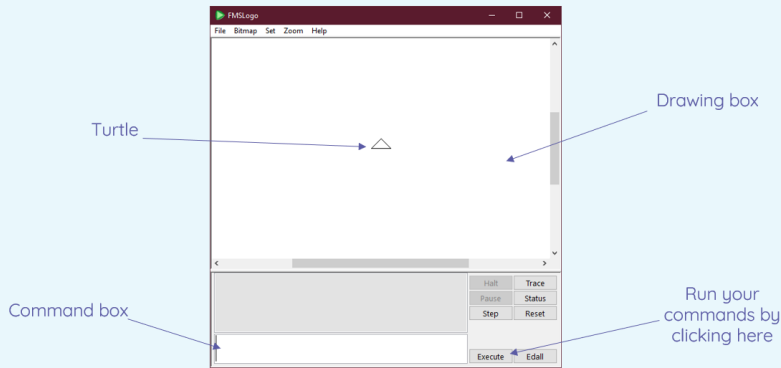




The Logo interface



Key Vocabulary	Definition
Algorithm	An algorithm is an ordered set of precise instructions
Pattern Repeat	Repeat means 'to do or say something again'. A pattern repeat is repeated over and over again.
Code Snippet	A code snippet is a small, reusable code.
Decompose	Breaking down a problem into smaller parts.

Basic commands in Logo

FD 100 — Forward 100 (moves forward 100 steps)

BK 100 — Back 100 (moves back 100 steps)

RT 90 — Right 90 (turns right 90°)

LT 90 — Left 90 (turns left 90°)

CS — Clear screen

A number of logo commands need to have a number added after a space, eg
 Command_number
 FD 100
 The number indicates how far to move or turn.

How Amazon Warehouse Robots use Coding and programming.



Pattern Repeats



Debugging — finding and fixing errors

Remember to use your design as you program, following along with your plan to check that your programming is correct.

If you find an error in your design, use a different coloured pencil to correct it.

What debugging strategies have we used before?

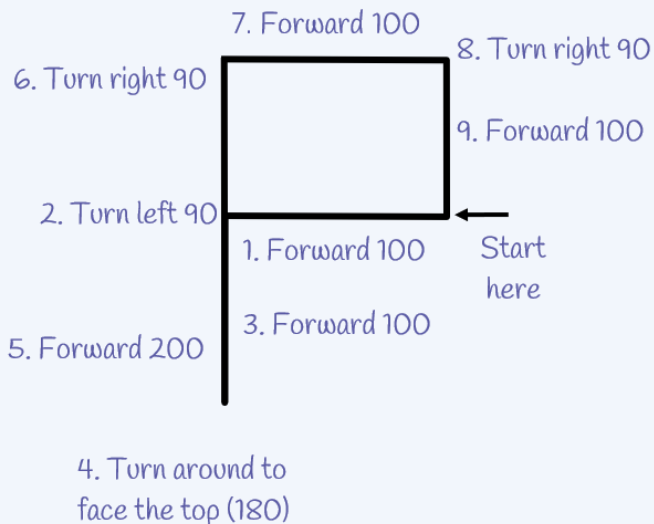
- Tracing through the code line by line to check it
- Reading the code out loud to see if it makes sense
- Decomposing the program into smaller parts to find errors
- Looking at other patterns with a similar code and checking your changes

Turtle Academy





How to make a letter:



Writing algorithms

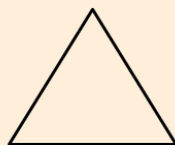
Write the algorithm for a square, either by using an annotated drawing, or by writing a list of instructions under the shape. Remember to:

- Mark a start position and direction
- Number your steps
- Include values for line lengths and degrees for turns



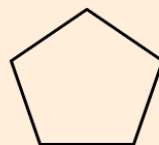
Writing an Algorithm

Triangle



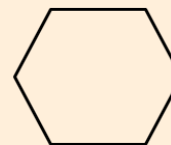
120°

Pentagon



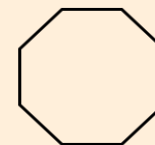
72°

Hexagon



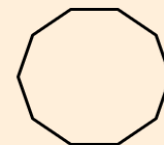
60°

Octagon



45°

Decagon



36°

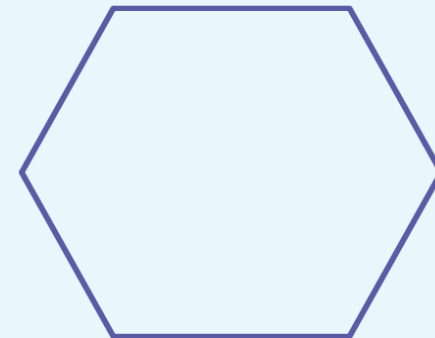
The angle shown is the amount of turn needed for each corner of the shape.

Decomposition in programming

When we think about what we need to program, we can also decompose our task into smaller parts.

For example, when planning how to draw a hexagon, we can break it down into these parts:

1. Clear the screen
2. Go forward 100
3. Turn right 60 degrees
4. Repeat steps 2 and 3 six times



repeat 6 [fd 100 rt 60]

Designing wrapping paper.

