

# Read Me

Corvus v0.9.0 and Corax v0.1.0

Corvus is an automatic Raven's-like test generator, written in JavaScript.

It is called Corvus, because that is the genus Ravens belong to.

In this case 'Raven' refers to Raven's Progressive Matrices, which are the most popular and most studied tests of fluid intelligence.

Corax is a tool that allows users to design and create their own tests for use with Corvus without programming.

It is called Corax, because Corvus Corax is the Common Raven's full Latin name.

*This Read Me file is intended for non-programmers. Programmers looking to edit or contribute to Corvus may be better served by the Advanced Corvus User Manual.*

## Read Me Contents:

How to download Corvus and Corax

How to open and use Corax on a local computer

How to open and use Corvus on a local computer

The Advanced Corvus User Manual (for programmers)

Final Words

# How to download Corvus and Corvax

Navigate to <https://github.com/Thimbleby/Corvus>, where you should see a web page like the following:

Thimbleby / Corvus

Unwatch 1 Star 1 Fork 0

<> Code Issues 0 Pull requests 0 Projects 0 Wiki Security Insights Settings

Raven's-like Automated Test Generator Edit

javascript d3js d3 cognitive-science intelligence Manage topics

20 commits 1 branch 0 releases 1 contributor GPL-3.0

Branch: master New pull request Create new file Upload files Find file Clone or download

Thimbleby Merge branch 'master' of https://github.com/Thimbleby/Corvus Latest commit 90c4c7a 22 hours ago

Corax	v0.9.0	22 hours ago
Demo Items	v0.9.0	22 hours ago
JavaScript	v0.9.0	22 hours ago
Libraries	Update to work without TrueColours	7 months ago
Other files	v0.9.0	3 days ago
Test	v0.9.0	22 hours ago
Advanced Corvus User Manual.pdf	v0.9.0	3 days ago
LICENSE	Initial commit	last year
README.md	Update README.md	3 days ago
index.html	v0.9.0	3 days ago
random.html	v0.9.0	3 days ago

README.md

Read Me

Corvus v0.9.0 and Corax v0.1.0

Click on the green 'Clone or Download' button on the right. The button is circled in red in the image below.

Thimbleby / Corvus

Unwatch 1 Star 1 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Security Insights Settings

Raven's-like Automated Test Generator

javascript d3js d3 cognitive-science intelligence Manage topics

20 commits 1 branch 0 releases 1 contributor GPL-3.0

Branch: master New pull request

Create new file Upload files Find file Clone or download

Thimbleby Merge branch 'master' of https://github.com/Thimbleby/Corvus

Corax	v0.9.0
Demo Items	v0.9.0
JavaScript	v0.9.0
Libraries	Update to work without TrueColours
Other files	v0.9.0

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/Thimbleby/Corvus.git

Open in Desktop Download ZIP

A small box should pop open below your mouse. From this box select "Download ZIP" (Circled red).

Thimbleby / Corvus

Unwatch 1 Star 1 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Security Insights Settings

Raven's-like Automated Test Generator

javascript d3js d3 cognitive-science intelligence Manage topics

20 commits 1 branch 0 releases 1 contributor GPL-3.0

Branch: master New pull request

Create new file Upload files Find file Clone or download

Thimbleby Merge branch 'master' of https://github.com/Thimbleby/Corvus

Corax	v0.9.0
Demo Items	v0.9.0
JavaScript	v0.9.0
Libraries	Update to work without TrueColours
Other files	v0.9.0

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/Thimbleby/Corvus.git

Open in Desktop Download ZIP

Extract everything from the zip file using your normal means of doing so - exactly how to do this will vary system to system. Once done, you should be left with a folder titled "Corvus-master". You have now successfully downloaded this app.

# How to open and use Corvus on a local computer:

Opening the folder "Corvus-Master" should present you with contents like in this image:

Corvus-master				
Name	Date modified	Type	Size	
Corax	11/11/2019 17:41	File folder		
Demo Items	11/11/2019 17:41	File folder		
JavaScript	11/11/2019 17:41	File folder		
Libraries	20/08/2019 22:55	File folder		
Other files	11/11/2019 17:41	File folder		
Test	11/11/2019 17:41	File folder		
Advanced Corvus User Manual.pdf	10/11/2019 20:12	Adobe Acrobat D...	886 KB	
Corvus User Manual.pdf	20/08/2019 22:55	Adobe Acrobat D...	865 KB	
index.html	10/11/2019 20:12	Chrome HTML Do...	1 KB	
LICENSE	10/11/2019 20:12	File	35 KB	
random.html	10/11/2019 20:12	Chrome HTML Do...	2 KB	
README.md	10/11/2019 20:12	MD File	2 KB	

Corvus can be launched in your default browser by double clicking on the file "index.html". However Corvus will not work with certain browsers such as Microsoft Edge. Chrome, Firefox and Safari have all been tested and should work.

