



Production



CAD



Programming



Electronics

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Color Master

A sassy opponent

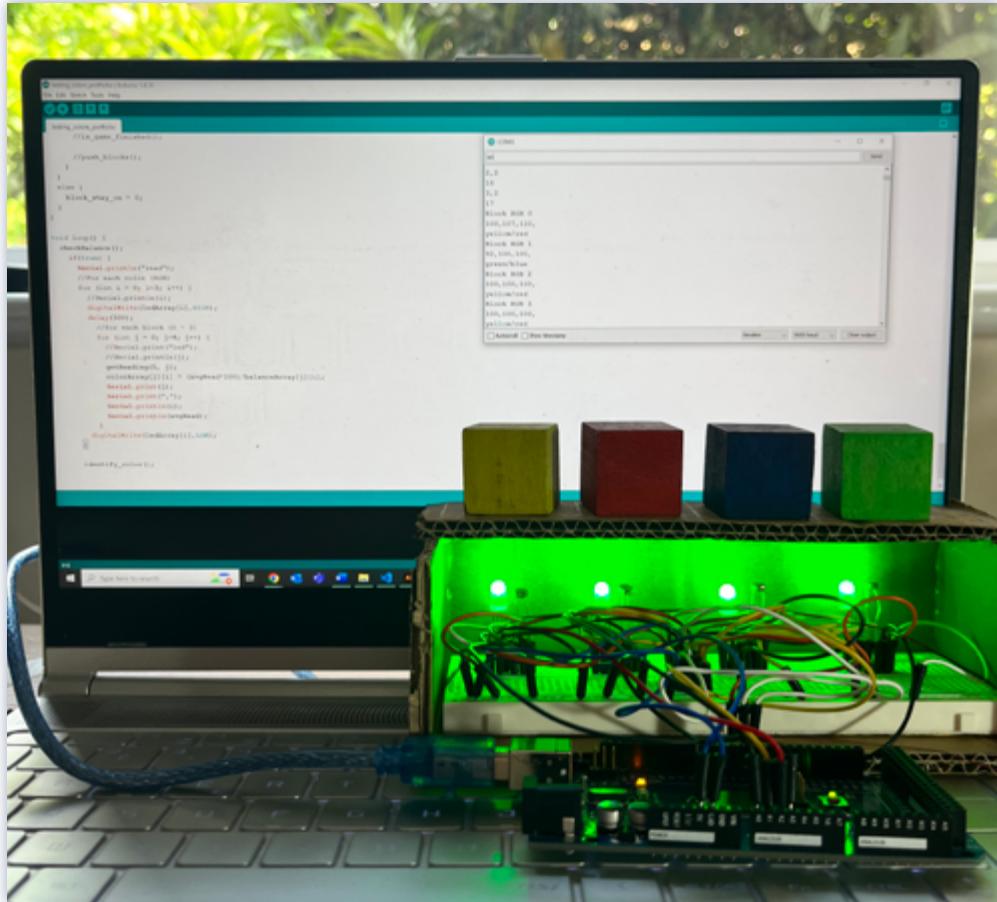
Mastermind is a simple logic game in which the user attempts to find the hidden code through multiple iterations. Play against the Color Master, as he removes the wrongly placed blocks but keeps those rightly placed until you crack the code, or lose!



