

How to create your memory script for Q301

Your text file is used to tell the experiment program which pictures (or word) you want to show on each trial. The program will simply go through your script, showing each picture in the order in which it appears in your script.

To begin your script, we'll have some values that tell the program about your experimental design.

Here are the first 3 lines in a sample script. The easiest way to set up your script file is to use excel.

```
RememberKnow  
400  
600
```

The first line tells the program that this script is for a remember/know experiment. You could also use OldNew if you were doing an old/new paradigm like the Rugg nature paper.

The second line tells the program that you have 400 trials in the study part of the experiment.

The third line tells the program that you have 600 trials in the test part of the experiment.

After this header information, you list the conditions and filenames for the 400 study trials.

The information is separated by tabs, with the first entry the condition number (usually 1 to 3, or 1 to 2).

Here is an example in excel:

```
RememberKnow  
400  
600  
2    hep.jpg  
1    nice.jpg  
3    hello.jpg  
2    fred.jpg  
1    hep1.jpg
```

This shows the first 5 study trials. So the program will show the picture hep.jpg first, and record that it is in condition 2. nice.jpg is the next picture, and it will be recorded as in condition 1.

Continue this for the 400 lines that are in the study condition.

The test conditions will follow immediately after the study conditions.

Here are the steps to take to get your pictures into the script file. I'm going through an example with 40 study trials and 60 test trials to keep it simple, but you can do it with 400 and 600 easily.

First, organize your pictures into two (or three) folders according to the conditions. So pictures of faces might be in one folder, and pictures of houses might be in a separate folder if those are your conditions.

The next step is to get a folder listing for each folder. In Mac OS X, you can highlight the files in the folder and copy the list, and then paste that into excel. Windows might work the same way, or you can find a file listing program on the web. Do not try to type in the names yourself, because typos will kill you.

Paste your filenames into two (or three) columns into excel:

	Condition 1		Condition 2
	Face1.jpg		House1.jpg
	Face2.jpg		House2.jpg
	Face3.jpg		House3.jpg
	Face4.jpg		House4.jpg
	Face5.jpg		House5.jpg
	Face6.jpg		House6.jpg
	Face7.jpg		House7.jpg
	Face8.jpg		House8.jpg
	Face9.jpg		House9.jpg
	Face10.jpg		House10.jpg
	Face11.jpg		House11.jpg
	Face12.jpg		House12.jpg
	Face13.jpg		House13.jpg
	Face14.jpg		House14.jpg
	Face15.jpg		House15.jpg
	Face16.jpg		House16.jpg
	Face17.jpg		House17.jpg
	Face18.jpg		House18.jpg
	Face19.jpg		House19.jpg
	Face20.jpg		House20.jpg
	Face21.jpg		House21.jpg
	Face22.jpg		House22.jpg
	Face23.jpg		House23.jpg
	Face24.jpg		House24.jpg
	Face25.jpg		House25.jpg
	Face26.jpg		House26.jpg
	Face27.jpg		House27.jpg
	Face28.jpg		House28.jpg
	Face29.jpg		House29.jpg
	Face30.jpg		House30.jpg

We need to do two things to this list. First, we need to randomize the list. We will use a trick in excel to do this. The function `=rand()` creates a random number. We will assign a random number to each row in each list, and then *sort* on the random numbers. This will reorder the list. First, type the formula `=rand()` into the cell next to the first row:

Condition 1		Condition 2
Face1.jpg	=rand()	House1.jpg
Face2.jpg		House2.jpg
Face3.jpg		House3.jpg
Face4.jpg		House4.jpg
Face5.jpg		House5.jpg
Face6.jpg		House6.jpg
Face7.jpg		House7.jpg
Face8.jpg		House8.jpg
Face9.jpg		House9.jpg
Face10.jpg		House10.jpg
Face11.jpg		House11.jpg
Face12.jpg		House12.jpg
Face13.jpg		House13.jpg
Face14.jpg		House14.jpg
Face15.jpg		House15.jpg
Face16.jpg		House16.jpg
Face17.jpg		House17.jpg
Face18.jpg		House18.jpg
Face19.jpg		House19.jpg
Face20.jpg		House20.jpg
Face21.jpg		House21.jpg
Face22.jpg		House22.jpg
Face23.jpg		House23.jpg
Face24.jpg		House24.jpg
Face25.jpg		House25.jpg
Face26.jpg		House26.jpg
Face27.jpg		House27.jpg
Face28.jpg		House28.jpg
Face29.jpg		House29.jpg
Face30.jpg		House30.jpg

