valid triangle.
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3. Write a function that generates a random number between 1 and 10. Use any logic of your choice to achieve this.
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3. Create a function that accepts a string of n characters and exchanges the first character with the last, the second with the next – to – last, and so forth until n exchanges have been made. What will the final string look like? Write the function to verify your conclusion.

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MySQL Exercise 6

1. Write a stored procedure by the name of Comp\_intr to calculate the amount of interest on a bank account that compounds interest yearly. The formula is:- I = p (1+ r) y – p where:- I is the total interest earned. p is the principal. r is the rate of interest as a decimal less than 1, and y is the number of years the money is earning interest. Your stored procedure should accept the values of p, r and y as parameters and insert the Interest and Total amount into tempp table.

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2. Create a stored function by the name of Age\_calc. Your stored function should accept the date of birth of a person as a parameter. The stored function should calculate the age of the person in years. The stored function should return the age in years.

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MySQL Exercise 7 Create the following 3 tables and insert sample data as shown:- Ord\_mst Ord\_no Cust\_cd Status 1 Ord\_dtl C1 P Ord\_no Prod\_cd Qty 1 P1 100 1 Prod\_mst P2 200 Prod\_cd Prod\_name Qty\_in\_stock Booked\_qty P1 Floppies 10000 1000 P2 Printers 5000 600 P3 Modems 3000 200 1. Write a Before Insert trigger on Ord\_dtl. Anytime a row is inserted in Ord\_dtl, the Booked\_qty in Prod\_mst should be increased accordingly.

2. Write a Before Delete trigger on Ord\_dtl. Anytime a row is deleted from Ord\_dtl, the Booked\_qty in Prod\_mst should be decreased accordingly.

3. Write a Before Update of Prod\_cd, Qty trigger on Ord\_dtl. Anytime the Prod\_cd or Qty is updated, the Booked\_qty in Prod\_mst should be increased/decreased accordingly.

4. Write a Before Update of Status trigger on Ord\_mst. If the Status is updated from P (Pending) to D (Delivered), the Booked\_qty and Qty\_in\_stock from Prod\_mst should be decreased accordingly. If the Status is updated from P (Pending) to C (Cancelled), the details of the order should be deleted from Ord\_dtl and corresponding Booked\_qty from Prod\_mst should be decreased accordingly. (The Before delete trigger on Ord\_dtl would automatically decrease the Booked\_qty from Prod\_mst).

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