

Programming Ideas Simplified

Indefinite infinite Loops

Terms of use are on the last slide

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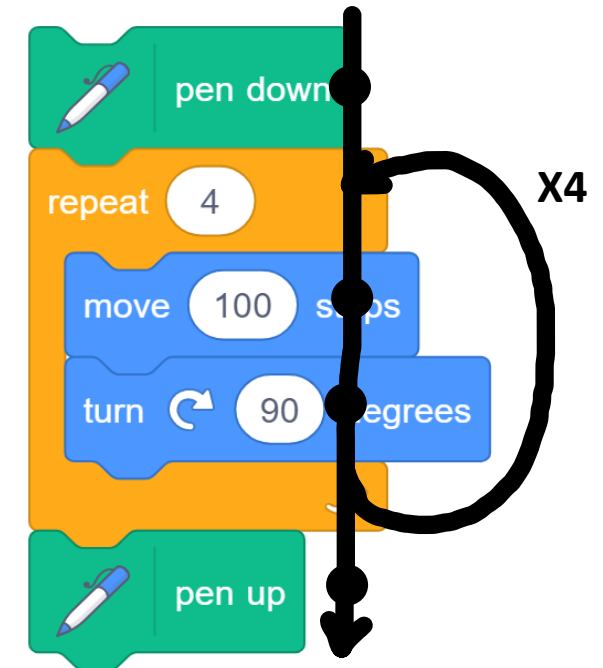
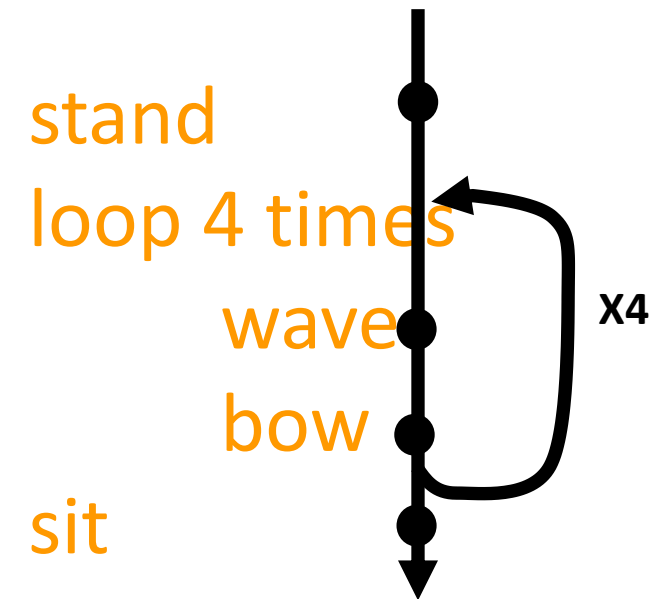


Revising Count-Controlled-Loops

A loop is a set of instructions that are repeated

A count-controlled-loop

- Can replace a sequence where there is a pattern.
- Is controlled by the number
- Ends after the number of repeats are complete
- Is called a repeat loop in Scratch programming
- Has a flow of control (order that commands are executed in)
- Can be used in an algorithm or in programming



Indefinite Loop

Loop always
stand
sit

Indefinite Means
We do **NOT** know
how many times it
will loop or how
long it will run for

Indefinite Loop

Loop always

→ stand

→ sit

Actions **inside** a
loop are indented

Indefinite Loop

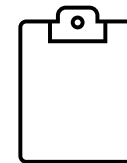
Loop always
stand
sit

Can you roleplay
this everyday
algorithm?

Indefinite Loop

Loop always
stand
sit

What
stops this
loop?



Indefinite Loop

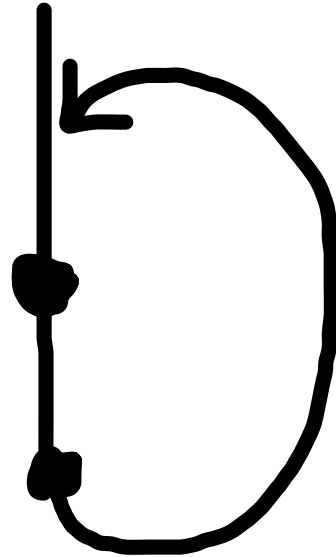
Loop always
stand
sit

What
stops this
loop?

