Computer Studies at LCS

Solving problems to help others

- What is Computer Studies about?

  - Code is a means to an end – and that end is to help others.

- Have an idea?

  - Like no other time in history, being able to write software means you can go from having an idea to producing a viable product in record time.

  - Here's an example...

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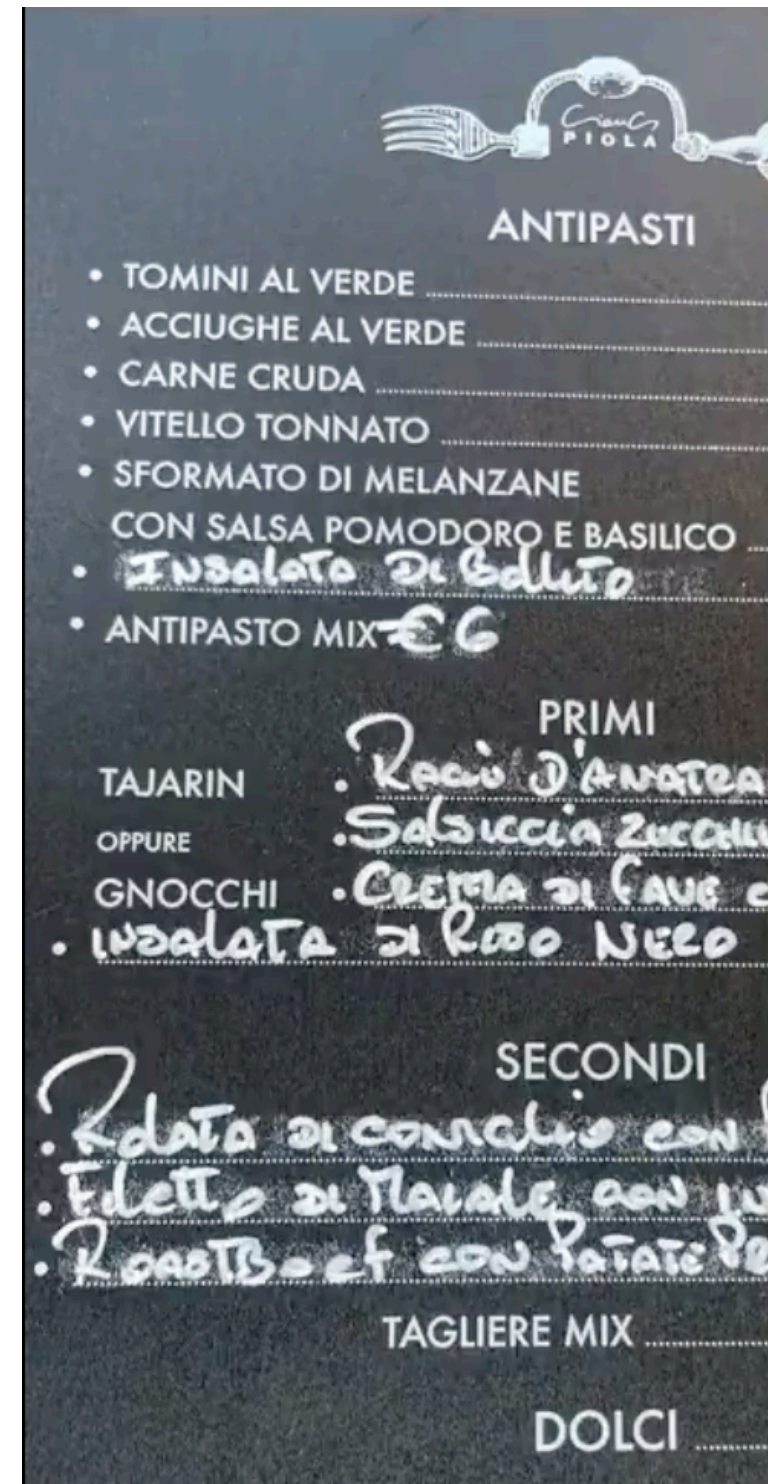## Solving problems to help others

- <u>Jordi Bruin</u> is an app developer from the Netherlands

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- Jordi speaks Dutch and English

- In late August a couple of summers ago he travelled to Italy

- He was faced with a problem when dining out in restaurants...

  - Have you ever been somewhere where you could not read the menu?

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- A few years ago, on August 30, he had an idea...