You will be presented with a page much like the following image:

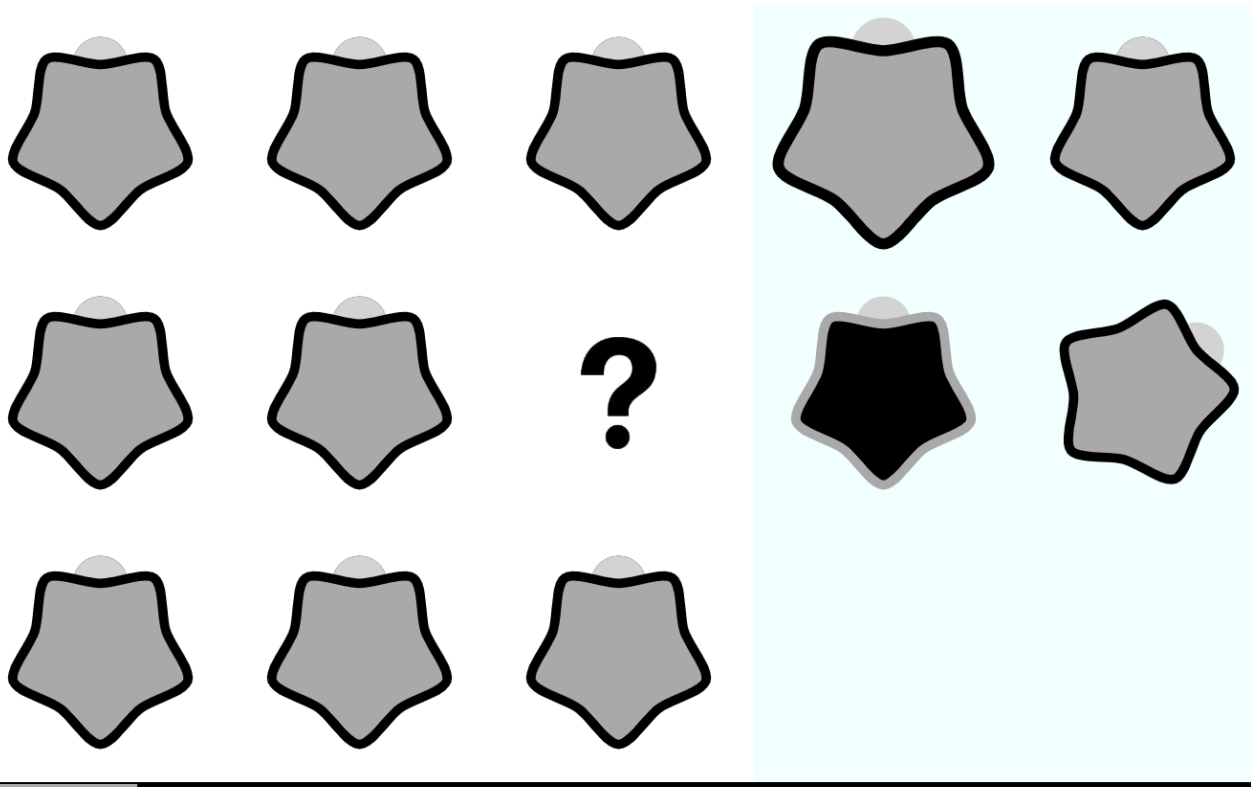


## Corvus v0.9.0

When the test starts select the icon from righthand-side that would complete the pattern of 9 icons.

Click [here](#) to start the test!

The user can start a test by following the instructions on the page. The following image is an example test item:



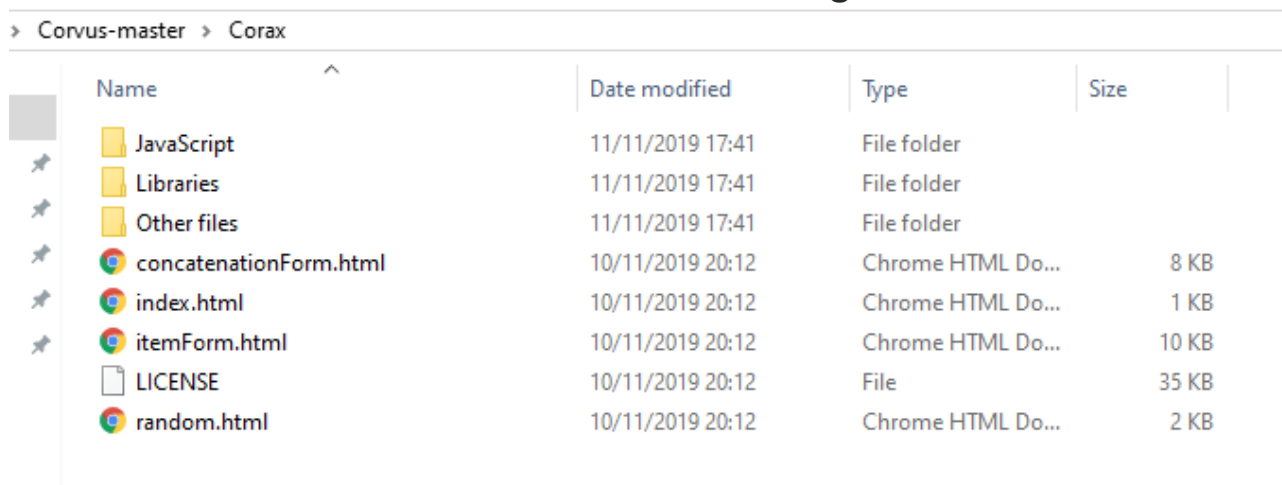
Once the test is complete, Corvus will download the participant's results to the local machine. Depending on your default browser and operating system, this may download automatically, or require authorisation by the user. By default your browser should place the file in your downloads folder. If you want it to download without prompts, you may need to open it in a different browser, or by changing your system settings - exactly how this can be done will depend on your system.

The results downloaded will include the participant's choices for each test item, if their answer was correct, how long they took, and how and when they moved their mouse over the options available.

# How to open and use Corax on a local computer:

Corax allows you to design, view and download your own test items. Once you have constructed your test items, you can also use Corax to combine them into a test that can be used with Corvus.

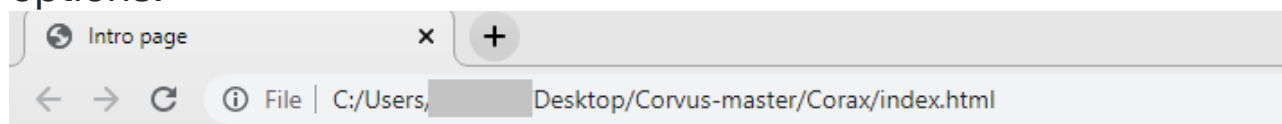
Inside the folder "Corvus-Master" you should find a folder titled "Corax". Its contents should look something like this:



Corvus-master > Corax				
Name	Date modified	Type	Size	
JavaScript	11/11/2019 17:41	File folder		
Libraries	11/11/2019 17:41	File folder		
Other files	11/11/2019 17:41	File folder		
concatenationForm.html	10/11/2019 20:12	Chrome HTML Do...	8 KB	
index.html	10/11/2019 20:12	Chrome HTML Do...	1 KB	
itemForm.html	10/11/2019 20:12	Chrome HTML Do...	10 KB	
LICENSE	10/11/2019 20:12	File	35 KB	
random.html	10/11/2019 20:12	Chrome HTML Do...	2 KB	

You can launch Corax in your default browser by double clicking on the file "index.html", in this location.

When launched, you will be presented with a choice from two options:



## Corax v0.1.0

Welcome to Corax.

Click [here](#) to specify and download a single test item file.

A larger range of options than Corax can provide can be accessed by editing the files directly.

Please see the advanced manual for help in doing so.

Click [here](#) to upload your test item files.

Corax can then concatenate them into a single downloadable test file.

This downloaded file can be used by placing it into Corvus/Test.

Ensure the file is called 'test.js'.

The first option allows you to design, view and download your own test items.

When you are satisfied with your test items, the second option on this menu will allow you to combine them into a test that Corvus can use.

On choosing the first option from the previous page, you will be presented with the following:

### Corax v0.1.0

Click [here](#) to view the test item!  
Once viewed, click on 'Download this test item' to download it.  
See Corax's user manual for further instructions once downloaded.  
Once finished viewing and downloading the test item, you can return here using your browser's back button  
  
Click [here](#) to return to Corax's main page.

Use the menus below to specify the test item you wish to generate, view and download.  
You will not be able to view or download any test items while text shows red.  
The red text indicates that something needs to change about that option in order to create a valid test item.

---

Item Size: 3x3

---

Graphic Option:

Logic Option:

---

Click [here](#) to view the test item!  
Once viewed, click on 'Download this test item' to download it.  
See Corax's user manual for further instructions once downloaded.  
Once finished viewing and downloading the test item, you can return here using your browser's back button  
  
Click [here](#) to return to Corax's main page.

