

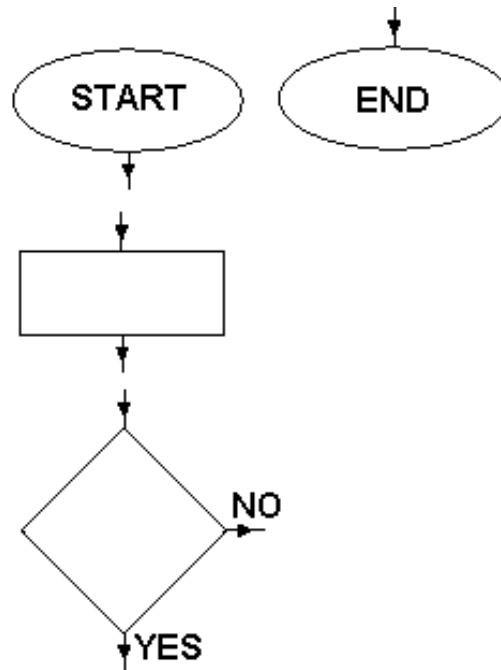
# Unit 1 Section 2 : Flow Charts for Practical Tasks

A *flow chart* is a way of showing how a task should be carried out.

All the flow charts we will be looking at begin with a *Start Point* and finish with an *End Point*. These look like this on the chart :

Most of the boxes on a flow chart are *instructions*, which tell you what to do next. These appear in rectangular boxes like the one shown on the right:

Sometimes a question needs to be answered to decide what instruction should happen next. These questions are put in *decision* boxes like the one on the right:



To construct a flow chart we need to think about the order in which the operations need to occur, then draw the chart.

## Flow Chart Example 1

We will now draw a flow chart for having a bath.

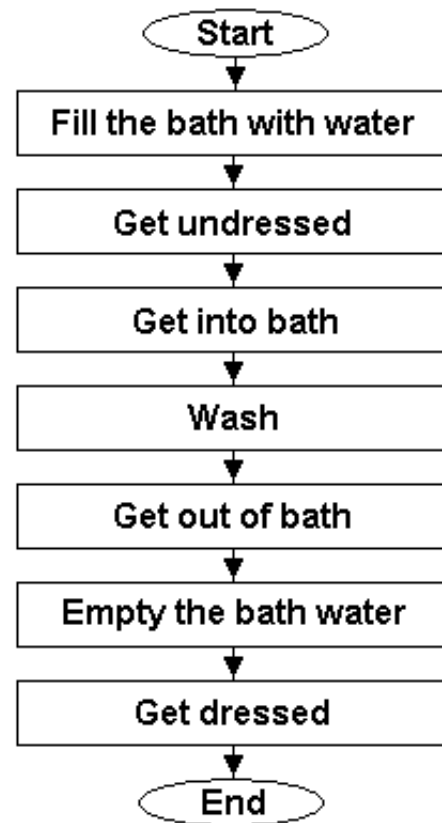
We start by thinking about the steps involved:

- (1) Fill the bath with water
- (2) Get undressed.
- (3) Get into bath.
- (4) Wash.
- (5) Get out of bath.
- (6) Empty the bath water.
- (7) Get dressed.

Now we need to draw the chart with instruction boxes. There are no decisions on this chart - the steps all follow on from one another. Remember the **Start** and **End** boxes.

The final chart is shown on the right. Of course some people might do some of these steps in a different order,

but hopefully they get undressed before getting in the bath!



## Flow Chart Example 2

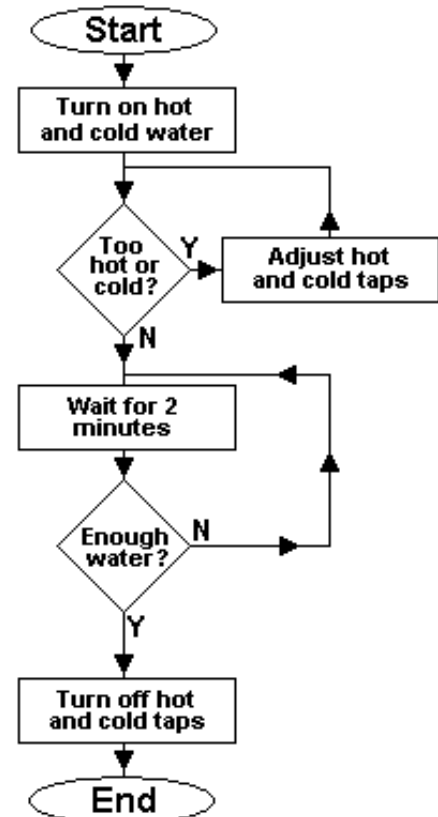
The step *Fill the bath with water* in the previous example could have been more detailed. For example, you need to check if there is enough water and whether it is at the right temperature while running the bath.