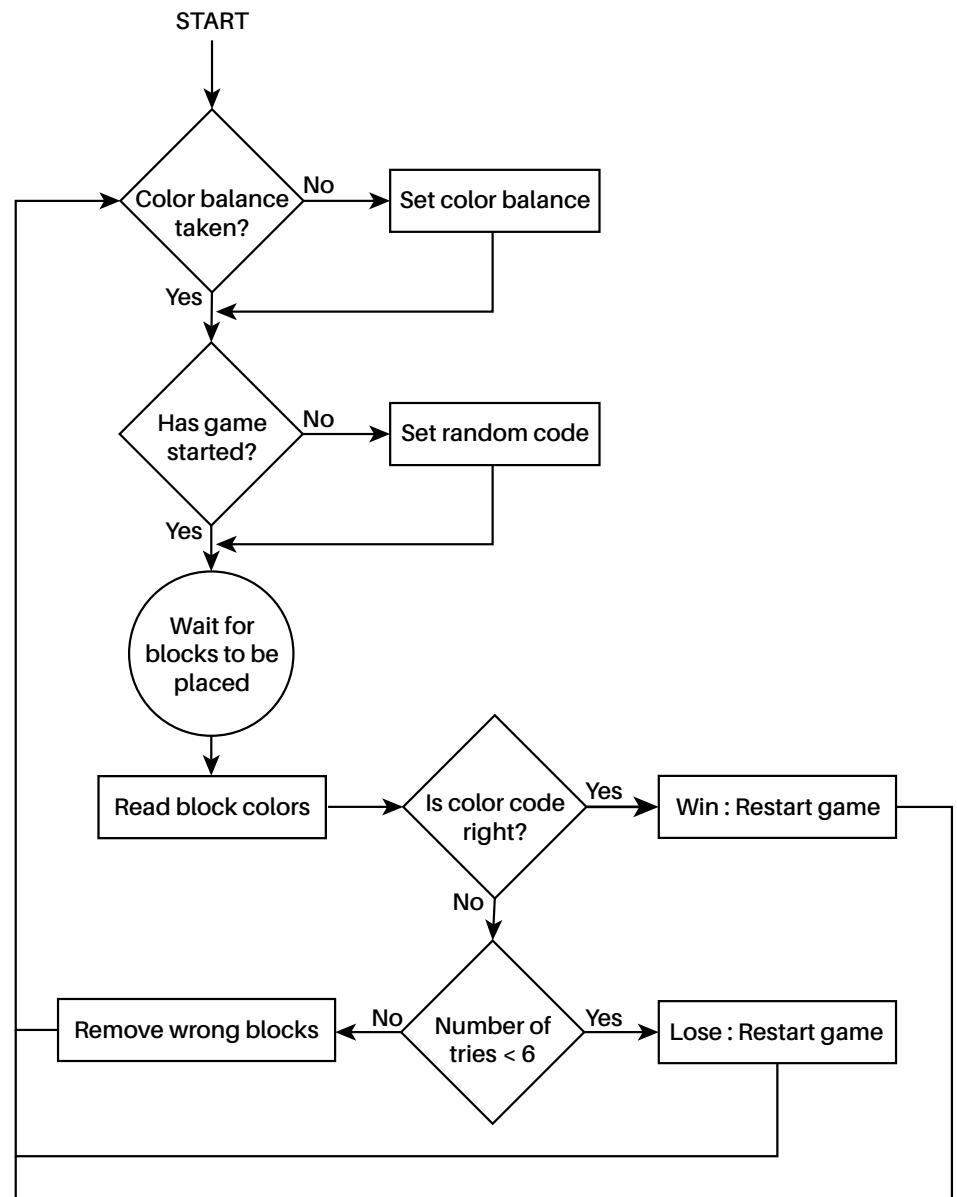
Programmed on an Arduino
Mega 2560 with C++



