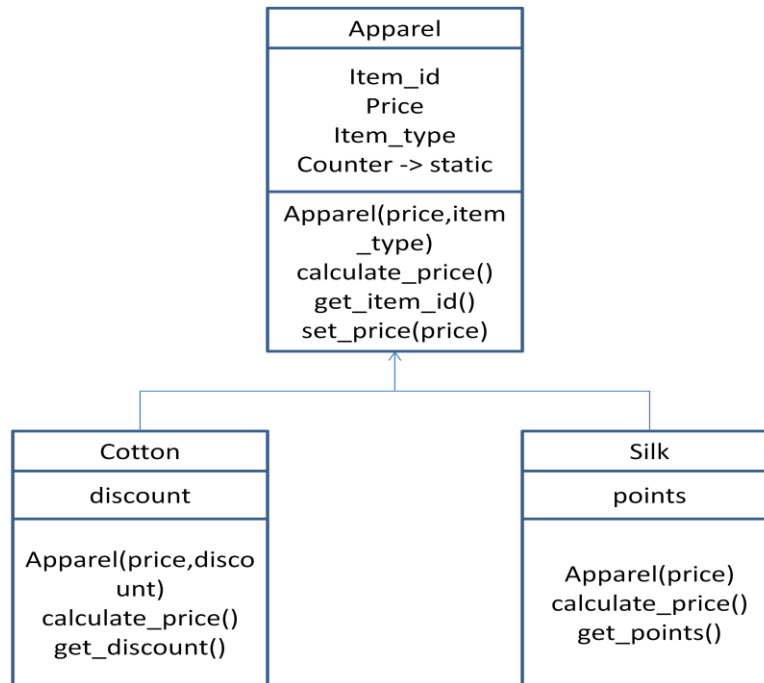1. An apparel shop wants to manage the items which it sells. Write a JAVA program to implement the class diagram given below.

Class Description:
Apparel class:

1. Initialize static variable counter to 100
2. In the constructor, auto-generate item_id starting from 101 prefixed by "C" for cotton apparels and "S" for silk apparels. Example – C101, S102, S103, C104 etc.
3. **calculate_price():** Add 5% service tax on the price of the apparel and update attribute, price with the new value

Cotton class:

1. While invoking parent constructor from child constructor, pass "Cotton" as item_type
2. **calculate_price():** Update attribute, price of Apparel class based on rules given below
   a. Add service tax on price by invoking appropriate method of Apparel class
   b. Apply discount on price
   c. Add 5% VAT on final price

Silk class:

1. While invoking parent constructor from child constructor, pass "Silk" as item_type

2. **calculate_price():** Update attribute, price of Apparel class based on rules given below
   a. Add service tax on price by invoking appropriate method of Apparel class
   b. Identify points earned based on rules given below:

      Silk apparels with price more than Rs. 10000, earn 10 points and anything less than or equal to that earn 3 points

   c. Initialize attribute, points with the identified points
   d. Add 10% VAT on price

Note: Perform case sensitive string comparison .

For testing:

- Create objects of Cotton class and Silk class
- Invoke **calculate_price()** on Cotton objects and Silk objects
- Display their details