

CS6403 Software Engineering

TADR (Think, analyse, discuss and respond) – 1

1. You are in charge of automating a multi-site architectural practice. The cost of developing the software has been estimated to be \$530,000. Approximately how much additional money will be needed for postdelivery maintenance of the software?
2. You are a software-engineering consultant. The chief information officer of a regional gasoline distribution corporation wants you to develop a software product that will carry out all the accounting functions of the company and provide online information to the head office staff regarding orders and inventory in the various company storage tanks. Computers are required for 21 accounting clerks, 15 order clerks, and 37 storage tank clerks. In addition, 14 managers need access to the data. The company is willing to pay \$30,000 for the hardware and the software together and wants the complete software product in 4 weeks. What do you tell him? Bear in mind that your company wants his corporation's business, no matter how unreasonable his request.
3. Nine months after delivery, a fault is detected in the software of a product that analyzes DNA using the Stein–Röntgen reagent. The cost of fixing the fault is \$18,900. The cause of the fault is an ambiguous sentence in the specification document. Approximately how much would it have costed to correct the fault during the analysis phase? Suppose that the fault had been detected during the implementation phase. Approximately how much would it have cost to fix then?
4. Describe a situation in which the client, developer, and user are the same person.
5. What problems can arise if the client, developer, and user are the same person? How can these problems be solved?
6. What potential advantages accrue if the client, developer, and user are the same person?
7. It is your first day at your first job. Your manager hands you a program listing and says, "See if you can find the bug." What do you reply?
8. Instead of implementing component c9 of a software product, the developers decide to buy a COTS component with the same specifications as component c9. What are the advantages and disadvantages of this approach?
9. Instead of implementing component c37 of a software product, the developers decide to utilize an open-source component with the same specifications as component c37. What are the advantages and disadvantages of this approach?