Electronics assembly to make color sensors
and unique arm movements in response

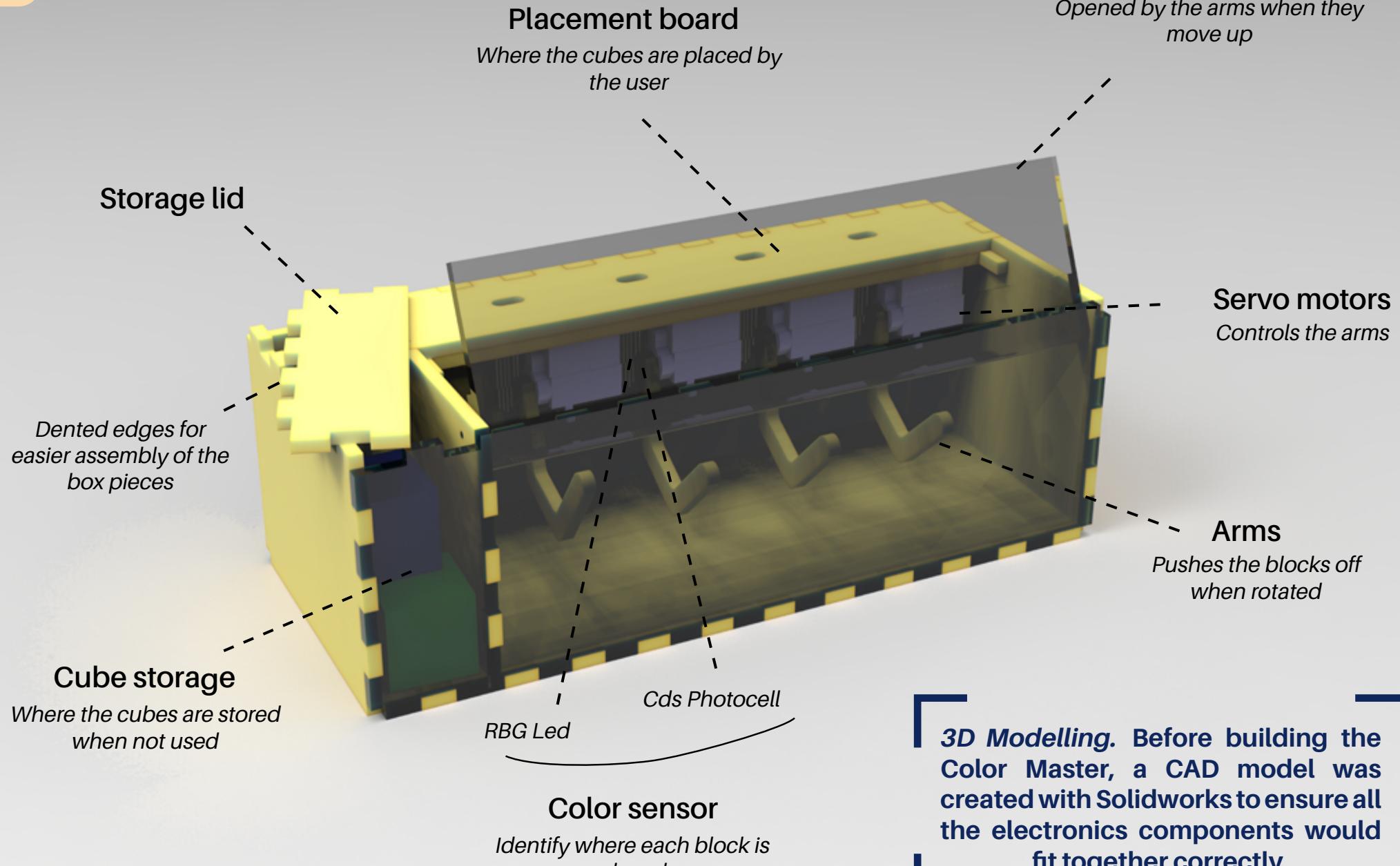


Custom color sensors. Red, green and blue are flashed by RBG Leds through the hole under the cubes, and the reflected light perceived by Cds Photocells identifies each color.





Design validation
with CAD

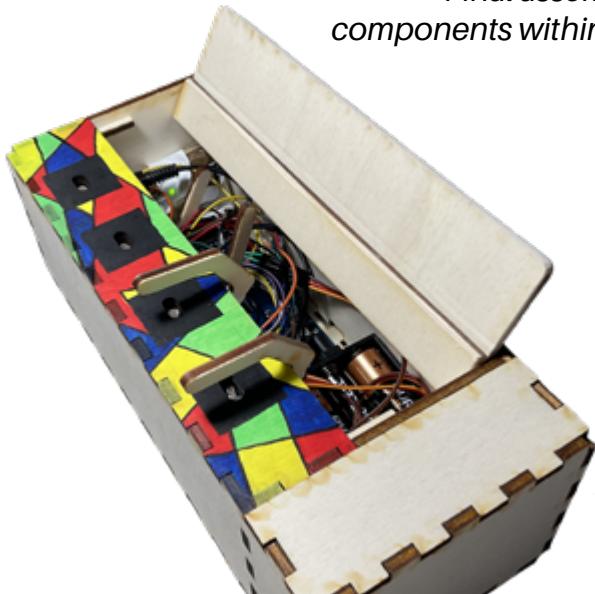


3D Modelling. Before building the Color Master, a CAD model was created with Solidworks to ensure all the electronics components would fit together correctly.