From here you can construct your own test item!

Start by selecting a Graphic Option, and a Logic Option.

Note however that only certain combinations of Graphic Options and Logic Options are possible, but Corax will only allow you to make choices from these menus that work together.

If after selecting an option in both menus, you decide that you would rather make a test item with an option that is greyed out, you can reset both menus by choosing "Please Select" from either of Graphic Options or Logic Options.

You will then be presented with additional options. Follow the instructions provided, ensuring that there is no warning red text -- which, if present, indicates that there is something wrong with that

aspect of your test item. The following image is an example of that red text in action:

**Corax v0.1.0**

Click [here](#) to view the test item!  
Once viewed, click on 'Download this test item' to download it.  
See Corax's user manual for further instructions once downloaded.  
Once finished viewing and downloading the test item, you can return here using your browser's back button

Click [here](#) to return to Corax's main page.

Use the menus below to specify the test item you wish to generate, view and download.  
You will not be able to view or download any test items while text shows red.  
The red text indicates that something needs to change about that option in order to create a valid test item.

Item Size: 3x3

Graphic Option: 

Petals

Logic Option: 

Addition

Form:

These four elements form the top-left four elements of the matrix.  
The sum of each row and column (of these four elements) must not exceed or fall below a magnitude of 9.  
Similarly the sum of all four elements must also not exceed or fall below a magnitude of 9.

Top left element:

-8

Centre left element:

-4

Top centre element:

-7

Centre element:

-6

Alternate Answer Delta Layouts:

Number of alternative options: 

3

The alternate answers must be different to each other, and must not be equal the sum of the Form elements.

Alternate Option 1:

-4

Alternate Option 2:

6

Alternate Option 3:

6

Click [here](#) to view the test item!

Once viewed, click on 'Download this test item' to download it.

See Corax's user manual for further instructions once downloaded.

Once finished viewing and downloading the test item, you can return here using your browser's back button

Click [here](#) to return to Corax's main page.

In this particular example, there are multiple problems. Firstly under **Form**, the sum of all the dropdown menus cannot exceed 9 or fall below -9. Similarly, the sum of each column and row of the dropdown menus cannot exceed 9 or fall below -9. This is explained in the text immediately under the title **Form** Your final item might look something like this:



## Corax v0.1.0

Click [here](#) to view the test item!  
Once viewed, click on 'Download this test item' to download it.  
See Corax's user manual for further instructions once downloaded.  
Once finished viewing and downloading the test item, you can return here using your browser's back button

Click [here](#) to return to Corax's main page.

Use the menus below to specify the test item you wish to generate, view and download.  
You will not be able to view or download any test items while text shows red.  
The red text indicates that something needs to change about that option in order to create a valid test item.

---

**Item Size:** 3x3

---

**Graphic Option:** Petals

**Logic Option:** Addition

---

**Form:**

These four elements form the top-left four elements of the matrix.  
The sum of each row and column (of these four elements) must not exceed or fall below a magnitude of 9.  
Similarly the sum of all four elements must also not exceed or fall below a magnitude of 9.

Top left element: 9  
Centre left element: -3

Top centre element: -6  
Centre element: -2

---

**Alternate Answer Delta Layouts:**

Number of alternative options: 3

The alternate answers must be different to each other, and must not be equal the sum of the Form elements.

Alternate Option 1: -4  
Alternate Option 2: -3  
Alternate Option 3: 3

---

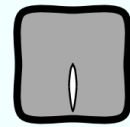
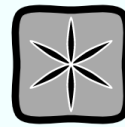
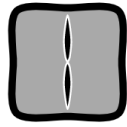
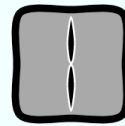
Click [here](#) to view the test item!  
Once viewed, click on 'Download this test item' to download it.  
See Corax's user manual for further instructions once downloaded.  
Once finished viewing and downloading the test item, you can return here using your browser's back button

Click [here](#) to return to Corax's main page.

When you are happy with your test item, you can click the word "here" in the text "Click here to view the test item!"

Corax will then show you what your test item might look like in Corvus. Although, note that some aspects are random, such as the order the options are presented in.

The following image is the test item as specified in the previous image:



[Download this test item](#)

If, on viewing it, you want to alter your test item, you can return to the test item design page by clicking the back arrow in your browser.

If instead you are happy, and want to download it, click on any of the options, or on the blue text "Download this test item" as seen in the top right of the image above.

Depending on your default browser and operating system, this may download automatically, or require authorisation by the user.