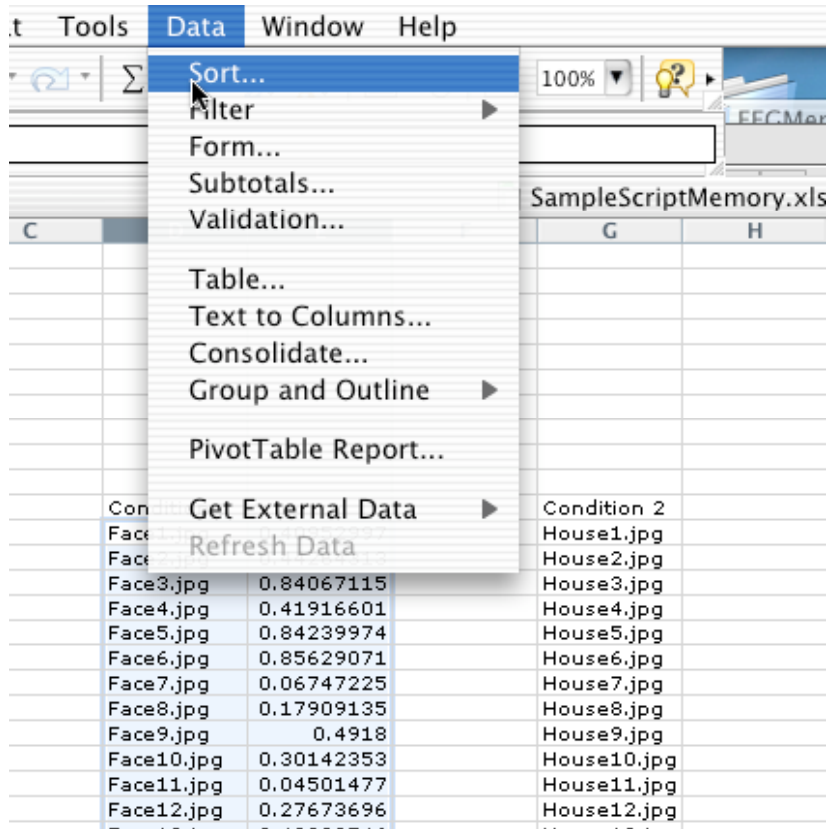
Hit return, and then copy this formula all the way down (your numbers will differ from mine):

Condition 1		Condition 2
Face1.jpg	0.40952997	House1.jpg
Face2.jpg	0.44264313	House2.jpg
Face3.jpg	0.84067115	House3.jpg
Face4.jpg	0.41916601	House4.jpg
Face5.jpg	0.84239974	House5.jpg
Face6.jpg	0.85629071	House6.jpg
Face7.jpg	0.06747225	House7.jpg
Face8.jpg	0.17909135	House8.jpg
Face9.jpg	0.4918	House9.jpg
Face10.jpg	0.30142353	House10.jpg
Face11.jpg	0.04501477	House11.jpg
Face12.jpg	0.27673696	House12.jpg
Face13.jpg	0.49323546	House13.jpg
Face14.jpg	0.47156928	House14.jpg
Face15.jpg	0.92640874	House15.jpg
Face16.jpg	0.89499186	House16.jpg
Face17.jpg	0.91026206	House17.jpg
Face18.jpg	0.946207	House18.jpg
Face19.jpg	0.76211535	House19.jpg
Face20.jpg	0.22447315	House20.jpg
Face21.jpg	0.00132503	House21.jpg
Face22.jpg	0.71599532	House22.jpg
Face23.jpg	0.50631348	House23.jpg
Face24.jpg	0.35427095	House24.jpg
Face25.jpg	0.54262732	House25.jpg
Face26.jpg	0.80881084	House26.jpg
Face27.jpg	0.33872289	House27.jpg
Face28.jpg	0.83119106	House28.jpg
Face29.jpg	0.62219935	House29.jpg
Face30.jpg	0.153794	House30.jpg

Now select the column with the names, and the column with the random numbers:

	Condition 1		Condition 2
	Face1.jpg	0.40952997	House1.jpg
	Face2.jpg	0.44264313	House2.jpg
	Face3.jpg	0.84067115	House3.jpg
	Face4.jpg	0.41916601	House4.jpg
	Face5.jpg	0.84239974	House5.jpg
	Face6.jpg	0.85629071	House6.jpg
	Face7.jpg	0.06747225	House7.jpg
	Face8.jpg	0.17909135	House8.jpg
	Face9.jpg	0.4918	House9.jpg
	Face10.jpg	0.30142353	House10.jpg
	Face11.jpg	0.04501477	House11.jpg
	Face12.jpg	0.27673696	House12.jpg
	Face13.jpg	0.49323546	House13.jpg
	Face14.jpg	0.47156928	House14.jpg
	Face15.jpg	0.92640874	House15.jpg
	Face16.jpg	0.89499186	House16.jpg
	Face17.jpg	0.91026206	House17.jpg
	Face18.jpg	0.946207	House18.jpg
	Face19.jpg	0.76211535	House19.jpg
	Face20.jpg	0.22447315	House20.jpg
	Face21.jpg	0.00132503	House21.jpg
	Face22.jpg	0.71599532	House22.jpg
	Face23.jpg	0.50631348	House23.jpg
	Face24.jpg	0.35427095	House24.jpg
	Face25.jpg	0.54262732	House25.jpg
	Face26.jpg	0.80881084	House26.jpg
	Face27.jpg	0.33872289	House27.jpg
	Face28.jpg	0.83119106	House28.jpg
	Face29.jpg	0.62219935	House29.jpg
	Face30.jpg	0.153794	House30.jpg

We need to sort on the random numbers. Find the sort command under the Data menu item:



You'll get a dialog like this:

	D	E	F	G	H	I
Condition 1				Condition 2		
Face1.jpg	0.40952997			House1.jpg		
Face2.jpg	0.44264313			House2.jpg		
Face3.jpg	0.84067115					
Face4.jpg	0.41916601					
Face5.jpg	0.84239974					
Face6.jpg	0.85629071					
Face7.jpg	0.06747225					
Face8.jpg	0.17909135					
Face9.jpg	0.4918					
Face10.jpg	0.30142353					
Face11.jpg	0.04501477					
Face12.jpg	0.27673696					
Face13.jpg	0.49323546					
Face14.jpg	0.47156928					
Face15.jpg	0.92640874					
Face16.jpg	0.89499186					
Face17.jpg	0.91026206					
Face18.jpg	0.946207					
Face19.jpg	0.76211535					
Face20.jpg	0.22447315					
Face21.jpg	0.00132503					
Face22.jpg	0.71599532					
Face23.jpg	0.50631348					
Face24.jpg	0.35427095					
Face25.jpg	0.54262732					
Face26.jpg	0.80881084					
Face27.jpg	0.33872289					
Face28.jpg	0.83119106					
Face29.jpg	0.62219935					
Face30.jpg	0.153794					