Nothing

Flow of control

Loop always
stand
sit



Indefinite Loop

Stand up

Face the front

Loop always

move forward 1 step

Turn quarter turn to right

Can you roleplay
this everyday
algorithm?

Indefinite Loop

Stand up

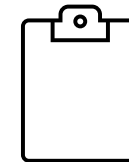
Face the front

Loop always

move forward 1 step

Turn quarter turn to right

What actions are
inside the loop?



Indefinite Loop

Stand up
Face the front
Loop always

move forward 1 step

Turn quarter turn to right

What actions are
inside the loop?

Indefinite Loop

Stand up

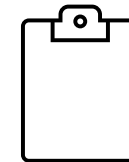
Face the front

Loop always

move forward 1 step

Turn quarter turn to right

What actions are
outside the loop?



Indefinite Loop

Stand up

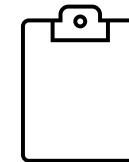
Face the front

Loop always

move forward 1 step

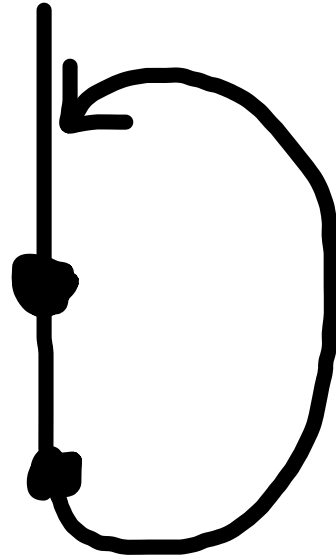
Turn quarter turn to right

What actions are
outside the loop?



Flow of control reminder

Loop always
stand
sit



Flow of control

Stand up

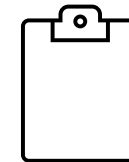
Face the front

Loop always

move forward 1 step

Turn quarter turn to right

Can you draw the
flow of control?



Flow of control

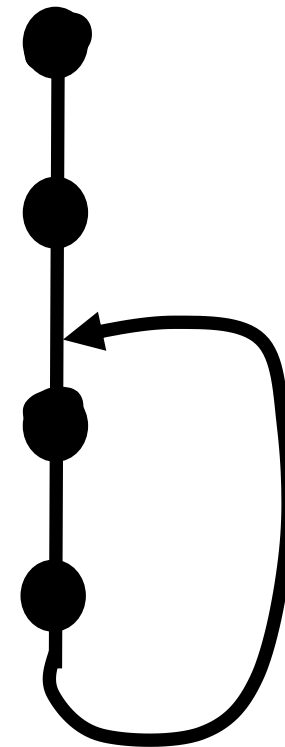
Stand up

Face the front

Loop always

move forward 1 step

Turn quarter turn to right



Indefinite loop

Stand up

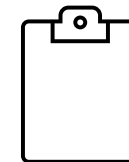
Face the front

Loop always

move forward 1 step

Turn quarter turn to right

Can you have
actions after the
loop?



Indefinite loop

Stand up

Face the front

Loop always

move forward 1 step

Turn quarter turn to right

Can you have
actions after the
loop?

