1. Complete the Item class to make the program runnable. The instance variables of Item should at least include title, (original) unit price, and quantity. Also write a test program with appropriate test cases.
2. Update the Sale class to support different discounts for seniors and preferred customers. Update your test program with appropriate new test cases. Your program must use switch (case) statement(s).
3. Update your program for (2) to support that the senior’s discount is only on Tuesday. Update your test program with appropriate new test cases. Your program must keep the switch (case) statement(s).
4. Refactor your program for (3) to eliminate the switch statement(s) by using polymorphism, and retest your program.
5. **(CS 571 Graduate Students Only)** Update your program for (4) to handle the new discount policy “buy one, get the second (and the rest of the same item) 50% off” for certain items.