Again we need to think about the steps involved:

- (1) Turn on the hot and cold taps.
- (2) Is it too hot or cold? If it is, go to step 3, otherwise go to step 4.
- (3) Adjust the hot and cold taps and go back to step 2.
- (4) Wait for 2 minutes.
- (5) Is the bath full? If it is, go to step 7, otherwise go to step 6.
- (6) Go back to step 4.
- (7) Turn off the hot and cold taps.

Now we need to draw the chart. This time we need to use decision boxes for steps 2 (where the temperature of the water is checked) and 5 (where it is checked if the bath is full).

The final chart is shown on the right.



## Exercises

In the questions below, you will need to fill in the detail on some flow charts for practical tasks.

In each one you will be given several operations to choose from and a flow chart to fill in. When you have finished, click on the **Check** button to find out whether you have answered correctly. If your answer is completely right then **✓ Correct** will appear and you should move on to the next question. If **✗ Try again** appears then part of your answer is wrong. Click on **✗ Try again** to have another go. If you can't work out the right answer then click on **Tell me!** to see the answer.

### Filling in diagrams

At various points in this exercise you will need to fill in flow charts by picking items and placing them in the correct place. The boxes on the right are for practising this process.

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To copy a letter into a box, first click on the letter, then click the box where you want it to go. An arrow will show the currently selected letter. To clear a box, make sure no letter is selected, and then click that box.

A	B	C	D	E
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Try putting the word BED in the blue boxes, then check if you are correct below.

When you have finished, click the Check button.

**Check**

### Question 1

The flow chart on the right is meant to show the steps for making and drinking a glass of blackcurrant squash.

Place the instructions below in the flow chart.

Make sure you put the instructions in the correct order.

**Pour measure of  
juice into glass**

**Fill up glass to  
top with water**

**Take juice out  
of cupboard**

**Drink  
juice**

When you have finished, click the Check button.

**Check**

### Question 2

The flow chart on the right is meant to show the steps for stopping working on a computer and shutting it down.

Place the instructions below in the flow chart.

Some of the instructions are not required - you should only include those which are relevant to the task.

**Quit the  
program**

**Check your  
electronic mail**

**Switch off  
the machine**

**Turn on  
the computer**

**Finish working on  
your document**

**Select  
'shut down'**

**Start a new  
document**

**Save your work  
on a disk**

When you have finished, click the Check button.

**Check**

### Question 3

The flow chart on the right is meant to show the steps for working out 4.72 divided by 1.18 on a calculator.

Place the instructions below in the flow chart.

Some of the instructions are not required - you should only include those which are relevant to the task.

**Read the  
answer**

**Enter 4.72 on  
the calculator**

**Enter 1.18 on  
the calculator**

**Press the C  
(cancel) key**

**Press the ÷  
(divide) key**

**Press the ×  
(multiply) key**

**Enter 4.00 on  
the calculator**

**Press the =  
(equals) key**

When you have finished, click the Check button.

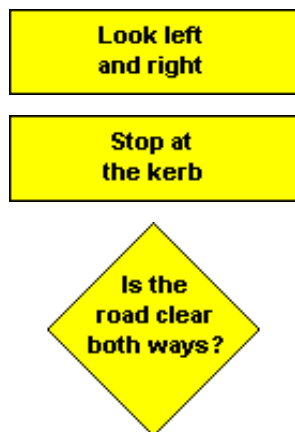
**Check**

### Question 4

The flow chart on the right is meant to show the steps for safely crossing the road. There is a decision box in this flow chart.

Place the boxes below in the flow chart.

**Cross the  
road carefully**



When you have finished, click the Check button.

**Check**

### Question 5

The flow chart on the right is meant to show the steps for making a move in a 'Snakes and Ladders' game.

Place the boxes below in the flow chart. Some are instruction boxes and some are decision boxes, so you need to decide which is which.

**Climb up ladder**

**Landed on snake head?**

**Throw dice**

**At bottom of ladder?**

**Move the counter**

When you have finished, click the Check button.

**Check**

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**You have now completed Unit 1 Section 2**

**Your overall score for this section is**

### Correct Answers

You answered  questions correctly out of the  questions in this section.

### Incorrect Answers

There were  questions where you used the *Tell Me* button.

There were  questions with wrong answers.

There were  questions you didn't attempt.

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