Prototyping, laser cutting &
workshop assembly

*Final assembly of all
components within the box.*



*User Experience - block
storage space on the side.*



Spotfind

A helpful item tracker for the elderly

With SpotFind, never lose your treasures again! The device communicates with the tags attached to your frequently lost items, to help you find them when needed. It will vibrate every time a signal is received and the LEDs will light up to tell you how far away it is.

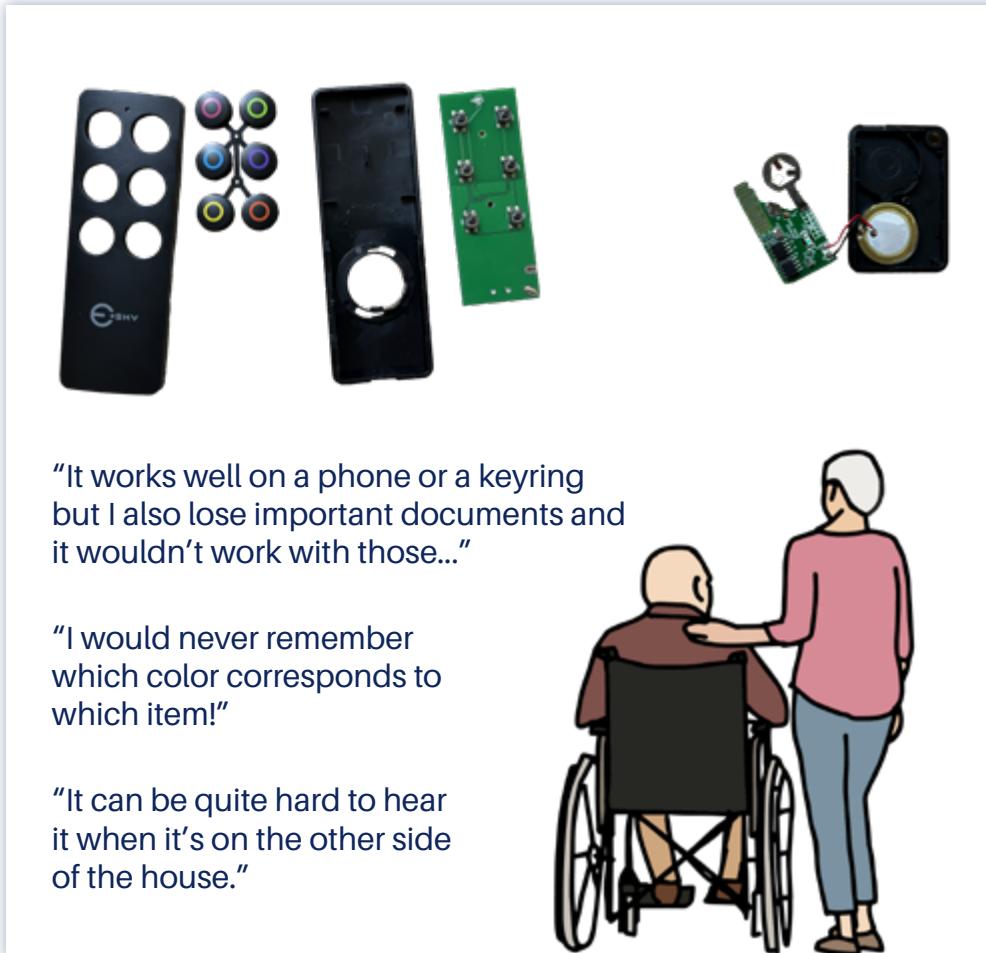




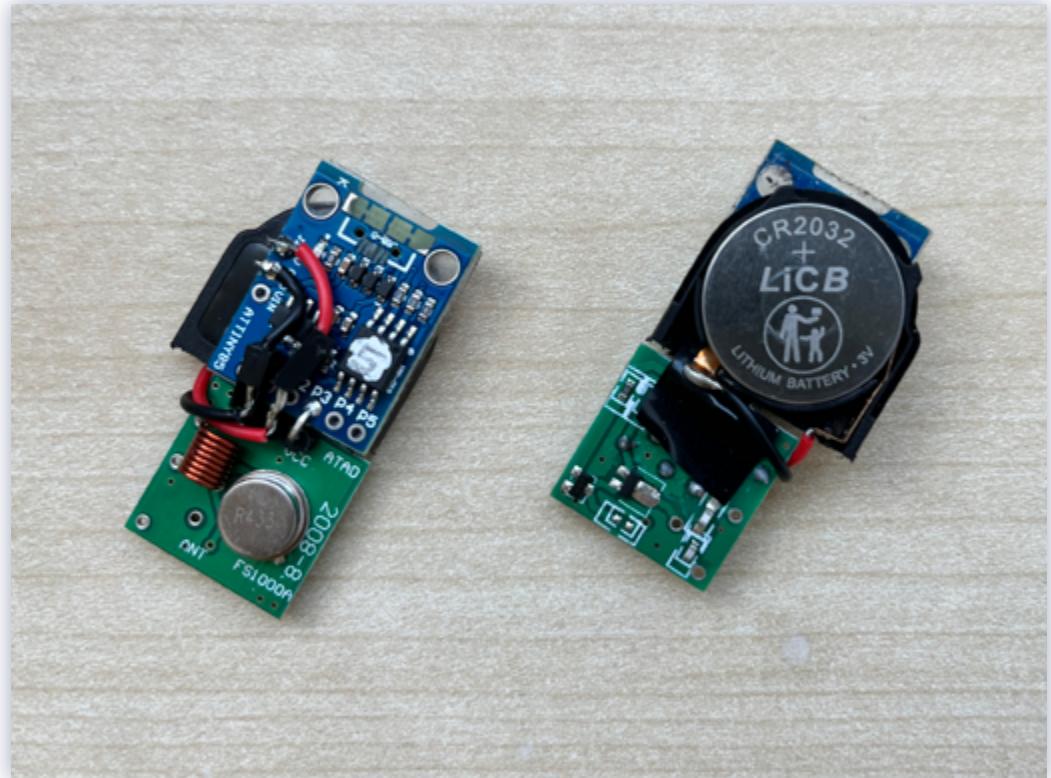
Rigourous user research for an informed concept development and requirement specification.



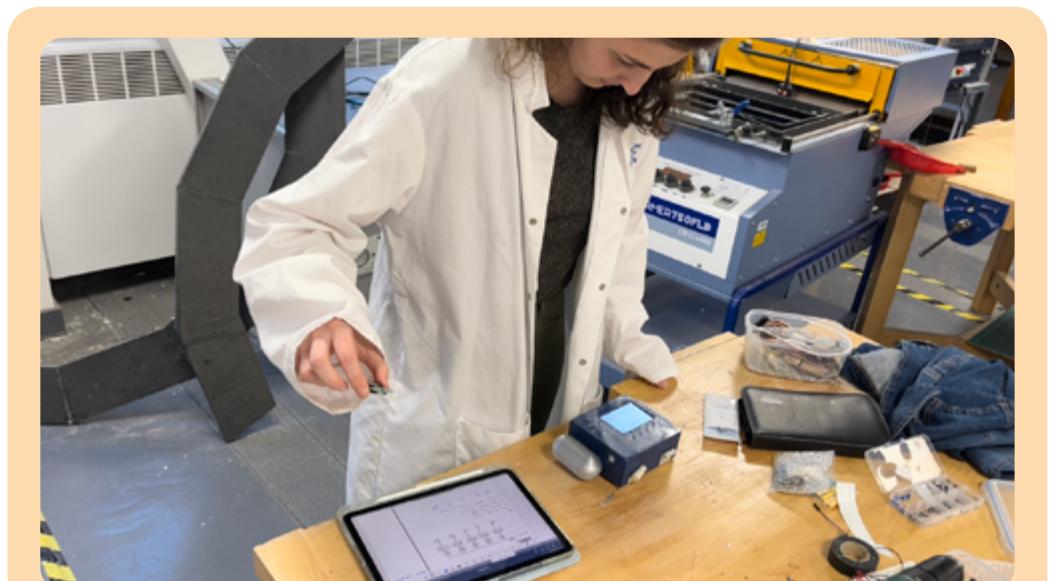
Intricate assembly of components in 8 tags and experimentation of the device's monitoring.



Used a remote-controlled item tracker on the market to gain valuable insight from senior users: press the button and the corresponding tag will make some noise.