> **Jordi Bruin** @jordibruin · Aug 30
>
> Reading menus when you're traveling abroad can be so much easier. I note myself googling names of recipes a lot to see pictures of what it looks like.
>
> There's an app idea here waiting for some good execution and integration with Google image search 🤔
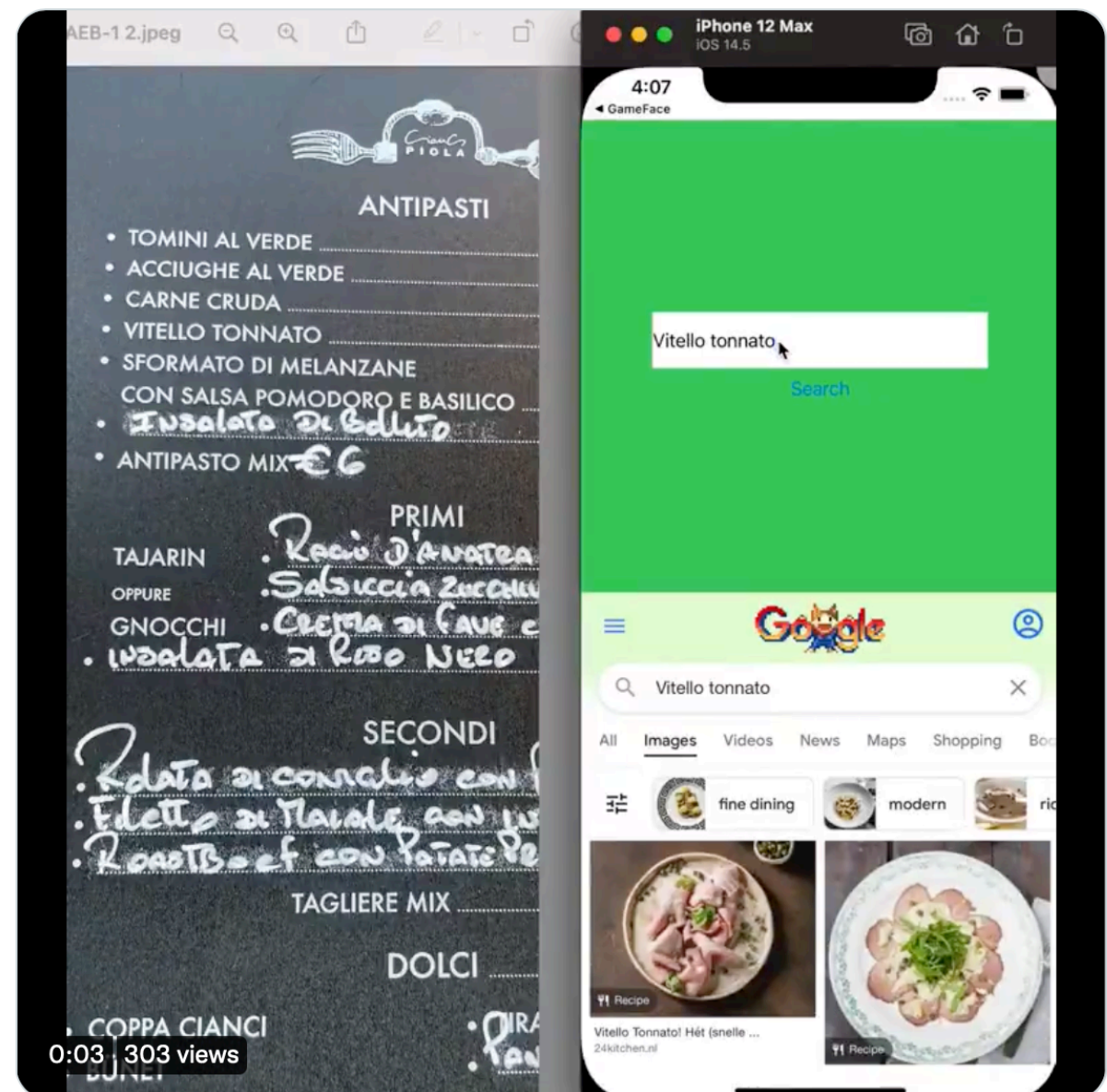
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- On August 31, he had an "MVP" (minimum viable product)...

- At present, the app is simply a split screen

- User types in search term on top

- At the same time, Google Image search is performed below

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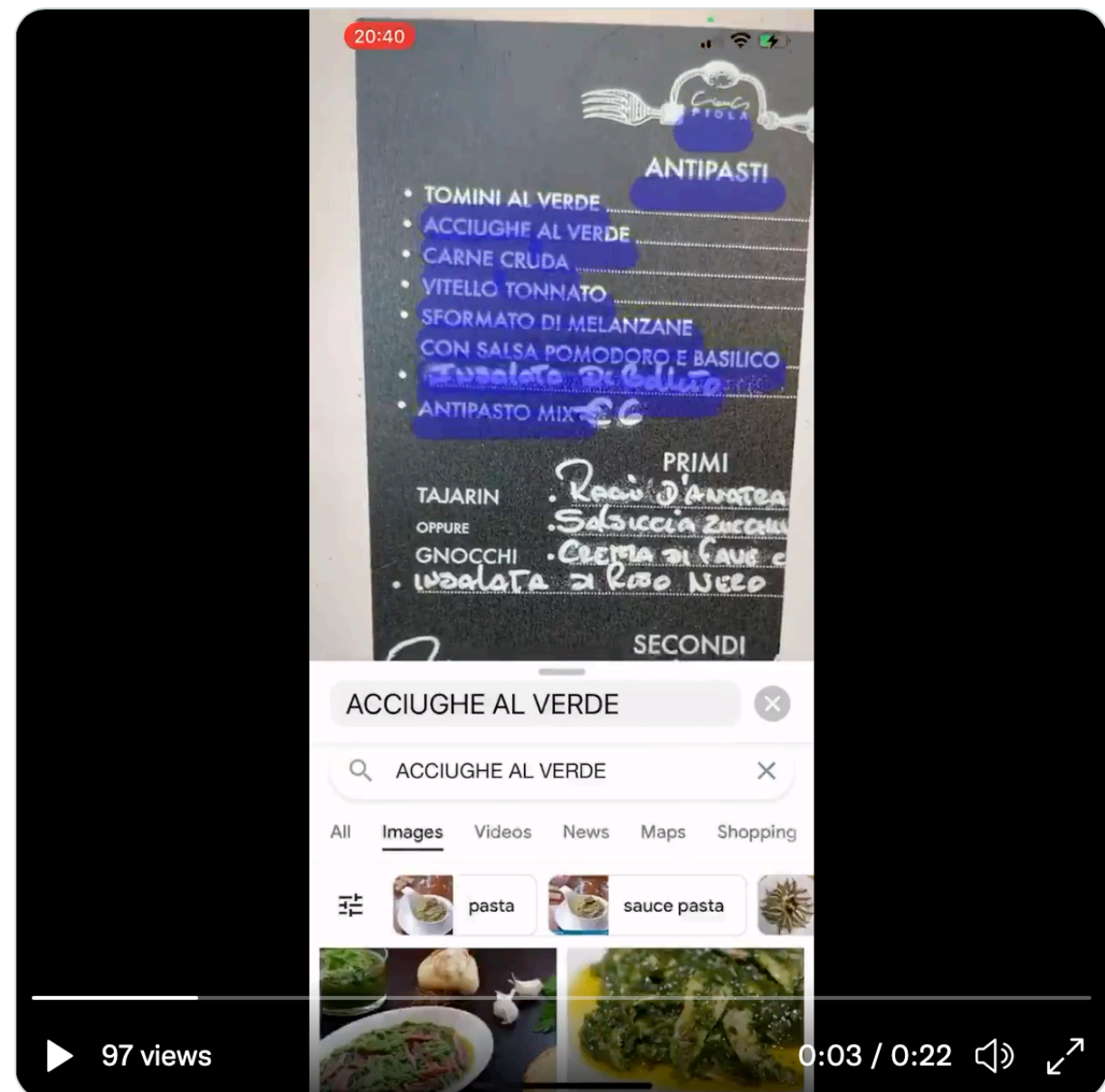## Solving problems to help others

- On September 1, he had used the text recognition features of the Vision framework provided by Apple to allow menus to be scanned

- Google Image searches now occur automatically…

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- Jordi's app neatly demonstrates the input-process-output pattern for thinking about software...

