

Question - 1

SCORE: 20 points

Implementation of equals() and hashCode()

Your company has many different products and each product has several different sizes.

The inventory management system treats each combination of "(String) productName" & "(int) size" as an individual *Product* record.

The records also contains a "(LocalDateTime) lastUpdate" field as a timestamp, which can be updated such that even if it is different, as long as the *productName* and *size* fields are equal, the *Product* record should be considered as same.

product1: productName = "Gloves", size = 5, timestamp = "2018-01-15 18:35:05"

product2: productName = "Gloves", size = 7, timestamp = "2018-01-11 10:02:55"

product3: productName = "Gloves", size = 5, timestamp = "2017-12-03 11:28:23"

product4: productName = "Hat", size = 5, timestamp = "2017-12-03 11:28:23"

With the above example data, only `product1.equals(product3)` should return *true* as their *productName* and *size* fields are identical (*timestamp* may vary). All other *equals()* calls should return *false*.

Please complete the *equals()* and *hashCode()* methods for the *Product* class.

Question - 2

SCORE: 5 points

Strings

The compares the characters inside a string object, whereas compares two objects references to see whether they refer to the same instance.

- ☐ == operator , equals() method
- ☐ equals() method , compare() method
- ☒ equals() method, == operator
- ☐ == operator, compare() method

Question - 3

SCORE: 10 points

Reverse linked nodes

Reverse a singly linkedNode list;
Such as :

Input: 1->2->3->4->5->NULL
Output: 5->4->3->2->1->NULL

The definition of a linkedNode is given: