

Computer Programming

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Session: Introduction

Recap



- Computer is a machine
 - It can operate only when a 'program' is given to it
 - Program is a set of instructions
 - Computer first reads and understand the entire program
 - It then executes the instructions in specified order

Overview of This Lecture



- Instructions and Procedures
- A recipe for preparing Indian tea
- Procedure for a cashier in bank

Instructions, Procedures

- We often instruct people to do something
 - Please get me a glass of water
 - Please keep this book on the shelf
- Written Instructions are needed when
 - A task is complex, needs many steps to be carried out
 - Different people have to do the same task in exactly the same way

Recipe for preparing Indian Tea



- Take a cup of water in a vessel
- Add two teaspoons sugar, one teaspoon tea leaves, milk
- Boil for 3 minutes
- Strain into a tea kettle
- Serve in a cup

(Wrong) Recipe for preparing Indian Tea



- Take a cup of water in a vessel
- Boil for 3 minutes
- Add two teaspoons sugar, one teaspoon tea leaves, milk
- Strain into a tea kettle
- Serve in a cup

Quiz



You will serve (a) Good Indian Tea (b) Hot water
(c) Some funny looking mixture (d) None of these

Analysis of the Quiz answers



- Since the water was not boiled with all ingredients, you will certainly not get the Good Indian Tea. (a) is wrong
- You did add ingredients just before straining, so you will not have plain hot water definitely. (b) is wrong
- Some colour from tea leaves, and some sweetness from Sugar will be added. (c) is correct
- Since (c) is correct, (d) is obviously incorrect

A Banking Procedure



- An Old Bank maintains account information in ‘Ledgers’
- Customer comes to withdraw money from account
 - Presents a cheque or a withdrawal-slip
 - Should be paid cash if balance is adequate
 - Appropriate entries must be made in the ledger
- A written procedure is used by the cashier

A job-card for Bank Cashier



- Greet the customer and collect the instrument presented.
- Keep the instrument on your right, and keep a paperweight on it.
- Check balance in Account ledger
- Write a 'debit' entry in the ledger, update balance amount
- Count cash, and hand it over to the customer.
- Thank the customer for banking with your bank.

Summary



- A written procedure
 - Must be first fully read and understood
 - Then all steps must be executed in the specified order