  - *Input* comes from using the Vision framework to scan menus

  - *Process* is taking the text that was read, and sending it to an image search website

  - *Output* is showing the results of the image search within a usable interface

- This is much like a certain toy you may have experience with...

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- So much of app development is knowing how to put small pieces of functionality together

- Move data from one "piece" to another

- You often don't write the "big pieces" yourself

- Put them together in a unique way, though... that can be a successful app!
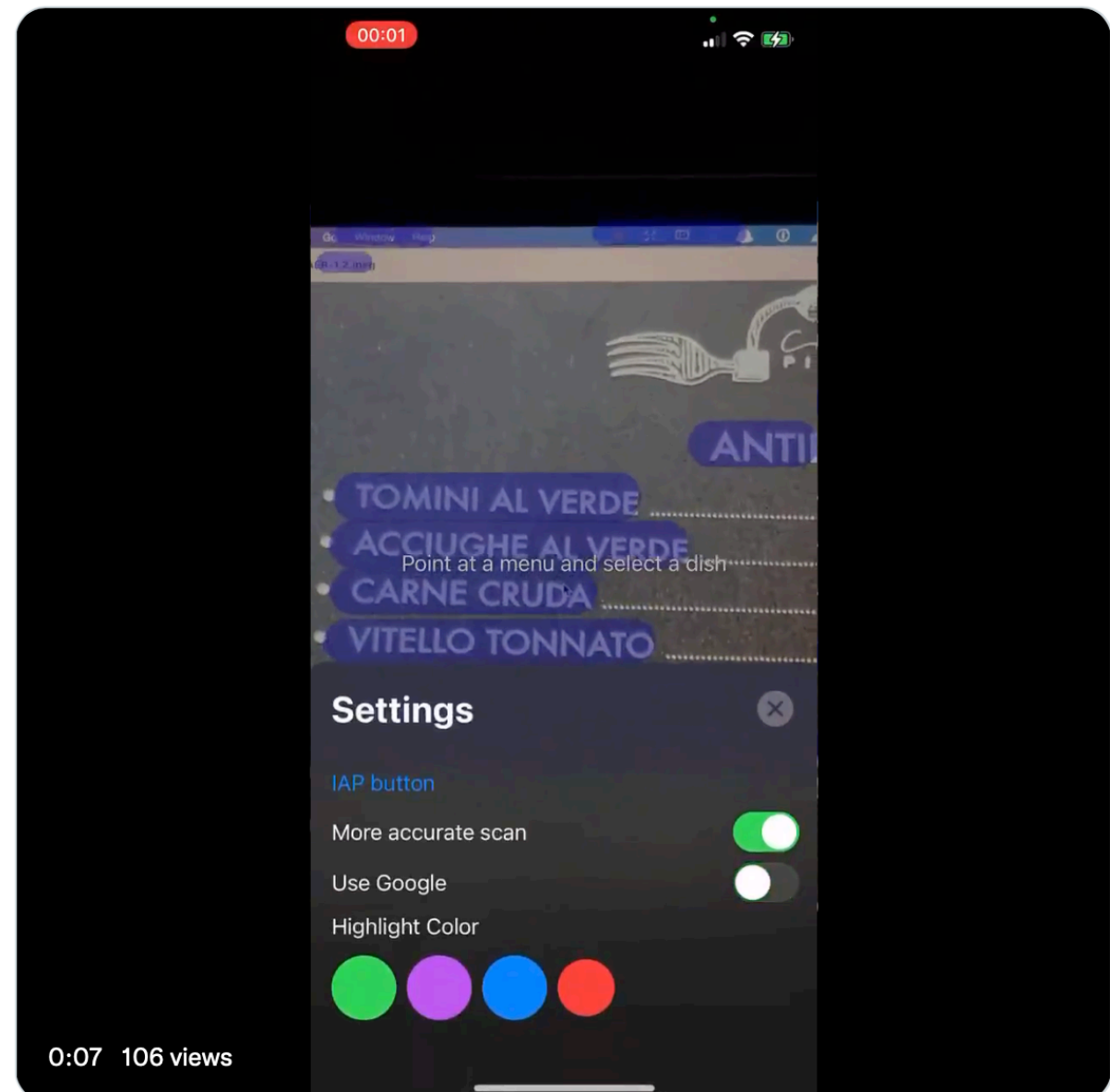
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- However, Jordi wasn't done...

- A few hours later that same day, also September 1, he added the option to use Bing image search as well...
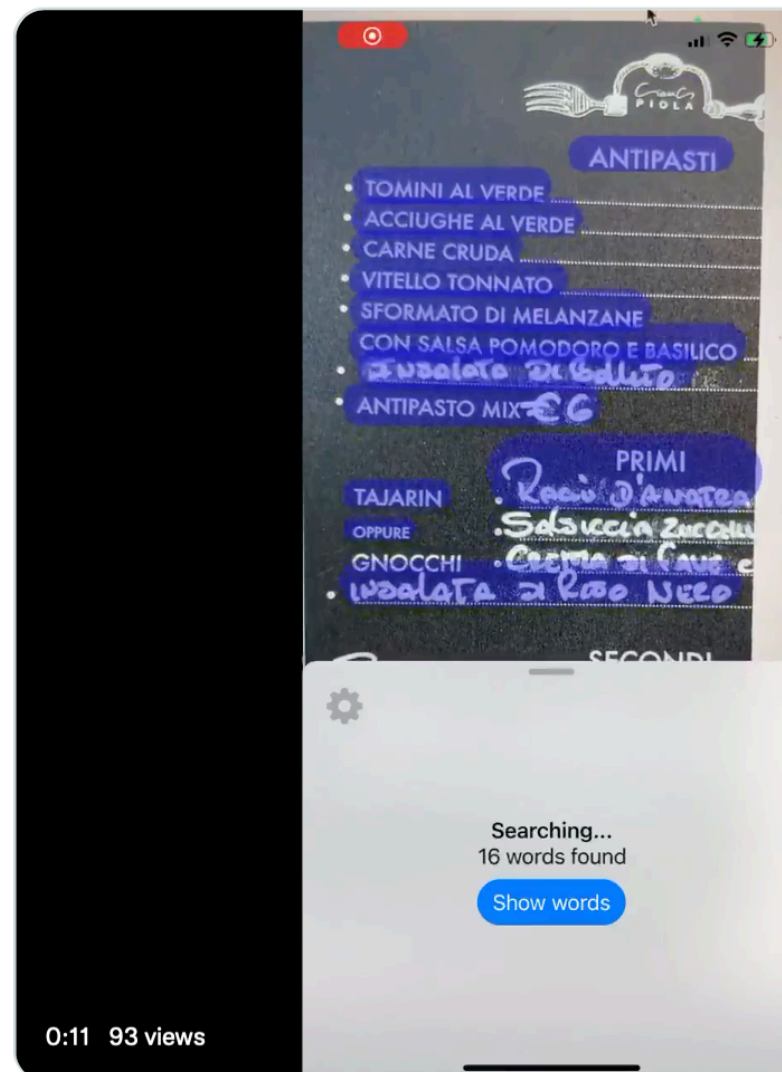
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- The next day, September 2, he'd refined the app so it presented a list of all the menu items scanned, and the user could flip between them...
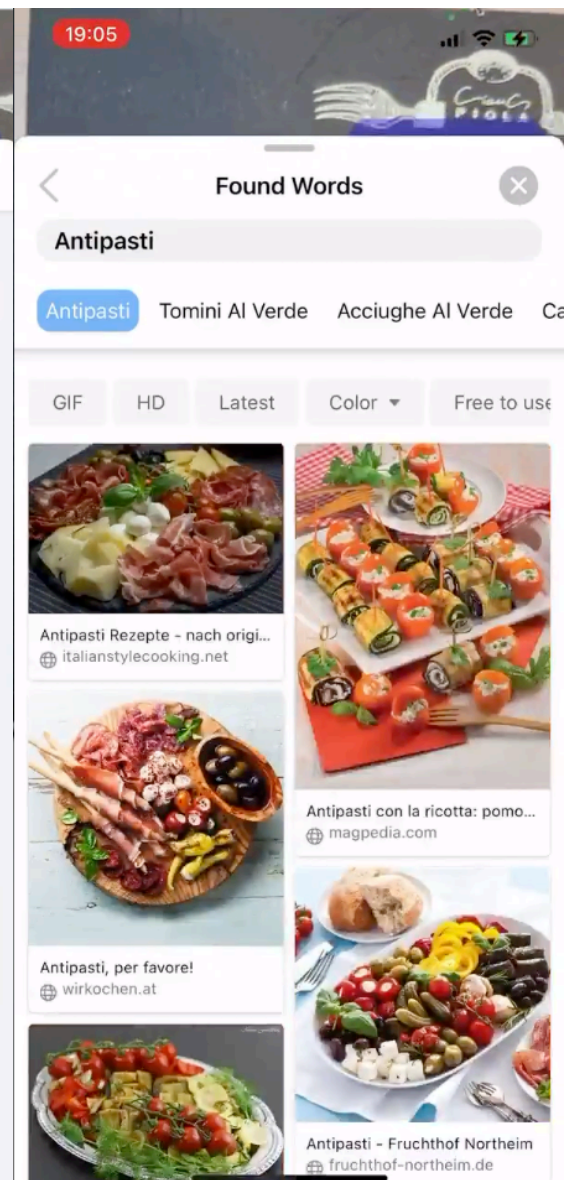
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- A few hours later, his app had been approved for distribution to testers through Apple's TestFlight service

- Note how Jordi asks that people try out his app and provide feedback...

- Through the LCS Apple Developer account, as a member of the development team, you will have access to TestFlight as well...
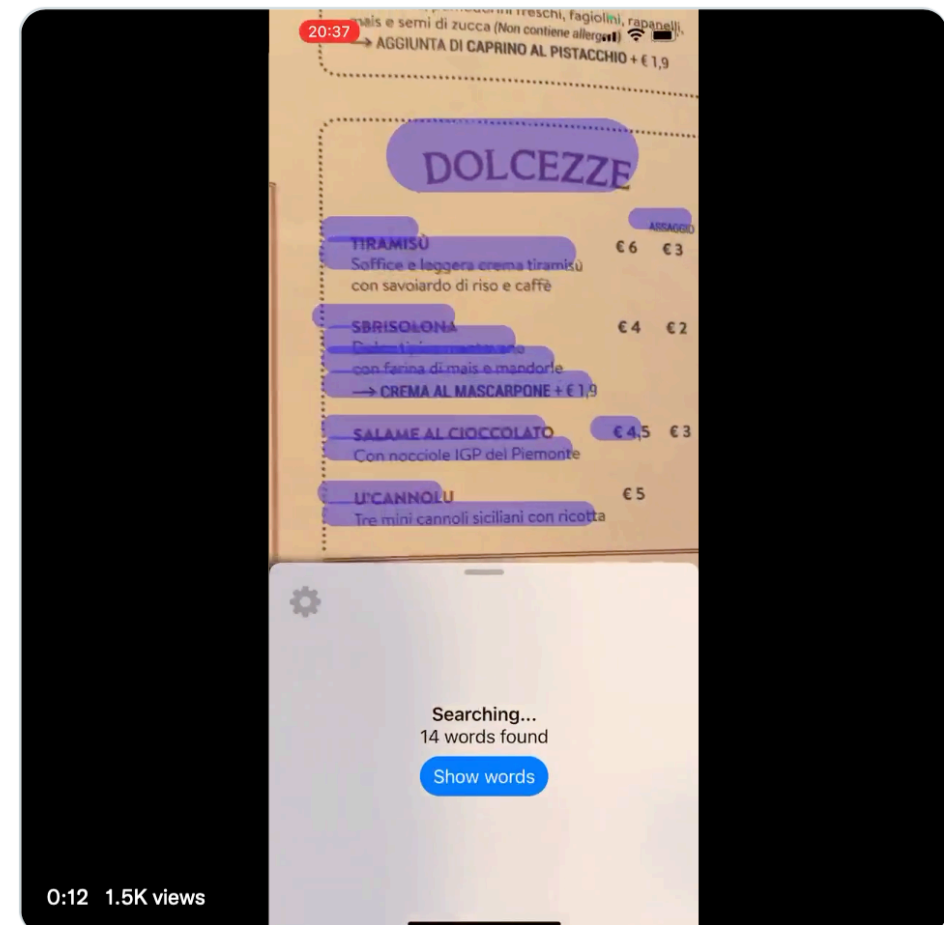

Jordi Bruin
@jordibruin

👀 Cibo is out on TestFlight now!

Quickly see photos of food dishes by pointing your camera at a menu!

Appreciate any feedback and bugs you might run into (there's a few 😉)

testflight.apple.com/join/xQrj5opm

2:43 PM · Sep 2, 2021 · Twitter for iPhone
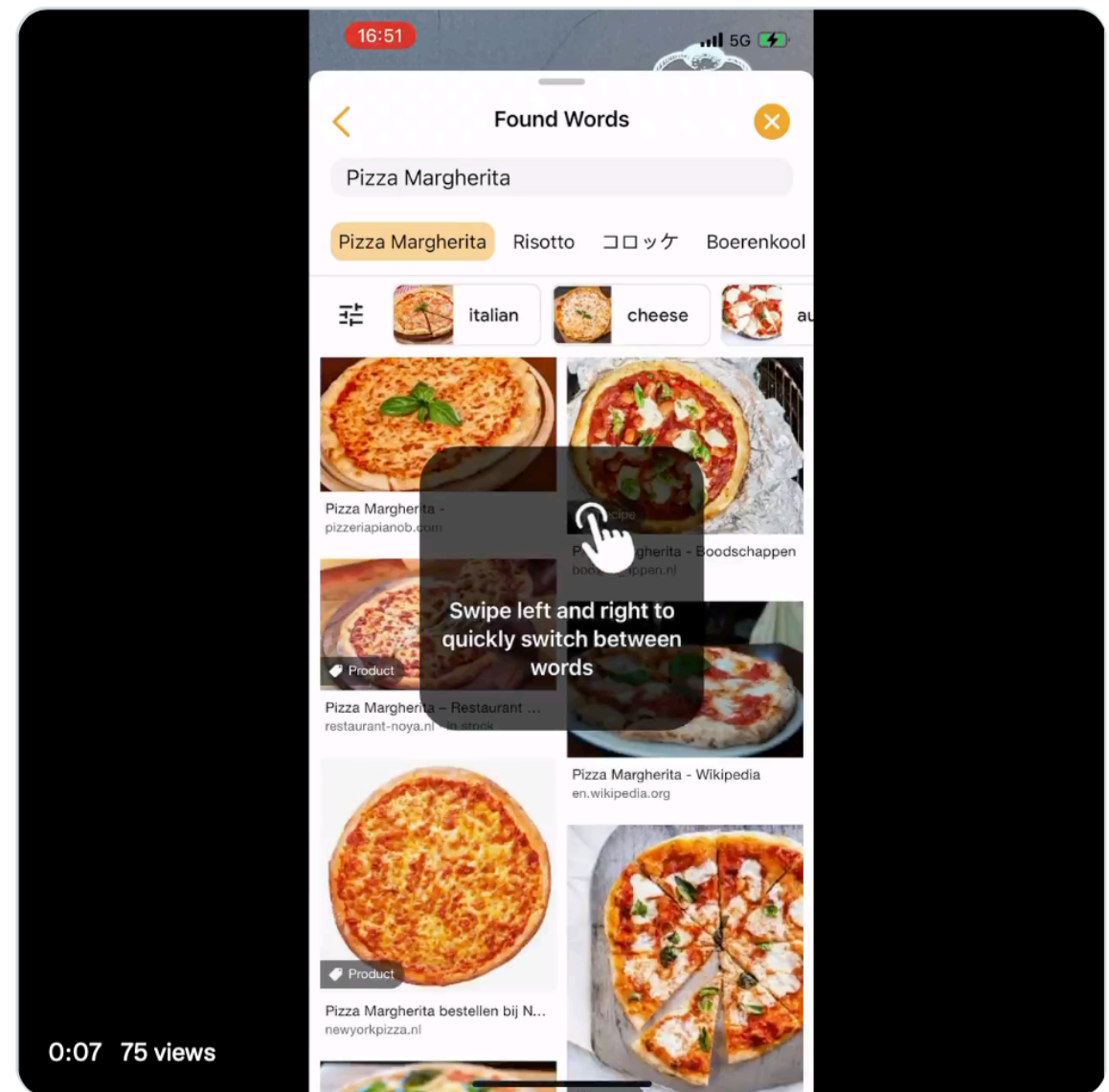
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- On September 3, he added "onboarding" hints

  - This refers to the idea of providing the user with timely guidance on how to use the app...

Added inline onboarding

Jordi Bruin
@jordibruin

Found Words

Pizza Margherita

Pizza Margherita · Risotto · コロッケ · Boerenkool

italian · cheese

Swipe left and right to quickly switch between words

0:07 · 75 views

10:55 AM · Sep 3, 2021 · Twitter for iPhone

2 Likes

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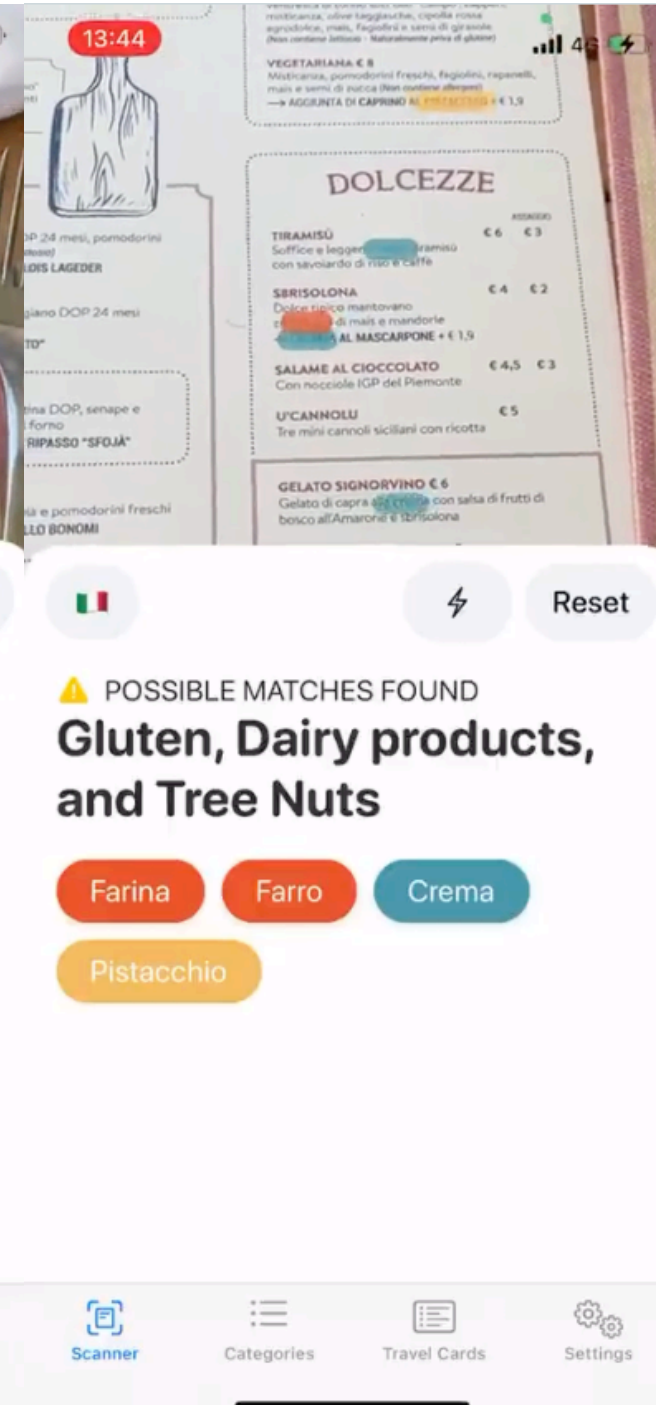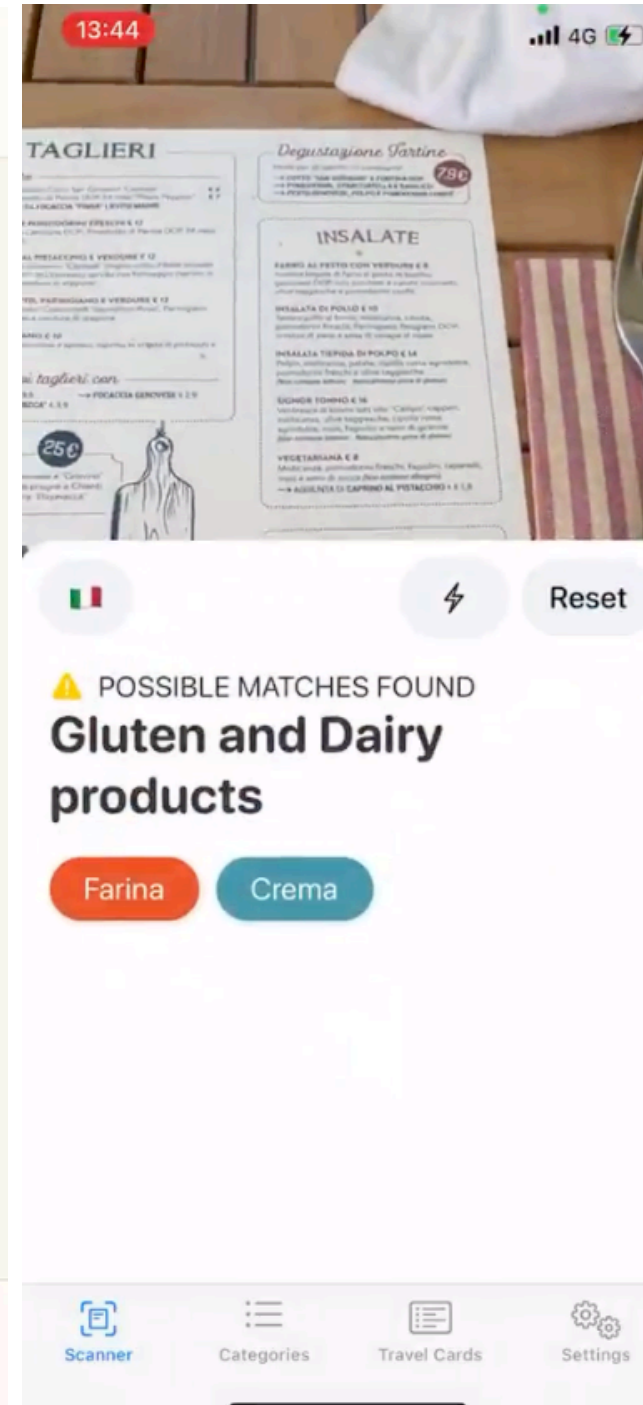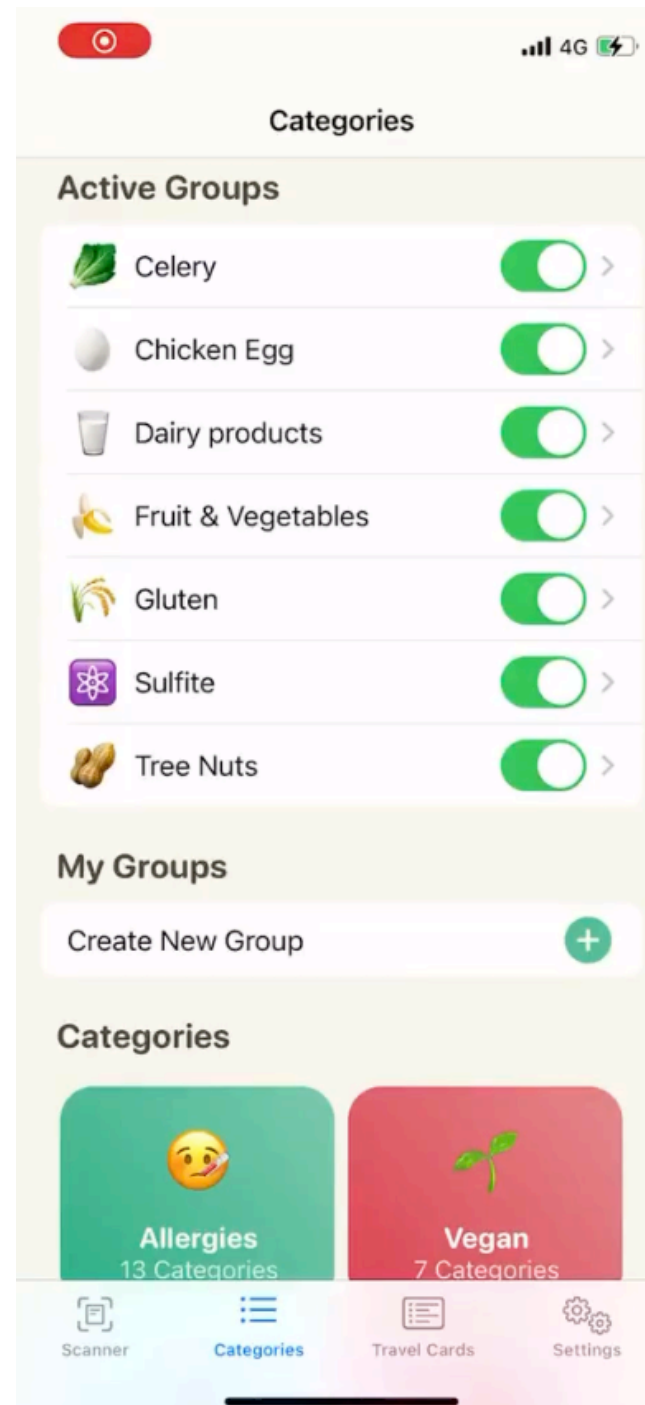## Solving problems to help others

- Do you know anyone with a food allergy?

  - Not understanding a menu is an inconvenience in terms of selecting a dish to eat for a meal

  - Not understanding that a menu item you are selecting contains an allergen could be life-threatening...
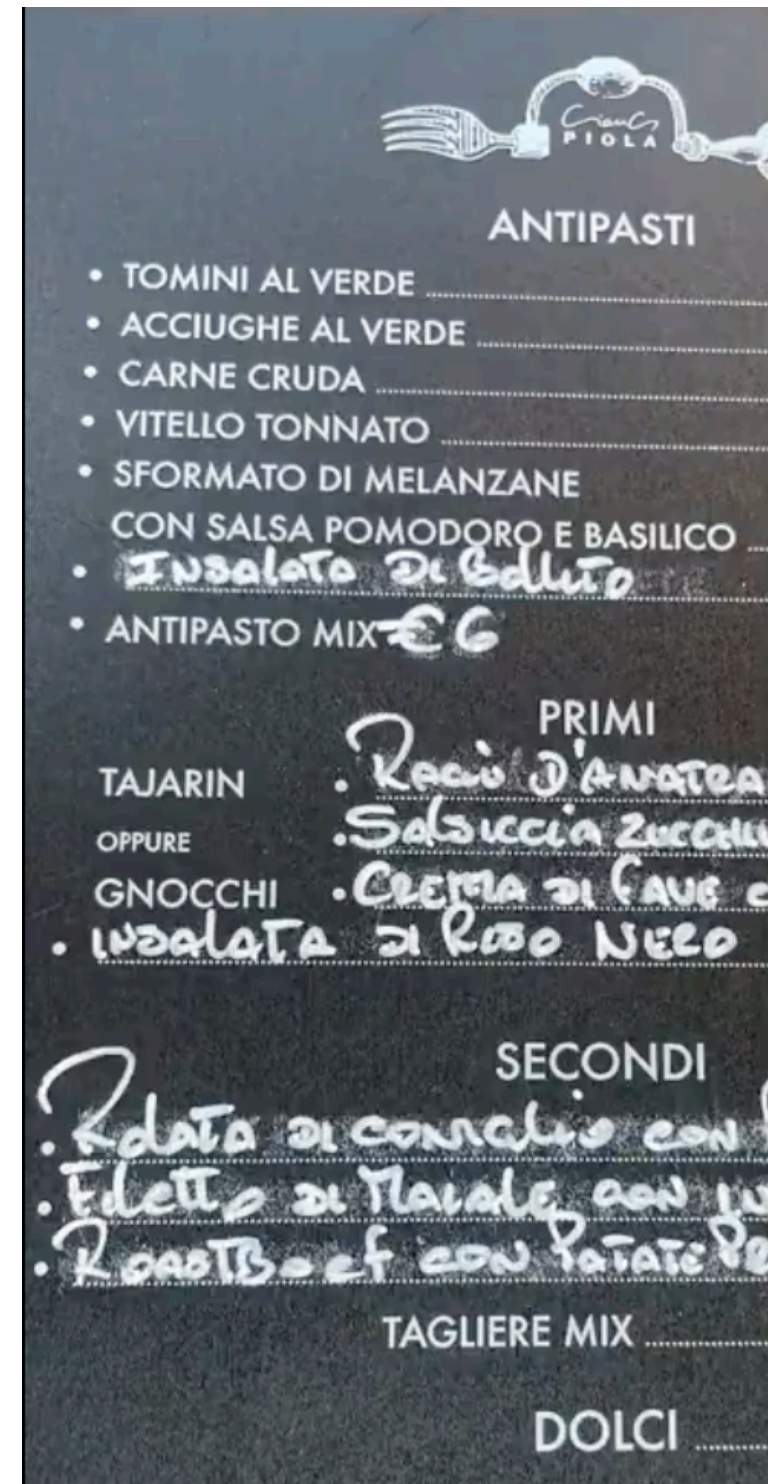
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- Allergen detection was another possible improvement that Jordi seems to have considered...

