8 The three structures – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	**Write it 3 times** (English)		
sequence			
selection			
iteration			
counter			
total			

Recall

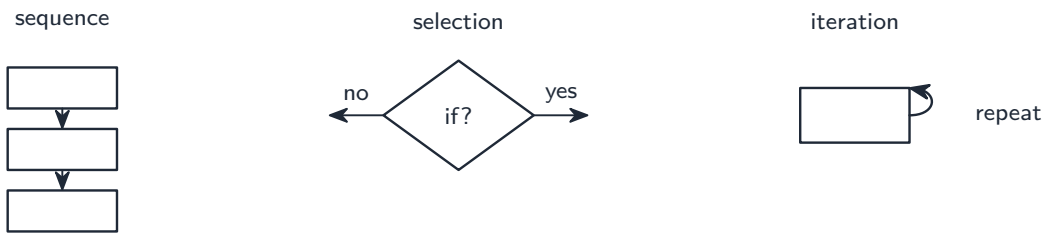
Programs are built from just three basic structures.

New ideas

Read these first, then do the Practice.

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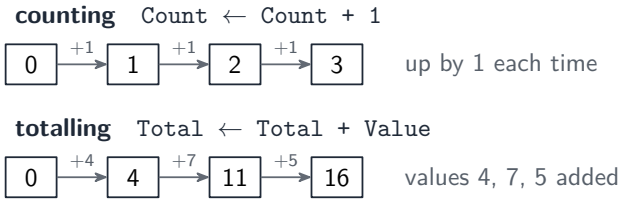
1 The three structures



- **sequence** – steps run one after another;
- **selection** – a choice with IF (yes/no);
- **iteration** – a loop that repeats steps.

2 Counting and totalling

Inside a loop, a program often uses a **counter** or builds a **total** :



Watch out: every program is built from three structures – **sequence** (in order), **selection** (a choice, IF), **iteration** (a loop). A **counter** (`count = count + 1`) counts how many; a **total** (`total = total + value`) builds a running sum.

Practice

Try these in order.

8.6 Name the three basic programming structures. [3]

8.7 Which structure makes a choice? [1]

8.8 Which structure repeats steps? [1]

8.9 What does `count = count + 1` do? [1]

8.10 Inside a loop, what does `total = total + value` do? [1]

8.11 Challenge. A program sets `total = 0`, then for each of the numbers 5, 3, 2 it runs `total = total + value`. What does `total` hold at the end? [2]

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