

java.lang Package

S No.	Assignment Question
1	<p>The Ohio Blood Center (OBC) was formed in 1979 and collects and distributes more than 100,000 units of blood and plasma annually. The non-profit organization serves more than 40 hospitals in nearly 35 countries throughout Iowa, Pennsylvania, and Rhode Island. To achieve its long-term growth objectives, OBC's management team knew, it had to streamline business processes by incorporating a sales management system. This system will track all the blood bookings, the stock information, sales statistics, and counter details.</p> <p>Consider you to be a part of the team that implements the solution for designing the application.</p> <p>Create an application in Java, which can be used to track the blood booking and sales tracking in three different counters of the blood bank. The three different counters are Counter 1, Counter 2 and Counter 3 that sells different groups of blood. The price for blood at different counters varies accordingly.</p> <p>The application consists of two classes: the first class is the base class BloodReservoir that stores all the information about the cost of blood per unit and units of blood sold. The setter methods of this class set the value for cost per unit and total units sold. The getter methods return the sales price and the whole income of each counter that supplies blood units.</p> <p>The second class BloodReservoirTest is the derived class that extends the BloodReservoir class. This class uses the Math and Wrapper classes to calculate and process the information. This is the main class, where three counters are created as the instances of the base class.</p> <p>The application initially prompts the user to enter the total volume of blood stored in the blood bank. Once the user enters the amount it again prompts for additional volume stored for emergency purpose. Next, the application inquires about the prices of blood per unit for three different counters. Once the application takes in all the above information it starts calculating the sales price for each counter. Hence the application prompts the user to enter the counter number where the blood is actually booked for selling. Next the user is prompted to enter the number of units of blood the user wants from that particular counter. If the unit of blood required is less than 30 then the application prints a warning message saying "Sales only MORE THAN 30 Pints" (Where, pint is the unit of blood that is being sold here in this blood bank). Else the application allows the sales person to supply blood if reservoir contains more than 30 Pints and the variable that stores the total units sold is incremented by the</p>

	<p>currently sold units. This is checked for all the counters depending upon the counter numbers as entered by the user.</p> <p>The application also asks the user whether he wants to track the sales for another blood booking counter. This loop checks the entire procedure till the user enters a “no”. The application also takes care of failed or interrupted I/O operations.</p> <p>At the end, the application prints a summary sheet that displays the total units of blood sold and the total sales generated for each counter. Finally, it also displays the balance blood units in the blood bank at the end of the day.</p>
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