

Programming Basics
using
Real-life examples

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What is programming?

- Translating idea to steps in “restricted” English language
- Logical Thinking & execution
- simpler than logic puzzles
- lot simpler than learning a foreign language
- Not a cryptic activity
- Underlying concepts are similar to daily activities
- Technical Common Sense

Activities

- Recipe to make your favorite food
- Assembly instructions for a toy
- Getting ready in the morning
- Going from one place to another

What is common to all of these?

Sequence of steps

More activities

- Go by car or take the bus?
- Go for a movie or study?
- Fly or drive?
- Carry a lunch-box or get lunch in café?

What is common to all of these?

Selection / decision / IF statement

Even more activities

- Eat cookies from a box
- Answer an exam that has several questions
- Get a list of items at the grocery store
- Moving all items from one room to another

What is common to all of these?

repetition / loop / iteration

Summary

- All programs have only 3 control structures:
Sequence, decision & repetition
- These are similar to activities we do every day.
- Problem description → High level idea →
Detailed Pseudocode → Implement in specific
language → Executable program