Tags electronics assembly



Built desktop app on Raspberry Pi
using Python and PyQt 5 (learnt
within 3 days)



Find

Editing items : bottle, goat, phone, phone, phone, phone, phone

1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	:
z	x	c	v	b	n	m	.	-	,

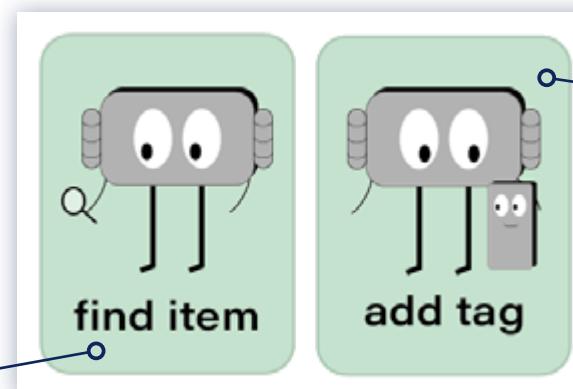
< Back Del Space ← Caps

Search

- 1 | bottle
- 3 | goat
- 2 | phone

< Back

Which item are you looking for?



What is the tag's number?

Enter

1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	:
z	x	c	v	b	n	m	.	-	,

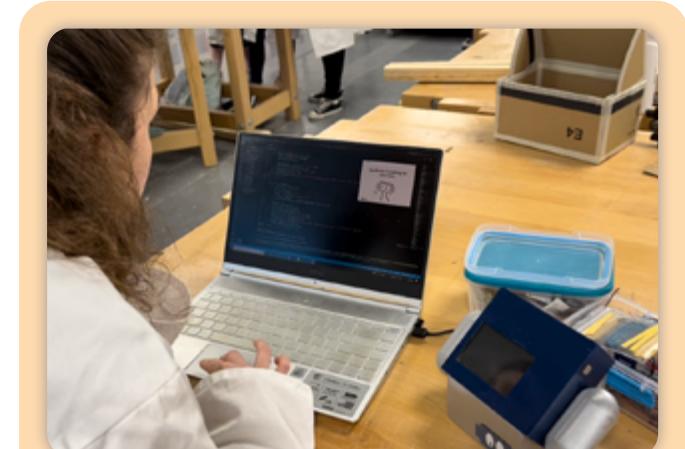
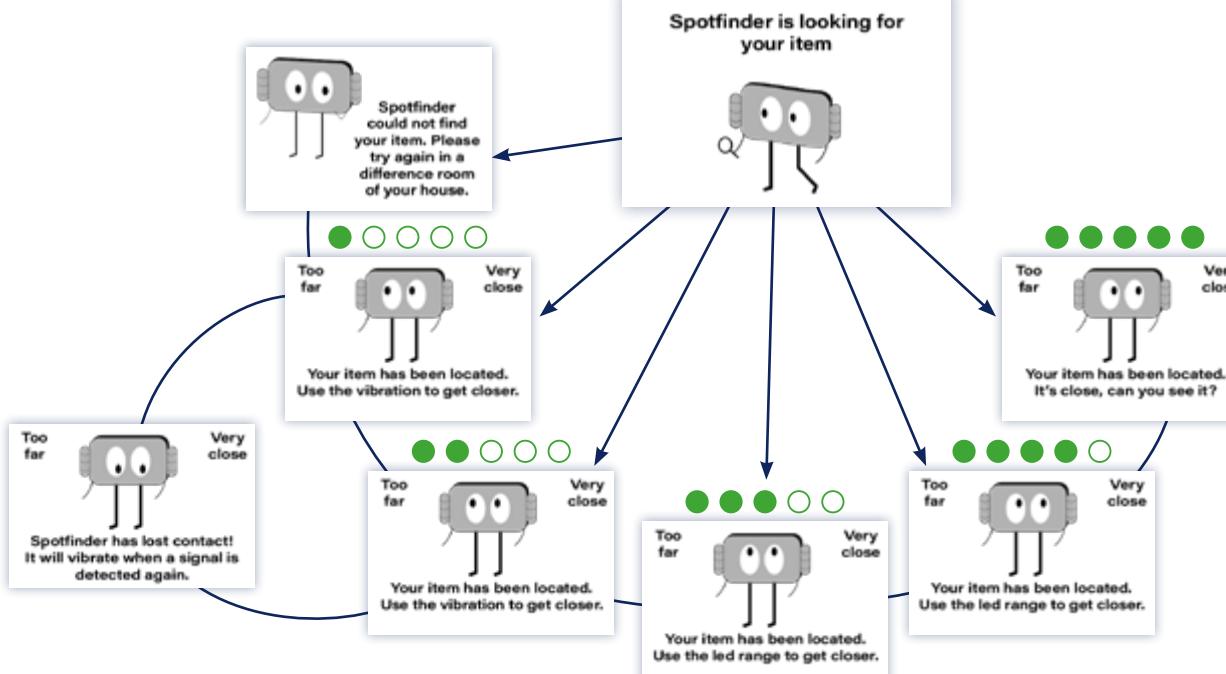
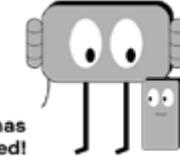
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To what item will the tag be attached?