Sort

Sort by Ascending
 Descending

Then by Ascending
 Descending

Then by Ascending
 Descending

My list has Header row No header row

Now, excel thinks we want to sort on column D, but we actually want to sort on column E which contains the random numbers. I'll change it:

	D	E	F	G	H	I
Condition 1						
Face1.jpg		0.40952997				
Face2.jpg		0.44264313				
Face3.jpg		0.84067115				
Face4.jpg		0.41916601				
Face5.jpg		0.84239974				
Face6.jpg		0.85629071				
Face7.jpg		0.06747225				
Face8.jpg		0.17909135				
Face9.jpg		0.4918				
Face10.jpg		0.30142353				
Face11.jpg		0.04501477				
Face12.jpg		0.27673696				
Face13.jpg		0.49323546				
Face14.jpg		0.47156928				
Face15.jpg		0.92640874				
Face16.jpg		0.89499186				
Face17.jpg		0.91026206				
Face18.jpg		0.946207				
Face19.jpg		0.76211535				
Face20.jpg		0.22447315				
Face21.jpg		0.00132503				
Face22.jpg		0.71599532				
Face23.jpg		0.50631348				
Face24.jpg		0.35427095				
Face25.jpg		0.54262732				
Face26.jpg		0.80881084				
Face27.jpg		0.33872289				
Face28.jpg		0.83119106				
Face29.jpg		0.62219935				
Face30.jpg		0.153794				
Condition 2						
House1.jpg						
House2.jpg						

Sort

Sort by Ascending Descending

Then by Ascending Descending

Then by Ascending Descending

My list has Header row No header row

Press the ok button to do the sort:

	D	E	F	G	H	I
Condition 1						
Face21.jpg		0.08944736				
Face11.jpg		0.00814655				
Face7.jpg		0.01760057				
Face30.jpg		0.20516224				
Face8.jpg		0.30840101				
Face20.jpg		0.67384674				
Face12.jpg		0.77932968				
Face10.jpg		0.21861716				
Face27.jpg		0.60323225				
Face24.jpg		0.47962391				
Face1.jpg		0.74067272				
Face4.jpg		0.1768076				
Face2.jpg		0.99740651				
Face14.jpg		0.32359363				
Face9.jpg		0.25049354				
Face13.jpg		0.22437308				
Face23.jpg		0.59777858				
Face25.jpg		0.09686064				
Face29.jpg		0.1096683				
Face22.jpg		0.99479464				
Face19.jpg		0.06014718				
Face26.jpg		0.55522712				
Face28.jpg		0.26365868				
Face3.jpg		0.63881337				
Face5.jpg		0.78657626				
Face6.jpg		0.06654875				
Face16.jpg		0.49757195				
Face17.jpg		0.72694087				
Face15.jpg		0.86540192				
Face18.jpg		0.91676159				
Condition 2						
House1.jpg						
House2.jpg						

Notice how the list is now reordered. You might wonder why the random numbers are not sorted, and the answer is that they were, but excel then recalculated, and every time it

does that it chooses a new random number. So the numbers got randomized again, but that's ok.

Repeat this process for your other list of filenames:

Condition 1		Condition 2	
Face21.jpg	0.40155942	House8.jpg	0.03513563
Face11.jpg	0.30569203	House11.jpg	0.32624953
Face7.jpg	0.80206927	House5.jpg	0.82030853
Face30.jpg	0.42457297	House24.jpg	0.67478659
Face8.jpg	0.34656254	House29.jpg	0.72419763
Face20.jpg	0.92635629	House17.jpg	0.37616536
Face12.jpg	0.19194526	House6.jpg	0.19138672
Face10.jpg	0.41276885	House14.jpg	0.2049534
Face27.jpg	0.32681509	House15.jpg	0.63364155
Face24.jpg	0.66528842	House27.jpg	0.81422101
Face1.jpg	0.30765618	House12.jpg	0.54130078
Face4.jpg	0.3176692	House21.jpg	0.80919526
Face2.jpg	0.52582184	House20.jpg	0.31800988
Face14.jpg	0.44142466	House30.jpg	0.06776427
Face9.jpg	0.01416711	House13.jpg	0.05868343
Face13.jpg	0.44292645	House25.jpg	0.93192785
Face23.jpg	0.0088634	House1.jpg	0.05378406
Face25.jpg	0.35805457	House16.jpg	0.53135346
Face29.jpg	0.94247862	House26.jpg	0.67587014
Face22.jpg	0.25875066	House23.jpg	0.2904132
Face19.jpg	0.95647962	House18.jpg	0.87905151
Face26.jpg	0.86235075	House19.jpg	0.38638303
Face28.jpg	0.29387186	House28.jpg	0.55621657
Face3.jpg	0.04055743	House22.jpg	0.35939292
Face5.jpg	0.71877674	House10.jpg	0.30798607
Face6.jpg	0.33362259	House2.jpg	0.32001247
Face16.jpg	0.71132734	House7.jpg	0.27838103
Face17.jpg	0.16306893	House9.jpg	0.9425541
Face15.jpg	0.15713574	House3.jpg	0.93922296
Face18.jpg	0.79767353	House4.jpg	0.46143243

Now we have to assign the images to be either targets or distractors. Let's say that condition 1 study images will have a condition number of 1, condition 2 study pictures will have a condition number of 2, condition 1 test pictures (distractors) will have a condition of 3, and condition 2 distractors will have a condition number of 4.

In our design, we have 40 study pictures, so that will be the first 20 pictures in each list. Assign these numbers in the cells to the *left* of the picture names:

	Condition 1		Condition 2
	1 Face21.jpg	0.91293173	2 House8.jpg
	1 Face11.jpg	0.46624664	2 House11.jpg
	1 Face7.jpg	0.67499408	2 House5.jpg
	1 Face30.jpg	0.19357736	2 House24.jpg
	1 Face8.jpg	0.33341449	2 House29.jpg
	1 Face20.jpg	0.11384994	2 House17.jpg
	1 Face12.jpg	0.22413755	2 House6.jpg
	1 Face10.jpg	0.2195379	2 House14.jpg
	1 Face27.jpg	0.51805971	2 House15.jpg
	1 Face24.jpg	0.0619717	2 House27.jpg
	1 Face1.jpg	0.12312933	2 House12.jpg
	1 Face4.jpg	0.34275634	2 House21.jpg
	1 Face2.jpg	0.85896668	2 House20.jpg
	1 Face14.jpg	0.00533211	2 House30.jpg
	1 Face9.jpg	0.29305795	2 House13.jpg
	1 Face13.jpg	0.57794652	2 House25.jpg
	1 Face23.jpg	0.83534972	2 House1.jpg
	1 Face25.jpg	0.43008356	2 House16.jpg
	1 Face29.jpg	0.3345723	2 House26.jpg
	1 Face22.jpg	0.18090842	2 House23.jpg
	Face19.jpg	0.33159978	House18.jpg
	Face26.jpg	0.07577831	House19.jpg
	Face28.jpg	0.04585141	House28.jpg
	Face3.jpg	0.42130614	House22.jpg
	Face5.jpg	0.12332058	House10.jpg
	Face6.jpg	0.32816536	House2.jpg
	Face16.jpg	0.0356756	House7.jpg
	Face17.jpg	0.62619126	House9.jpg
	Face15.jpg	0.58138621	House3.jpg
	Face18.jpg	0.85280673	House4.jpg

The remaining rows are distractors for each condition:

	Condition 1		Condition 2
	1 Face21.jpg	0.20989197	2 House8.jpg
	1 Face11.jpg	0.64236435	2 House11.jpg
	1 Face7.jpg	0.7119429	2 House5.jpg
	1 Face30.jpg	0.4375689	2 House24.jpg
	1 Face8.jpg	0.76148056	2 House29.jpg
	1 Face20.jpg	0.56040597	2 House17.jpg
	1 Face12.jpg	0.81299573	2 House6.jpg
	1 Face10.jpg	0.87163579	2 House14.jpg
	1 Face27.jpg	0.69703437	2 House15.jpg
	1 Face24.jpg	0.64844452	2 House27.jpg
	1 Face1.jpg	0.49801871	2 House12.jpg
	1 Face4.jpg	0.1844898	2 House21.jpg
	1 Face2.jpg	0.66686556	2 House20.jpg
	1 Face14.jpg	0.0251625	2 House30.jpg
	1 Face9.jpg	0.54643622	2 House13.jpg
	1 Face13.jpg	0.33220667	2 House25.jpg
	1 Face23.jpg	0.58495928	2 House1.jpg
	1 Face25.jpg	0.93650719	2 House16.jpg
	1 Face29.jpg	0.57552261	2 House26.jpg
	1 Face22.jpg	0.09642588	2 House23.jpg
	3 Face19.jpg	0.95834556	4 House18.jpg
	3 Face26.jpg	0.78583904	4 House19.jpg
	3 Face28.jpg	0.41884591	4 House28.jpg
	3 Face3.jpg	0.08567921	4 House22.jpg
	3 Face5.jpg	0.05559242	4 House10.jpg
	3 Face6.jpg	0.20250934	4 House2.jpg
	3 Face16.jpg	0.56216189	4 House7.jpg
	3 Face17.jpg	0.94851347	4 House9.jpg
	3 Face15.jpg	0.203219	4 House3.jpg
	3 Face18.jpg	0.12307679	4 House4.jpg

Now we can begin to create our study list. In a new column, create your header rows like that described at the beginning of these instructions. Then copy just your condition 1 filenames and their condition numbers and paste them into cells just underneath your header information:

	A	B	C	D	E	F	G
1	RememberKnow						
2		40					
3		60					
4		1 Face21.jpg					
5		1 Face11.jpg					
6		1 Face7.jpg					
7		1 Face30.jpg					
8		1 Face8.jpg					
9		1 Face20.jpg					
10		1 Face12.jpg					
11		1 Face10.jpg		Condition 1			Condition 2
12		1 Face27.jpg		1 Face21.jpg	0.57776408		2 House8.jpg
13		1 Face24.jpg		1 Face11.jpg	0.98302382		2 House11.jpg
14		1 Face1.jpg		1 Face7.jpg	0.86896378		2 House5.jpg
15		1 Face4.jpg		1 Face30.jpg	0.66334815		2 House24.jpg
16		1 Face2.jpg		1 Face8.jpg	0.86097726		2 House29.jpg
17		1 Face14.jpg		1 Face20.jpg	0.43231516		2 House17.jpg
18		1 Face9.jpg		1 Face12.jpg	0.13906646		2 House6.jpg
19		1 Face13.jpg		1 Face10.jpg	0.48827439		2 House14.jpg
20		1 Face23.jpg		1 Face27.jpg	0.13889774		2 House15.jpg
21		1 Face25.jpg		1 Face24.jpg	0.37926407		2 House27.jpg
22		1 Face29.jpg		1 Face1.jpg	0.73118448		2 House12.jpg
23		1 Face22.jpg		1 Face4.jpg	0.17995577		2 House21.jpg
24				1 Face2.jpg	0.61506159		2 House20.jpg
25				1 Face14.jpg	0.31076669		2 House30.jpg
26				1 Face9.jpg	0.55408305		2 House13.jpg
27				1 Face13.jpg	0.25098541		2 House25.jpg
28				1 Face23.jpg	0.96376375		2 House1.jpg
29				1 Face25.jpg	0.51228673		2 House16.jpg
30				1 Face29.jpg	0.95347912		2 House26.jpg
31				1 Face22.jpg	0.33513557		2 House23.jpg
32				3 Face19.jpg	0.97851995		4 House18.jpg
33				3 Face26.jpg	0.32606669		4 House19.jpg
34				3 Face28.jpg	0.32979611		4 House28.jpg
35				3 Face3.jpg	0.55690905		4 House22.jpg
36				3 Face5.jpg	0.72914862		4 House10.jpg
37				3 Face6.jpg	0.3046042		4 House2.jpg
38				3 Face16.jpg	0.14101221		4 House7.jpg
39				3 Face17.jpg	0.31238465		4 House9.jpg
40				3 Face15.jpg	0.09226142		4 House3.jpg
41				3 Face18.jpg	0.25578872		4 House4.jpg

Do the same with your condition 2 filenames and condition numbers:

	A	B	C	D	E	F	G	H
1	RememberKnow							
2		40						
3		60						
4		1 Face21.jpg						
5		1 Face11.jpg						
6		1 Face7.jpg						
7		1 Face30.jpg						
8		1 Face8.jpg						
9		1 Face20.jpg						
10		1 Face12.jpg						
11		1 Face10.jpg			Condition 1			Condition 2
12		1 Face27.jpg			1 Face21.jpg	0.46901063		2 House8.jpg
13		1 Face24.jpg			1 Face11.jpg	0.81407539		2 House11.jpg
14		1 Face1.jpg			1 Face7.jpg	0.90776976		2 House5.jpg
15		1 Face4.jpg			1 Face30.jpg	0.0023978		2 House24.jpg
16		1 Face2.jpg			1 Face8.jpg	0.42344939		2 House29.jpg
17		1 Face14.jpg			1 Face20.jpg	0.36471191		2 House17.jpg
18		1 Face9.jpg			1 Face12.jpg	0.70884867		2 House6.jpg
19		1 Face13.jpg			1 Face10.jpg	0.24571711		2 House14.jpg
20		1 Face23.jpg			1 Face27.jpg	0.87677244		2 House15.jpg
21		1 Face25.jpg			1 Face24.jpg	0.79708654		2 House27.jpg
22		1 Face29.jpg			1 Face1.jpg	0.02978346		2 House12.jpg
23		1 Face22.jpg			1 Face4.jpg	0.91405841		2 House21.jpg
24		2 House8.jpg			1 Face2.jpg	0.61926672		2 House20.jpg
25		2 House11.jpg			1 Face14.jpg	0.71517444		2 House30.jpg
26		2 House5.jpg			1 Face9.jpg	0.39906447		2 House13.jpg
27		2 House24.jpg			1 Face13.jpg	0.9394662		2 House25.jpg
28		2 House29.jpg			1 Face23.jpg	0.39825661		2 House1.jpg
29		2 House17.jpg			1 Face25.jpg	0.23781547		2 House16.jpg
30		2 House6.jpg			1 Face29.jpg	0.76015636		2 House26.jpg
31		2 House14.jpg			1 Face22.jpg	0.4894876		2 House23.jpg
32		2 House15.jpg			3 Face19.jpg	0.04697233		4 House18.jpg
33		2 House27.jpg			3 Face26.jpg	0.99348605		4 House19.jpg
34		2 House12.jpg			3 Face28.jpg	0.70692042		4 House28.jpg
35		2 House21.jpg			3 Face3.jpg	0.17894389		4 House22.jpg
36		2 House20.jpg			3 Face5.jpg	0.56488165		4 House10.jpg
37		2 House30.jpg			3 Face6.jpg	0.4181197		4 House2.jpg
38		2 House13.jpg			3 Face16.jpg	0.35280176		4 House7.jpg
39		2 House25.jpg			3 Face17.jpg	0.70503426		4 House9.jpg
40		2 House1.jpg			3 Face15.jpg	0.0774365		4 House3.jpg
41		2 House16.jpg			3 Face18.jpg	0.52657506		4 House4.jpg
42		2 House26.jpg						
43		2 House23.jpg						
44								

This is your entire study list. It would be poor experimental design to show all the condition 1 pictures first, followed by the condition 2 pictures. Instead, let's reorder the study list using the same =rand() function we used above. Put =rand() next to each filename in the study list. The trick here is that we need to select the column containing the condition number as well:

	A	B	C	D	E	F	G	H	
1	RememberKnow								
2	40								
3	60								
4	1	Face21.jpg	0.80195173						
5	1	Face11.jpg	0.15717245						
6	1	Face7.jpg	0.01934078						
7	1	Face30.jpg	0.11473455						
8	1	Face8.jpg	0.25933239						
9	1	Face20.jpg	0.73292414						
10	1	Face12.jpg	0.34635186						
11	1	Face10.jpg	0.59139955	Condition 1				Condition 2	
12	1	Face27.jpg	0.81380512	1	Face21.jpg	0.28231467		2	House8.jpg
13	1	Face24.jpg	0.89039838	1	Face11.jpg	0.88041055		2	House11.jpg
14	1	Face1.jpg	0.5304632	1	Face7.jpg	0.01934078		2	House5.jpg
15	1	Face4.jpg	0.87489249						use24.jpg
16	1	Face2.jpg	0.31602317						use29.jpg
17	1	Face14.jpg	0.23756284						use17.jpg
18	1	Face9.jpg	0.81061259						use6.jpg
19	1	Face13.jpg	0.75212293						use14.jpg
20	1	Face23.jpg	0.23251612						use15.jpg
21	1	Face25.jpg	0.44201417						use27.jpg
22	1	Face29.jpg	0.14878634						use12.jpg
23	1	Face22.jpg	0.97677807						use21.jpg
24	2	House8.jpg	0.43333321						use20.jpg
25	2	House11.jpg	0.63509032						use30.jpg
26	2	House5.jpg	0.28178635						use13.jpg
27	2	House24.jpg	0.33754918						use25.jpg
28	2	House29.jpg	0.3665743						use1.jpg
29	2	House17.jpg	0.48265505						use16.jpg
30	2	House6.jpg	0.93272287						use26.jpg
31	2	House14.jpg	0.21094811						use23.jpg
32	2	House15.jpg	0.27726297						use18.jpg
33	2	House27.jpg	0.95622299						use19.jpg
34	2	House12.jpg	0.03235362						use28.jpg
35	2	House21.jpg	0.72984635						use22.jpg
36	2	House20.jpg	0.85801024						use10.jpg
37	2	House30.jpg	0.17509894						use2.jpg
38	2	House13.jpg	0.12452538						use7.jpg
39	2	House25.jpg	0.3701164						use9.jpg
40	2	House1.jpg	0.46534556						use3.jpg
41	2	House16.jpg	0.79658426						use4.jpg
42	2	House26.jpg	0.31906988						
43	2	House23.jpg	0.71470398						
44									

Sort

Sort by Column C
 Ascending
 Descending

Then by
 Ascending
 Descending

Then by
 Ascending
 Descending

My list has
 Header row
 No header row

Options...
Cancel
OK

Make sure you sort on the correct column (I sorted on column C for this worksheet).
Once you do this, you should have:

	A	B	C
1	RememberKnow		
2	40		
3	60		
4	1	Face7.jpg	0.05439408
5	2	House12.jpg	0.82593649
6	1	Face30.jpg	0.57110712
7	2	House13.jpg	0.6587302
8	1	Face29.jpg	0.42557472
9	1	Face11.jpg	0.41554108
10	2	House30.jpg	0.60066694
11	2	House14.jpg	0.69367115
12	1	Face23.jpg	0.43418996
13	1	Face14.jpg	0.79042819
14	1	Face8.jpg	0.67064044
15	2	House15.jpg	0.84018759
16	2	House5.jpg	0.06065217
17	1	Face2.jpg	0.00662498
18	2	House26.jpg	0.07821111
19	2	House24.jpg	0.65745335
20	1	Face12.jpg	0.91349009
21	2	House29.jpg	0.31101172
22	2	House25.jpg	0.51669355
23	2	House8.jpg	0.02313254
24	1	Face25.jpg	0.78069676
25	2	House1.jpg	0.81389933
26	2	House17.jpg	0.68710922
27	1	Face1.jpg	0.62999873
28	1	Face10.jpg	0.27926913
29	2	House11.jpg	0.87626635
30	2	House23.jpg	0.78799174
31	2	House21.jpg	0.94436561
32	1	Face20.jpg	0.59754193
33	1	Face13.jpg	0.3909407
34	2	House16.jpg	0.32263543
35	1	Face21.jpg	0.24027169
36	1	Face9.jpg	0.63991234
37	1	Face27.jpg	0.74402484
38	2	House20.jpg	0.36134131
39	1	Face4.jpg	0.27526919
40	1	Face24.jpg	0.42882931
41	2	House6.jpg	0.75567415
42	2	House27.jpg	0.73359422
43	1	Face22.jpg	0.39601
44			

Make sure your condition numbers are still with the appropriate filenames.

Now we are ready to create the test list. First, I like to make a note at the end of the study list in a column that isn't part of the list:

	A	B	C	D
1	RememberKnow			
2	40			
3	60			
4	1	Face7.jpg	0.03879432	
5	2	House12.jpg	0.78218012	
6	1	Face30.jpg	0.61030725	
7	2	House13.jpg	0.72483222	
8	1	Face29.jpg	0.58925497	
9	1	Face11.jpg	0.21030859	
10	2	House30.jpg	0.78857755	
11	2	House14.jpg	0.08684563	Condi
12	1	Face23.jpg	0.72854805	1 Face2
13	1	Face14.jpg	0.05017923	1 Face1
14	1	Face8.jpg	0.88253732	1 Face7
15	2	House15.jpg	0.8059134	1 Face3
16	2	House5.jpg	0.69506807	1 Face8
17	1	Face2.jpg	0.02155321	1 Face2
18	2	House26.jpg	0.45159774	1 Face1
19	2	House24.jpg	0.5628229	1 Face1
20	1	Face12.jpg	0.78416497	1 Face2
21	2	House29.jpg	0.90523893	1 Face2
22	2	House25.jpg	0.09444186	1 Face1
23	2	House8.jpg	0.77047346	1 Face4
24	1	Face25.jpg	0.28434143	1 Face2
25	2	House1.jpg	0.23204186	1 Face1
26	2	House17.jpg	0.38577476	1 Face9
27	1	Face1.jpg	0.73554771	1 Face1
28	1	Face10.jpg	0.48514131	1 Face2
29	2	House11.jpg	0.47485583	1 Face2
30	2	House23.jpg	0.96754305	1 Face2
31	2	House21.jpg	0.79692199	1 Face2
32	1	Face20.jpg	0.49553724	3 Face1
33	1	Face13.jpg	0.28172293	3 Face2
34	2	House16.jpg	0.35271568	3 Face2
35	1	Face21.jpg	0.65201761	3 Face3
36	1	Face9.jpg	0.01220231	3 Face5
37	1	Face27.jpg	0.9906602	3 Face6
38	2	House20.jpg	0.83144136	3 Face1
39	1	Face4.jpg	0.8854011	3 Face1
40	1	Face24.jpg	0.02543319	3 Face1
41	2	House6.jpg	0.12230674	3 Face1
42	2	House27.jpg	0.00230064	
43	1	Face22.jpg	0.0311962	end of study list
44				

