Everyone MUST answer questions below

(1) Distinguish carefully between reusability, portability, and interoperability.

(2) Consider an automated teller machine (ATM). The user puts a card into a slot and enters a four-digit personal identification number (PIN). If the PIN is incorrect, the card is ejected. Otherwise, the user may perform the following operations on up to four different bank accounts:

(i) Deposit any amount. A receipt is printed showing the date, amount deposited, and account number.

(ii) Withdraw up to $200 in units of $20 (the account may not be overdrawn). In addition to the money, the user is given a receipt showing the date, amount withdrawn, account number, and account balance after the withdrawal.

(iii) Determine the account balance. This is displayed on the screen.

(iv) Transfer funds between two accounts. Again, the account from which the funds are transferred must not be overdrawn. The user is given a receipt showing the date, amount transferred, and the two account numbers.

(v) Quit. The card is ejected.

Explain how you would ensure that as many modules as possible of the product can be reused in future products.

(3) You are responsible for porting a 750,000-line COBOL product to your company's new computer. You copy the source code to the new machine, but discover when you try to compile it that every one of the over 15,000 input-output statements has been written in a nonstandard COBOL syntax that the new compiler rejects. What do you do now?

(4) Why do you think that some cynical software organizations refer to milestones as millstones? (Hint: Look up the figurative meaning of millstone in a dictionary.)

(5) Why do you think that, despite its drawbacks, lines of code (LOC or KDSI) is so widely used as a metric of product size?