Enter

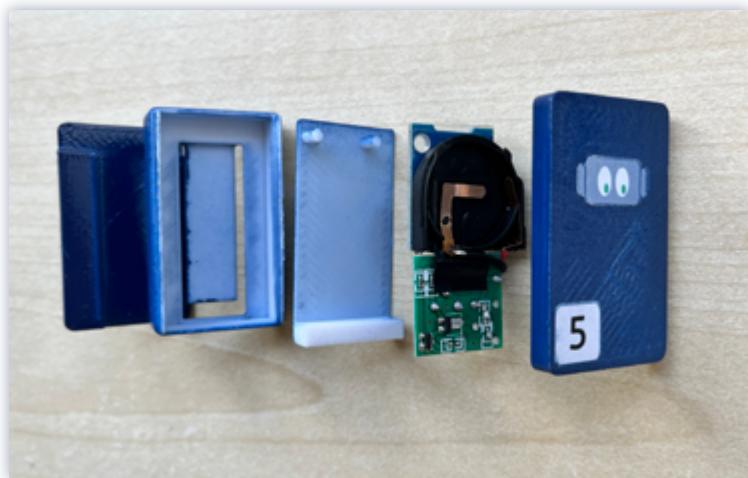
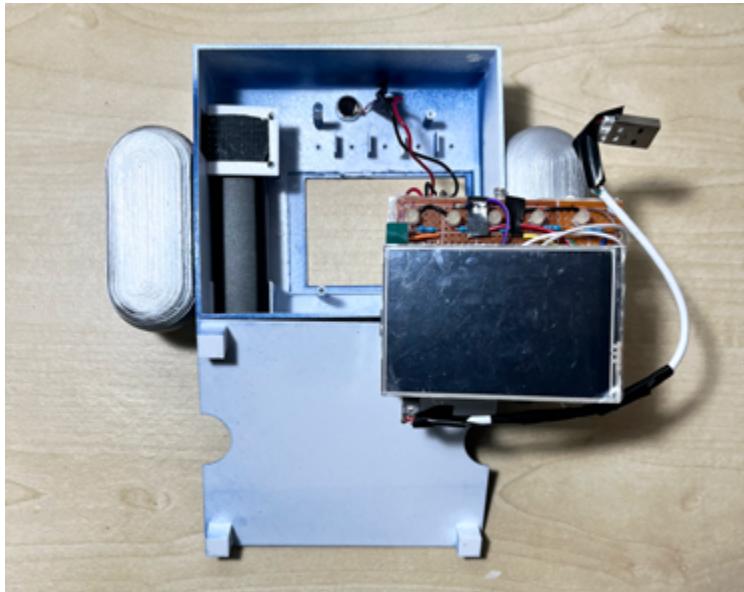
1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	:
z	x	c	v	b	n	m	.	-	,