Once you have designed, viewed and downloaded all of the test items you want to include in your test, find them on your system (by default browsers should download files to your downloads folder, but feel free to move them from there), and arrange them in the order you want them to appear in your test. This may involve you naming them according to their numerical order - if you choose to arrange them by doing so, remember to always use the same number of digits, as otherwise the order can be messed up by larger numbers that start with a small number (i.e. alphabetically 'item100' comes before 'item56', but after 'item056').

Once ready, from Corax's main menu (see above - you can get there by clicking "here" in the text "Click here to return to Corax's

main page."), choose the second option in order to construct the test from your test items.

### Corax v0.1.0

Participants ...  ... skip test items.  
The mouse over feature is ...  ... for participants.  
Selecting 'disabled' means that there will be no mouseover features.  
These test items will be ...  ... the test item files.  
Selecting 'specified' means your test items can still vary in very minor ways on repeat testing. For example the order the options are presented in is usually random.

On your computer, arrange all of the test items in the order you want them to appear in the test. Then select them all and click and drag them into this box.

Once you have assembled the list of test items above to your satisfaction, click [here](#), to download the concatenated test. Ensure the downloaded file is named 'test.js', and move it to Corvus/Test.

Click [here](#) to return to Corax's main page.

You should be presented with a page like the one depicted above. Which will start with a set of options you can make about the test as a whole.

Select all of your test items, taking care to preserve their order, then click and drag them into the drop-box on this page. Once done, you should see something like this:

### Corax v0.1.0

Participants ...  ... skip test items.  
The mouse over feature is ...  ... for participants.  
Selecting 'disabled' means that there will be no mouseover features.  
These test items will be ...  ... the test item files.  
Selecting 'specified' means your test items can still vary in very minor ways on repeat testing. For example the order the options are presented in is usually random.

On your computer, arrange all of the test items in the order you want them to appear in the test. Then select them all and click and drag them into this box.

- **item01.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item02.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item03.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item04.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item05.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item06.txt** (text/plain) - 94 bytes, last modified: 11/11/2019
- **item07.txt** (text/plain) - 94 bytes, last modified: 11/11/2019

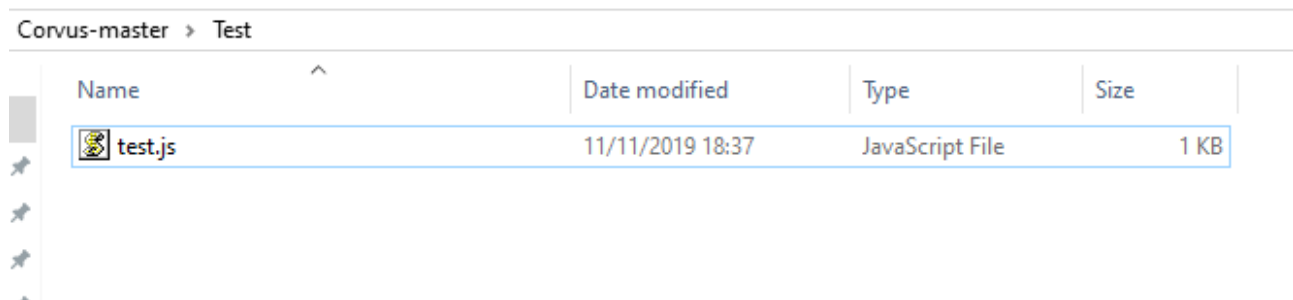
Once you have assembled the list of test items above to your satisfaction, click [here](#), to download the concatenated test. Ensure the downloaded file is named 'test.js', and move it to Corvus/Test.


Click [here](#) to return to Corax's main page.

When ready, click "here" in the line of text that ends "..., click here, to download your test."

Again, your system may require you to authorise the download. Once done, place the downloaded file in the folder "Test", which can be found in the folder "Corax-Master". You may need to rename, delete or overwrite the previous file; either way, the new

file needs to be called "test.js", and be in the "Test" folder, as shown below:



Corvus-master > Test			
Name	Date modified	Type	Size
 test.js	11/11/2019 18:37	JavaScript File	1 KB

To try the test, launch Corvus as described in the previous section.

## The Advanced Corvus User Manual (for programmers):

A brief introduction to modifying Corvus is provided in the same GitHub repository for those who are comfortable reading and editing JavaScript.

It may also be of use if you wish to host Corvus on your own secure server, as minor modifications to Corvus will be necessary.

## Final Words

If you have any questions, please feel free to contact the author by opening an issue on the GitHub repository for Corvus at <https://github.com/Thimbleby/Corvus>.