Introduction to Programming – IT110 – Lab Manual

Instructions:
1. Maintain a journal for this course.
2. Attempt all questions, and get yourself evaluated for them through a TA.

Lab 5

Write a C program for the following problems

Problem 1: Positive/Negative, Even/Odd
User will enter a number, you need to print if the number is positive even, positive odd, negative even or negative odd

e.g. user entered -145 → print “negative odd"
use entered 126 → print “positive even"

Problem 2: For all questions use Formatted Output

Part A: For user entered character, print character itself and its equivalent ASCII code

Part B: User enters a number representing paisa, display the value in the format of rupees.paisa

E.g user entered 345623, then the output should be 3456.23

Part C: User enters 3 product ID (with maximum 4 digits) and its price in rupees (with maximum 3 digits before decimal point), you need to display the output as in the example

User Input:
Product ID: 1750
Price: 12.456

Product ID: 105
Price: 6.749

Product ID: 6
Price: 125.89
Output must exactly be in this format:
1750 12.46
0105 6.75
0006 125.89

Problem 3: Vowel or Consonant
User will enter a character, you need to print if the character is Vowel or Consonant
(Note: You need to consider Upper and Lower case characters)
e.g. user entered c → print “Consonant”
user entered a → print “Vowel”
user entered E → print “Vowel”

Problem 4: Library late charge problem
A library charges fine for late return of books. For first 4 days, fine charged is Rs 1 per day, for 5-8 days it is Rs 3 per day, for 9-12 days it is Rs 5 per day and above 12 days it is Rs 7 per day. If book is not returned for 30 days, fine will be charged and student’s membership is cancelled. Accept the studentid, the number of late days for a student and print the fine paid by student.

User entered student id: 201711001 and Number of late days: 7 then the late fee is 1 Rs/day * 4 days + 3 Rs/day * 3 days = 13 Rs

Problem 5: Sales Receipt
Assuming a website is has 5 products which it is selling with each product ID and price in Rs for each as below:

Product ID: 1  2  3  4  5
Price:  5.0  21.0  10.5  7.25  99.75

Write a program that reads a series of pairs of numbers as: 1) Product IDs 2) Quantity sold. Write C program that will display the Product ID subtotal of sales for each product and grand total of complete sale

User input is:
Product IDs and its Quantity sold
Product ID: 2
Subtotal = 50 x 21 = 1050

Product ID: 4
Subtotal = 45 x 7.25 = 326.25

Product ID: 5
Subtotal = 37 x 99.75 = 3672.25

Grand total = 1050 + 326.25 + 3672.25 = 5048.5

Note: Your output must have only 2 digits after decimal point because you are displaying amount