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- By September 4, Jordi's initial version of his app, Cibo, was published

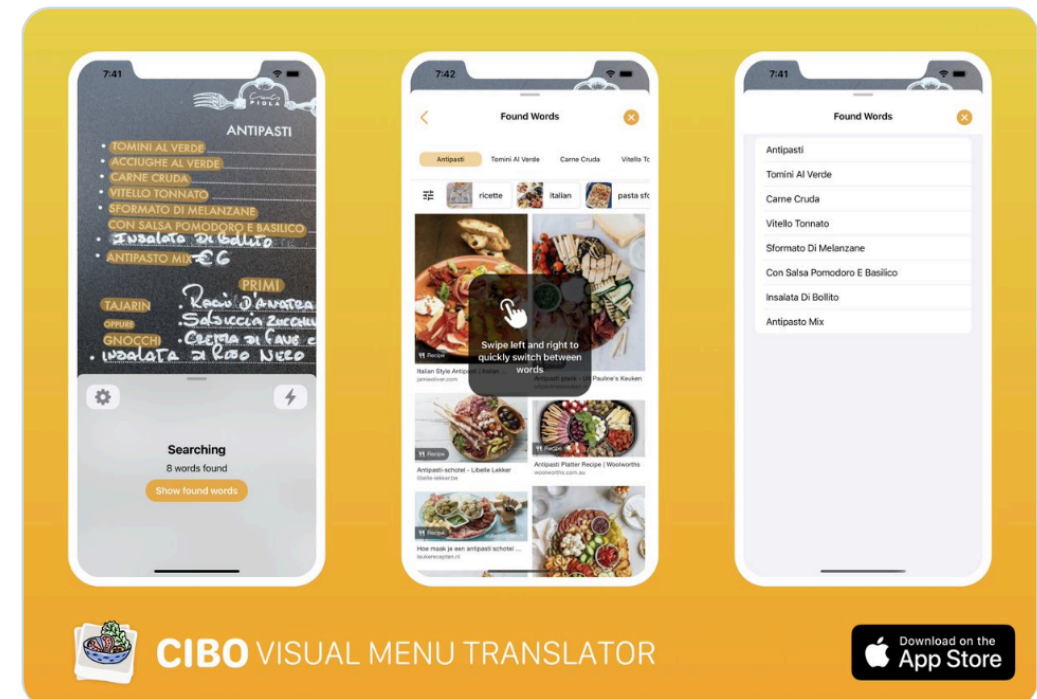- You can <u>download it if you wish</u>, right now...

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- Jordi's process from conception of an idea, to iteratively improving on that idea, neatly illustrates the design process we'll use this year

- Make small steps, share progress, reflect, collect feedback, improve, repeat...

Steps in the Design Process

Reflect and report on the process

Clearly define the problem or challenge

Test and evaluate the solution

Conduct research

Any step can be revisited

Build a prototype or model

Generate ideas for potential solutions

Choose the best solution
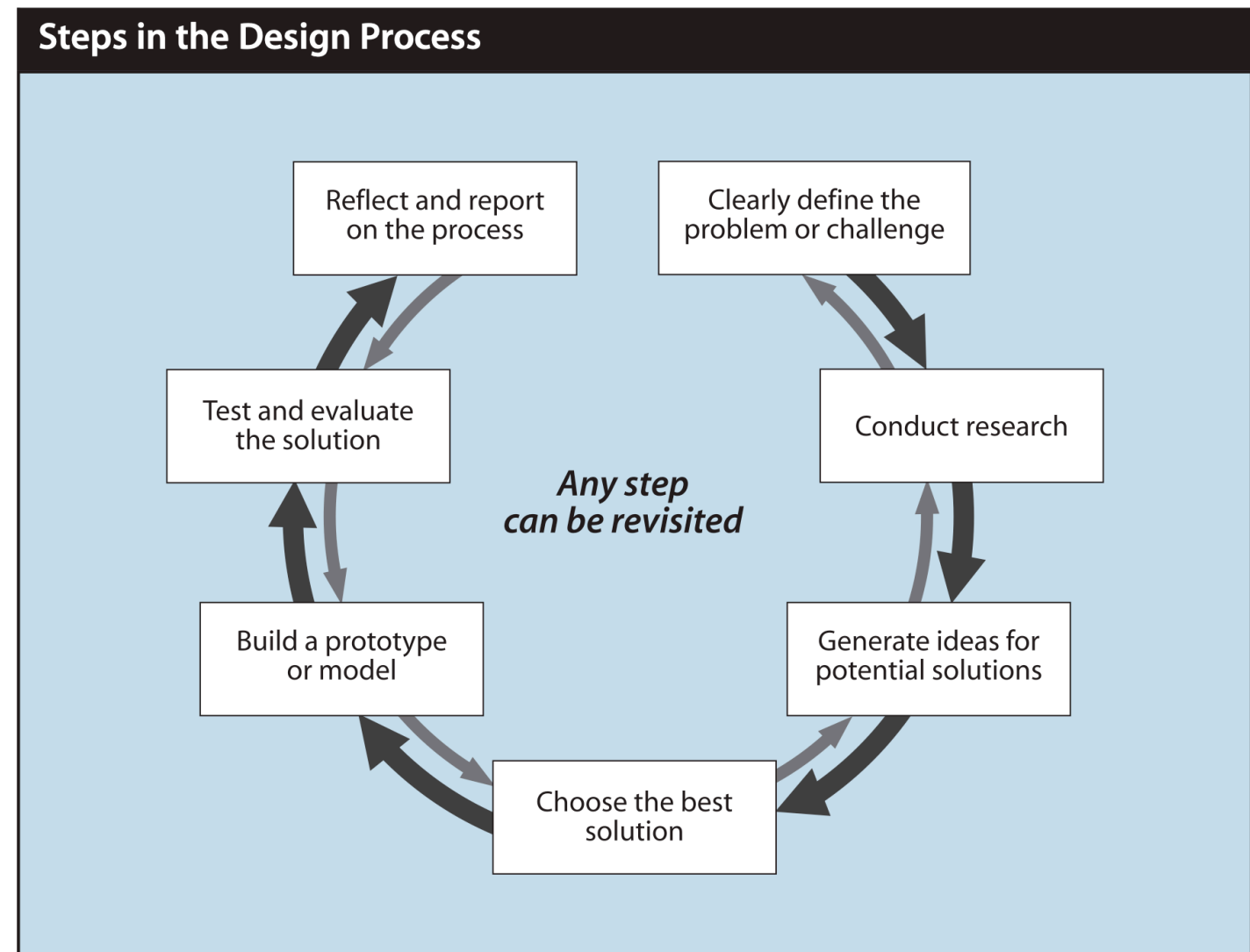
Although processes such as this involve a framework of sequential steps, they are typically iterative processes that may require a retracing of steps, diversions to solve specific problems along the way, or even a return to the start of the process if it becomes clear that the situation needs to be clarified and the problem redefined. Problem solvers soon discover that the process calls for an open mind, the freedom to be creative, and a great deal of patience and persistence.

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- Think this couldn't be you?

- It can be, and it has been done

- Vincent Cloutier published <u>LCS Leave</u> through his work in this course a few years ago

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iPhone Screenshots