

1 Designing programs – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
input	输入	_____
output	输出	_____
program	程序	_____

Recall

You have used many programs –apps, games, websites:

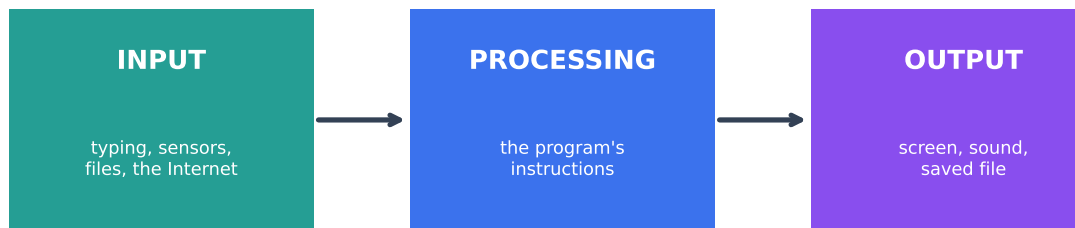
- Every program was designed by someone to do a job.
- Big programs are built by teams working together.
- A program takes something in and gives something back.

This sheet lines up how programs are made. Each idea has a worked example.

New ideas

■ 1 Input, process, output

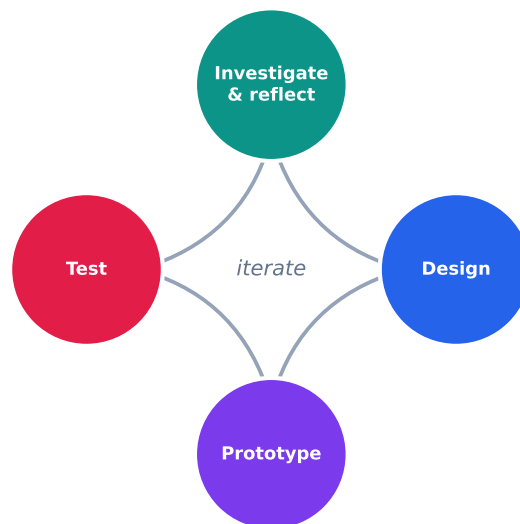
Most programs follow the **input–process–output** pattern: take an **input** 输入, do some processing, then give an **output** 输出.



Worked example. A calculator app takes two numbers (input), adds them (process), and shows the total (output).

■ 2 The development cycle

A **program** 程序 is built step by step: plan it, write it, test it, and improve it –often looping back to fix problems.



■ 3 Working together

Large programs are built by **teams**. Collaboration –sharing ideas and reviewing each other’s work –produces better, more reliable programs.

■ 4 Purpose

Every good program has a clear **purpose** –a problem it solves or a need it meets. Knowing the purpose guides every design decision.

Watch out: writing code is only one part of making a program. Planning what it should do, and testing that it really works, matter just as much –skipping them leads to buggy software.

Practice

Try these in order. The methods are all above.

2.1 State the three parts of the input–process–output pattern. [3]

2.2 For a program that finds the average of some test scores, state its input, process, and output. [3]

2.3 State two things that happen in the program development cycle besides writing code. [2]

2.4 State one benefit of programmers working in a team. [1]

2.5 Explain why knowing a program’s purpose is important. [1]
