**TUTORIAL 2**

**Question 1**

One large chemical company pays it salespeople on a commission basis. The salespeople receive $200 per week plus 9% of their gross sales for that week. For example, a salesperson who sells $5000 worth of chemicals in a week receives $200 plus 9% of $5000, or a total of $650. Develop a program that will input each salesperson’s gross sales for last week and will calculate and display that salesperson’s earnings. Process one salesperson’s figures at a time. Below is a sample input/ output dialog:

*Enter sales in dollars (-1 to end):* ***5000.00***

*Salary is: $650.00*

*Enter sales in dollars (-1 to end):* ***1234.56***

*Salary is: $311.11*

*Enter sales in dollars (-1 to end):* ***-1***

**Question 2**

Develop a program that will determine the gross pay for each of several employees. The company pays “straight time” for the first 40 hours worked by each employee and pays “time-and-a-half” for all hours worked in excess of 40 hours. You’re given a list of the employees of the company, the number of hours each employee worked last week and the hourly rate of each employee. Your program should input this information for each employee and should determine and display the employee’s gross pay. Here is a sample input/output dialog:

*Enter number of hours worked (-1 to end):* ***39***

*Enter hourly rate of the worker ($00.00):* ***10.00***

*Salary is $390.00*

*Enter number of hours worked (-1 to end):* ***40***

*Enter hourly rate of the worker ($00.00):* ***10.00***

*Salary is $400.00*

*Enter number of hours worked (-1 to end):* ***41***

*Enter hourly rate of the worker ($00.00):* ***10.00***

*Salary is $415.00*

*Enter number of hours worked (-1 to end):* ***-1***

**Question 3**

Write a program that reads in the side of a square and then prints that square out of asterisks. Your program should work for squares of all side sizes between 1 and 20. For example, if your program reads a size of 4, it should print out:



**Question 4**

Input an integer (5 digit or fewer) containing only 0s and 1s (i.e. “binary” integer) and print its decimal equivalent.

[Hint: use remainder and division operators to pick off the “binary” number’s digits one at a time from right to left]

**Question 5**

A prime number is any natural number greater than 1 that is divisible only by 1 and by itself. Write a C program that reads an integer and determines whether it is a prime number or not.