< Back Del Space ← Caps



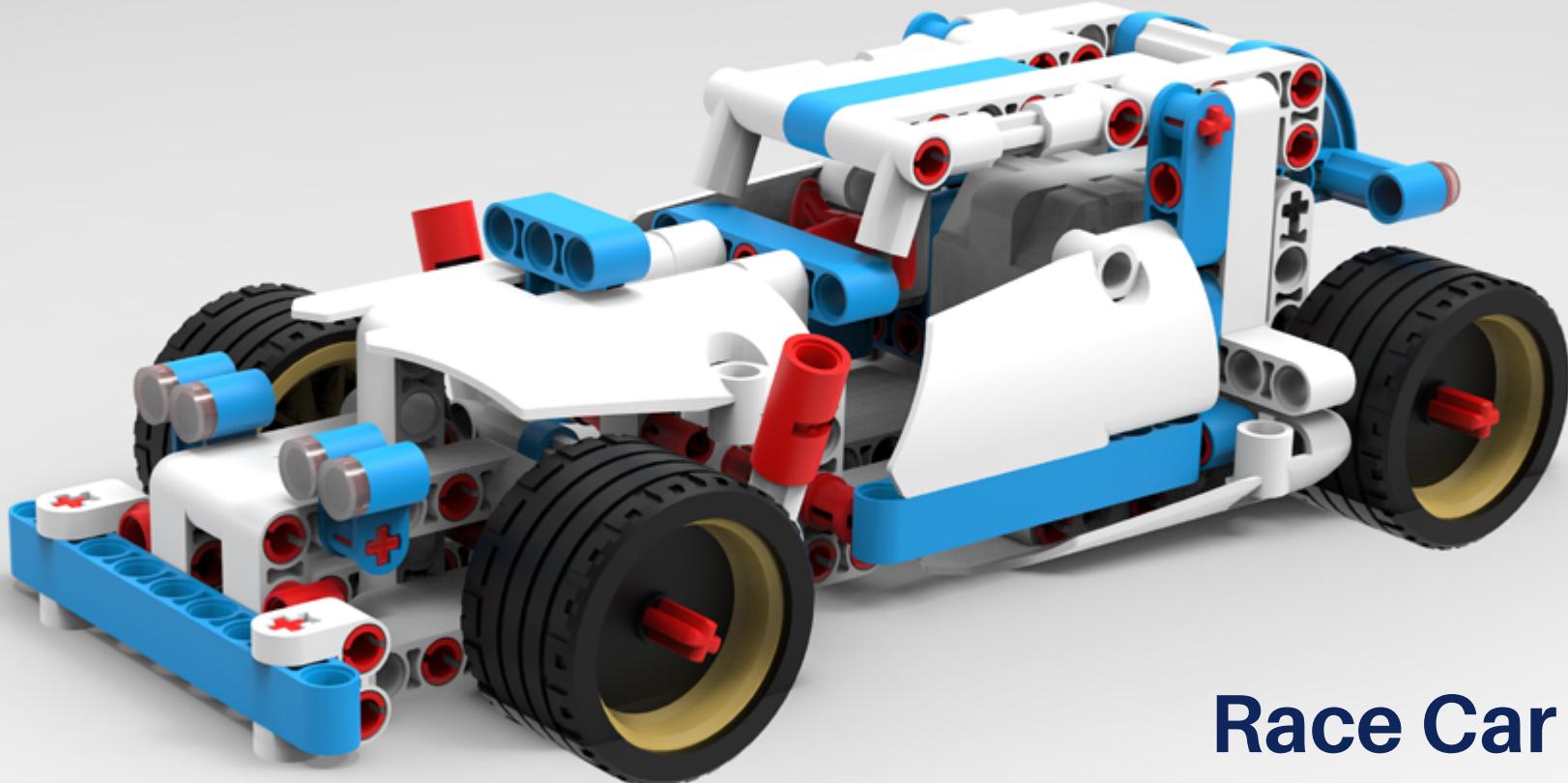


CAD casing development for easy
fabrication and final product assembly





LEGO Technic Getaway Racer
modelled on Solidworks and
rendered in KeyShot 10



Race Car

A CAD experimentation

Each part of this LEGO Technic Getaway Racer was modelled and virtually assembled before being rendered, testing various colors, materials and environments.



Self taught skills : pattern ideation, sewing
of final result and solo photoshoot

Ball Gown

A custom garment

With self-initiative and self-teaching, I developed my skillset to create this black-tie gown with tailored measurements, complex materials and intricate finishes in two weeks.





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