OOP Assignment # 3
Issue Date: 26th April 2019
Due Date: 5th May 2019
Marks: 20 points

Please carefully read the following instructions .
INSTRUCTIONS
- **You're allowed to make necessary assumptions where required. Provide those assumptions**
- **as comments.**
- **It should be clear that your assignment would not get any credit if the assignment is submitted after the due date. No assignment will be accepted after the due date.**
- **Strict action will be taken if submitted solution is copied from any other student.**
- **You are supposed to submit your assignment on Slate only.**
- **If you find any mistake or confusion in assignment (Question statement), please**
- **consult before the deadline. After the deadline no queries will be entertained in this regard.**
- **For any query, feel free to email at: mahrukh.khan@nu.edu.pk**

Question #1

Write a C++ program for billing system of different hardware parts. The program should perform following tasks:

- Ask the user for total money he have.
- Show menu to customer for orders.
- Allow the customer to select more than one item of the selected menu.
- Prompt the customer if his selection exceeds the amount he has.
- Calculate and print the bill.

Assume that the shop offers the following items (the price of each item is shown to the right of the item):

- Hammer $5.45
- Screw Driver $3.20
- Electric Sander $7.00
- Jig Saw $6.99
- Power Saw $12.90
- Lawn Mower $13.00
- Sledge Hammer $2.00
- Wrench $8.45
- Mallet $12.00
- Axe $13.00

Notes:
Define a class Parts that contains following data members.

- menuItem [ ] of type string.
- menuPrice[ ] of type double.
- quantity of type int.
- Function setData: This function store the hardware items into the array menuList and price in menu price.
- Function showMenu: This function shows the different items offered by the shop and tells the user how to select the items and should allow the user to enter only items which are within the customer provided amount. You must call a printBill() function with an argument consist of an array in which the quantity again each item is stored.
- Function printBill: This function calculates and prints the bill and stores the items and their total cost in bill.txt.

Your program must contain following functions:
- main(): This function must call the function setData(),showMenu(),printbil()(Note that the billing amount should include a 5% tax.).

Question #2

A play in a local theater is in great demand. To help a local charity, the theater owner has decided to donate a portion of the gross amount generated from the movie to the charity. This example designs and implements a program that prompts the user to input the play name, adult ticket price, child ticket price, number of adult tickets sold, number of child tickets sold, and percentage of the gross amount to be donated to the charity. The output of the program is as follows.

```
Movie Name: ...................... Duckey Goes to Mars
Number of Tickets Sold: .................................2650
Gross Amount: ......................................... $9150.00
Percentage of Gross Amount Donated: 10.00%
Amount Donated: .......................................$ 915.00
Net Sale: ....................................................... $8235.00
```

Notes:
In the output, the first column is left-justified and the numbers in the second column are right-justified. The empty space between the first and second columns is filled with dots. (Hint: iomanip)