W e b E n g i n e e r i n g

Lab 01 – Practice Questions **Marks 00**

Instructions

Work on this lab individually. You can use your books, notes, handouts etc.

Objective

Today's lab will help you to refresh your basic programming concepts in Java.

What you have to do

Program the following tasks in Java, compile and execute them. The name of your files will be according to the task given in this lab.

Task 1 [00]

Write down a program that'll display the following shape.

```
**************
* ********** *
* * ****** * *
* * *     ** *
* * ****** * *
* ********** *
**************
```

Task 2 [00]

Write down a program that'll design a cake for our beloved country Pakistan on its Birthday that 14th of August using *, &, % or any other characters.

Task 3 [00]

Suppose an employee gets paid every **month** and earns **2000.00** each pay period. In a year the employee gets paid **12** times. Write a program that defines the following variables:

payAmount This variable will hold the amount of pay the employee earns each pay period.

payPeriods This variable will hold the number of pay periods in a year.

annualPay This variable will hold the employee's total annual pay, which will be calculated.

The program should calculate the employee's **total annual pay** by multiplying the employee's pay amount by the **number of pay periods** in a year, and store the result in the **annualPay** variable. Display the **total annual pay** on the screen.

No input from user is required.

Task 4 [00]

A soft drink company recently surveyed **12,467** of its customers and found that approximately **14 percent** of those surveyed purchase **one or more energy drinks per week** of those customers who purchase energy drinks, approximately **64 percent** of them prefer **citrus flavored** energy drinks. Write a program that displays the following:

The approximate number of customers in the survey who purchase one or more energy drinks per week

The approximate number of customers in the survey who prefer citrus flavored energy drinks

Task 5 [00]

Armstrong number is a number that is equal to the sum of cubes of its digits. For example 0, 1, 153, 370, 371 and 407 are the Armstrong numbers.
Write a program which have pre-defined *starting* and *ending* range and print all Armstrong numbers between the range.

☺ ☺ ☺ **BEST OF LUCK** ☺ ☺ ☺