No

Indefinite loop

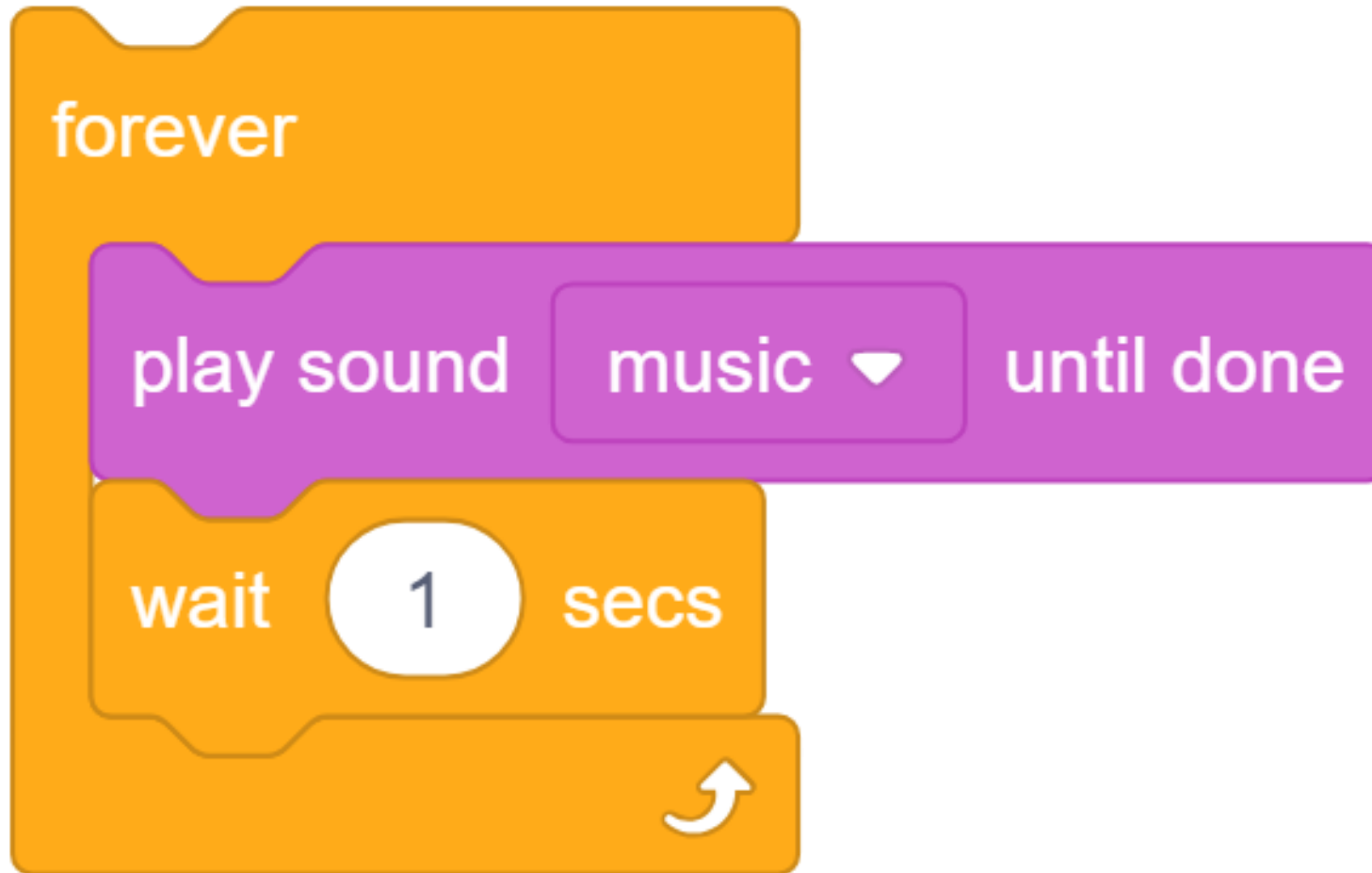
Wave
Loop always
stand
sit

Now write your own
everyday algorithm
that uses an
indefinite loop

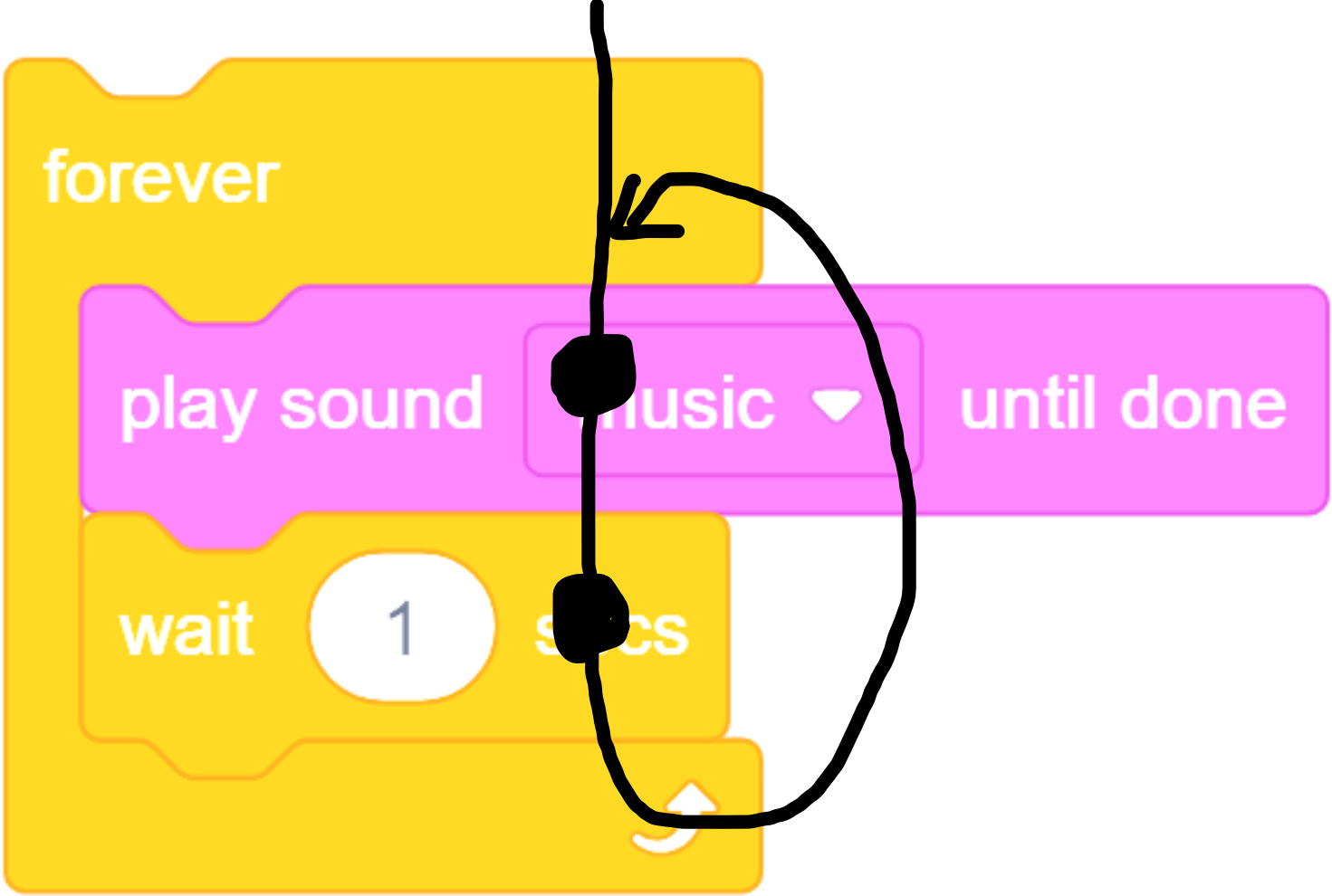
Can your
neighbour
act it out?

One mark if it makes sense
One mark if each action is on a new line
One mark if you indent the actions

Indefinite loop in code



Flow of control in code



Indefinite Infinite Loop

A loop is a set of instructions that are repeated

An indefinite infinite loop

- Can replace a sequence where there is a pattern.
- Is **indefinite** because we do not know how many times it will repeat or when it will end
- Is called a forever loop in Scratch programming
- Has a flow of control (order that commands are executed in)
- Can be used in an algorithm or in programming

Terms of use

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<https://computing.hias.hants.gov.uk/course/view.php?id=51>