See the mark in row 43? That tells me that the study list goes until row 43.

The next thing to do is to copy all of the filenames from both conditions, including their condition numbers. Here is what it looked like after I pasted in the condition 1 pictures:

	A	B	C	D
40	1	Face24.jpg	0.77160789	3 Face1
41	2	House6.jpg	0.32676325	3 Face1
42	2	House27.jpg	0.59719214	
43	1	Face22.jpg	0.27122558	end of study list
44	1	Face21.jpg		
45	1	Face11.jpg		
46	1	Face7.jpg		
47	1	Face30.jpg		
48	1	Face8.jpg		
49	1	Face20.jpg		
50	1	Face12.jpg		
51	1	Face10.jpg		
52	1	Face27.jpg		
53	1	Face24.jpg		
54	1	Face1.jpg		
55	1	Face4.jpg		
56	1	Face2.jpg		
57	1	Face14.jpg		
58	1	Face9.jpg		
59	1	Face13.jpg		
60	1	Face23.jpg		
61	1	Face25.jpg		
62	1	Face29.jpg		
63	1	Face22.jpg		
64	3	Face19.jpg		
65	3	Face26.jpg		
66	3	Face28.jpg		
67	3	Face3.jpg		
68	3	Face5.jpg		
69	3	Face6.jpg		
70	3	Face16.jpg		
71	3	Face17.jpg		
72	3	Face15.jpg		
73	3	Face18.jpg		
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				

Note that now I include both the study items (condition 1 targets) and items that only appear at test (condition 1 distractors).

Here I've pasted in the second list:

	A	B	C	D
56		1 Face2.jpg		
57		1 Face14.jpg		
58		1 Face9.jpg		
59		1 Face13.jpg		
60		1 Face23.jpg		
61		1 Face25.jpg		
62		1 Face29.jpg		
63		1 Face22.jpg		
64		3 Face19.jpg		
65		3 Face26.jpg		
66		3 Face28.jpg		
67		3 Face3.jpg		
68		3 Face5.jpg		
69		3 Face6.jpg		
70		3 Face16.jpg		
71		3 Face17.jpg		
72		3 Face15.jpg		
73		3 Face18.jpg		
74		2 House8.jpg		
75		2 House11.jpg		
76		2 House5.jpg		
77		2 House24.jpg		
78		2 House29.jpg		
79		2 House17.jpg		
80		2 House6.jpg		
81		2 House14.jpg		
82		2 House15.jpg		
83		2 House27.jpg		
84		2 House12.jpg		
85		2 House21.jpg		
86		2 House20.jpg		
87		2 House30.jpg		
88		2 House13.jpg		
89		2 House25.jpg		
90		2 House1.jpg		
91		2 House16.jpg		
92		2 House26.jpg		
93		2 House23.jpg		
94		4 House18.jpg		
95		4 House19.jpg		
96		4 House28.jpg		
97		4 House22.jpg		
98		4 House10.jpg		
99		4 House2.jpg		
100		4 House7.jpg		
101		4 House9.jpg		
102		4 House3.jpg		
103		4 House4.jpg		

Now that we have all the test lists items, we can reorder them, again using the `=rand()` function. Paste that into the 3rd column, next to the filenames:

	A	B	C	D
55		1 Face4.jpg	0.65257127	
56		1 Face2.jpg	0.11376185	
57		1 Face14.jpg	0.46645039	
58		1 Face9.jpg	0.22060421	
59		1 Face13.jpg	0.76527133	
60		1 Face23.jpg	0.94110526	
61		1 Face25.jpg	0.80613046	
62		1 Face29.jpg	0.21856256	
63		1 Face22.jpg	0.71424997	
64		3 Face19.jpg	0.86027723	
65		3 Face26.jpg	0.99398444	
66		3 Face28.jpg	0.13250584	
67		3 Face3.jpg	0.55119018	
68		3 Face5.jpg	0.45005642	
69		3 Face6.jpg	0.21543676	
70		3 Face16.jpg	0.01573659	
71		3 Face17.jpg	0.76034121	
72		3 Face15.jpg	0.5223499	
73		3 Face18.jpg	0.20968217	
74		2 House8.jpg	0.49996755	
75		2 House11.jpg	0.39264716	
76		2 House5.jpg	0.39904342	
77		2 House24.jpg	0.21677025	
78		2 House29.jpg	0.11195487	
79		2 House17.jpg	0.72008483	
80		2 House6.jpg	0.16446112	
81		2 House14.jpg	0.38393861	
82		2 House15.jpg	0.87239016	
83		2 House27.jpg	0.95513178	
84		2 House12.jpg	0.56058593	
85		2 House21.jpg	0.72575815	
86		2 House20.jpg	0.88216228	
87		2 House30.jpg	0.92709821	
88		2 House13.jpg	0.24289297	
89		2 House25.jpg	0.66318599	
90		2 House1.jpg	0.36098222	
91		2 House16.jpg	0.41769459	
92		2 House26.jpg	0.389921	
93		2 House23.jpg	0.62544163	
94		4 House18.jpg	0.67359382	
95		4 House19.jpg	0.57619628	
96		4 House28.jpg	0.03495513	
97		4 House22.jpg	0.50566149	
98		4 House10.jpg	0.31278363	
99		4 House2.jpg	0.0593343	
100		4 House7.jpg	0.93350008	
101		4 House9.jpg	0.1156358	
102		4 House3.jpg	0.87049867	
103		4 House4.jpg	0.37880695	

