CSC-101 – HW3

Q1 (25 Points) Write a program that prompts the user to input three numbers.

The program should then output the numbers in ascending order, separated by a single space.

Q2 (25 points) A box of cookies can hold **24** cookies, and a container can hold **75** boxes of cookies.

Write a program that prompts the user to enter:

- The total number of cookies

The program then outputs:

- The number of boxes and the number of containers to ship the cookies.

Note that each box must contain the specified number of cookies, and each container must contain the specified number of boxes. If the last box of cookies contains less than the number of specified cookies, you can discard it and output the number of leftover cookies.

Similarly, if the last container contains less than the number of specified boxes, you can discard it and output the number of leftover boxes.

Q3 (25 Points) Every salesperson has a base salary. The salesperson also receives a bonus at the end of each month, based on the following criteria: If the salesperson has been with the store for five years or less, the bonus is $10 for each year that he or she has worked there. If the salesperson has been with the store for more than five years, the bonus is $20 for each year that he or she has worked there. The salesperson can earn an additional bonus as follows: If the total sales made by the salesperson for the month are at least $5,000 but less than $10,000, he or she receives a 3% commission on the sale. If the total sales made by the salesperson for the month are at least $10,000, he or she receives a 6% commission on the sale.

To calculate a salesperson's monthly paycheck, you need to know the base salary, the number of years that the salesperson has been with the company, and the total sales made by the salesperson for that month. Suppose baseSalary denotes the base salary, noOfServiceYears denotes the number of years that the salesperson has been with

the store, bonus denotes the bonus, totalSales denotes the total sales made by the salesperson for the month, and additionalBonus denotes the additional bonus.

Since your program handles currency, make sure to use a data type that can store decimals with a precision to 2 decimals.

Q4 (25 Points) The cost of renting a room at a hotel is, say **$100.00** per night. For special occasions, such as a wedding or conference, the hotel offers a special discount as follows.

If the number of rooms booked is:

- at least **10**, the discount is **10%**
- at least **20**, the discount is **20%**
- at least **30**, the discount is **30%**

Also if rooms are booked for at least three days, then there is an additional **5%** discount.

Instructions

Write a program that prompts the user to enter:

1. The cost of renting one room
2. The number of rooms booked
3. The number of days the rooms are booked
4. The sales tax (as a percent).

The program outputs:

1. The cost of renting one room
2. The discount on each room as a percent
3. The number of rooms booked
4. The number of days the rooms are booked
5. The total cost of the rooms
6. The sales tax
7. The total billing amount.

Your program must use appropriate named constants to store special values such as various discounts.

Since your program handles currency, make sure to use a data type that can store decimals with a precision to 2 decimals.