We are now ready to sort on the random numbers to randomize the test trials. There are two important factors:

- 1) you must include the condition numbers column when you sort, so that the condition numbers move with their filename
- 2) you must sort only the test items. If you sort on the study items as well, you'll end up presenting some distractor items at study, which is bad. This is why it was a good idea to put that marker in at the end of the study list.

Here is what mine looked like after I sorted it:

30	2	House23.jpg	0.76317925	1	Fac
31	2	House21.jpg	0.8181562	1	Fac
32	1	Face20.jpg	0.52694912	3	Fac
33	1	Face13.jpg	0.86543212	3	Fac
34	2	House16.jpg	0.33275657	3	Fac
35	1	Face21.jpg	0.17120436	3	Fac
36	1	Face9.jpg	0.6201419	3	Fac
37	1	Face27.jpg	0.85610567	3	Fac
38	2	House20.jpg	0.85028071	3	Fac
39	1	Face4.jpg	0.05370418	3	Fac
40	1	Face24.jpg	0.48036298	3	Fac
41	2	House6.jpg	0.61953986	3	Fac
42	2	House27.jpg	0.84892345		
43	1	Face22.jpg	0.49346662		end of study list
44	3	Face16.jpg	0.18900788		
45	4	House28.jpg	0.88602769		
46	4	House2.jpg	0.25478617		
47	1	Face30.jpg	0.96954912		
48	2	House29.jpg	0.95915059		
49	1	Face2.jpg	0.9722077		
50	4	House9.jpg	0.44635365		
51	3	Face28.jpg	0.32443137		
52	2	House6.jpg	0.31982639		
53	3	Face18.jpg	0.60729577		
54	3	Face6.jpg	0.32562648		
55	2	House24.jpg	0.54431808		
56	1	Face29.jpg	0.58003624		
57	1	Face9.jpg	0.49572693		
58	1	Face21.jpg	0.39398172		
59	2	House13.jpg	0.22245008		
60	1	Face10.jpg	0.35566758		
61	4	House10.jpg	0.45342057		
62	1	Face20.jpg	0.10465336		
63	2	House1.jpg	0.29316802		
64	4	House4.jpg	0.82247753		
65	2	House14.jpg	0.22630644		
66	2	House26.jpg	0.68398561		
67	2	House11.jpg	0.57131126		
68	2	House5.jpg	0.05919285		
69	2	House16.jpg	0.41446621		
70	3	Face5.jpg	0.48601103		
71	1	Face14.jpg	0.26313862		
72	2	House8.jpg	0.46312595		
73	4	House22.jpg	0.88924163		
74	3	Face15.jpg	0.06887241		
75	3	Face3.jpg	0.45181496		

Notice that there the condition numbers moved with their filename, and that I sorted only the test items.

Two final steps. First, make sure that your study list contains exactly 40 items (or however many you plan to have, usually 300-400) and the test list contains exactly 60 items (or however many you plan to have, usually around 600).

The final step is to copy the first to columns to a new worksheet and save it as a text file:

	A	B	C	D
1	RememberKnow			
2		40		
3		60		
4		1 Face7.jpg		
5		2 House12.jpg		
6		1 Face30.jpg		
7		2 House13.jpg		
8		1 Face29.jpg		
9		1 Face11.jpg		
10		2 House30.jpg		
11		2 House14.jpg		
12		1 Face23.jpg		
13		1 Face14.jpg		
14		1 Face8.jpg		
15		2 House15.jpg		
16		2 House5.jpg		
17		1 Face2.jpg		
18		2 House26.jpg		
19		2 House24.jpg		
20		1 Face12.jpg		
21		2 House29.jpg		
22		2 House25.jpg		
23		2 House8.jpg		
24		1 Face25.jpg		
25		2 House1.jpg		
26		2 House17.jpg		
27		1 Face1.jpg		
28		1 Face10.jpg		
29		2 House11.jpg		
30		2 House23.jpg		
31		2 House21.jpg		
32		1 Face20.jpg		
33		1 Face13.jpg		
34		2 House16.jpg		
35		1 Face21.jpg		
36		1 Face9.jpg		
37		1 Face27.jpg		
38		2 House20.jpg		
39		1 Face4.jpg		
40		1 Face24.jpg		
41		2 House6.jpg		
42		2 House27.jpg		
43		1 Face22.jpg		
44		3 Face16.jpg		
45		4 House28.jpg		

Save this as a text file with your group number as the filename. E.g. group 1 would be group1.txt

Place this text file in the same folder as all your pictures. Zip this folder and put it on scratch for Tom to get. Email him that the pictures are there.

That's it! I'll check your pictures and email you if there are any problems. Make sure you get me your pictures 2-3 days before you plan to run so that if there are problems we can fix them prior to your subject run.