

Accessible Tables *for Authors*



Accessible Tables

To ensure tables are accessible, they need to be treated in a certain way depending on the type of table.

There are some features of tables that hinder accessibility and, due to new accessibility legislation, we need to treat these tables specially so that they can be read properly by people using screen readers or keyboard controls. There are two types of table: Simple and Complex. Simple tables are accessible but Complex ones are not. Complex tables can be made accessible by:

- Adapting the table to make it an accessible, Simple table
- Having our team display the table as an image. In this case, you will need to provide alt-text and long description to describe the table, as you would an image.

We ask that you please assess the tables in your title using the below criteria to see if they are Simple or Complex. If any are Complex, you will either need to tweak the table to make it Simple, or provide alt-text and long description in the dedicated ‘ComplexTables’ tab of the Image Descriptions Submission Form (for LaTeX titles, you should record any Complex tables in the form, then you can place the descriptions in your LaTeX code – please see our Image Descriptions – LaTeX guidance.

TABLES OF CASES/STATUTES in legal titles are not displayed as tables so are not subject to this guidance.

Tables

Please note that ALL tables must:

- Have a header row
- Contain data
- Have two or more columns, and three or more rows (including the header row)
- Must not contain lists within cells
- Have a label (number) and caption, and be cited in the text

You should be able to sort the data on a header and still provide a meaningful result.



If it doesn't fit these criteria, it should not be a table as it will not be accessible. Consider a list or an alternative way of displaying the information. If cells contain full sentences/paragraphs, consider whether this should be a table, as this can also hinder accessibility.

NOTE: If a table has a key, this must go in the table's caption (not a footnote).

Tables should not be provided as images. Tables should be provided as Word or Excel tables (with the exception of LaTeX titles where the table is created in LaTeX). If it can only be supplied as an image (e.g. because it is from a third party), then it must be treated as a figure. This means it should be labelled as a figure, and alt-text and long description must be provided and supplied in the Images tab of the Image Descriptions Submission Form.

Tables then fall into two categories:

Simple tables

Simple tables:

- Have a single header row
- Have none of the features listed below in the Complex category
- Must fit on a single print page*

*To fit on a single print page, a table must not exceed a Microsoft Word page (with default margins in place). Text within tables should not be smaller than 6pt. Tables that extend over multiple pages should be broken down into smaller tables and categorised as Simple/Complex as per this guidance. Each component table will require its own header row, number and caption (plus an individual image description for each one if it is a Complex table). Note that the 'Microsoft Word page' limit is not exact so, once typeset, we may discover that a table slightly exceeds the print page, and will need to discuss how to handle the table with you. If it cannot be broken down into smaller tables, it must be treated as a Complex table.

If your table is Simple, you do not need to do anything special with it.

Complex tables

Complex tables are any tables that contain...

- Multiple header rows (including part way down the table)

- Merged cells
- Empty cells**
- Images/figures within it (not including in-line graphics, i.e. characters captured as images, e.g. glyphs or emoticons)
- Or exceed a print page in size

**Note that empty cells make a table Complex. To make it a Simple table, you can add dashes or 'N/A' to the cells to indicate that they are intentionally left empty. This is only suitable for empty data cells, not cells that have been left blank for layout reasons. In these instances, the table would either have to be reworked or treated as a Complex table. The only time an empty cell is acceptable is when there are both column and row headers, and the first cell is left blank to separate them, e.g.:

	Revenue	Outgoings	Profit
Sunnyside Inn	£42,550	£21,433	£21,117
Belvoir B&B	£31,230	£11,055	£20,175
Indigo Lodge	£15,400	£4,299	£11,101
Gloria's B&B	£9,670	£7,456	£2,214
Maple Farm	£63,880	£26,734	£37,146
The Horse and Cart	£25,620	£10,211	£15,409

How to treat Complex tables

Consider if you can turn the Complex table into a Simple one by:

- Breaking it up into more than one table
- Incorporating multiple header rows into one
- Removing merged cells
- Placing dashes or 'N/A' in empty data cells

Consider if the table does not necessarily need to be in the main book. If so, it can be put in online supplementary material instead and the tables can remain as they are.

If it's not possible to alter the table, it will need to be treated as an image, and therefore we require **alt-text and long description**. This is regardless of how the table is submitted, e.g. Word or Excel. This is because Complex tables cannot be read correctly by a screen reader and so are not accessible.

These image descriptions **must be submitted using the Image Descriptions Submission Form using the ComplexTables tab** (or recorded in the form, then placed in the LaTeX code for LaTeX titles). If the table is fully described by the caption or surrounding text (so that a non-sighted user would get the same benefit as a sighted one), then a description does not need to be written, and this option can simply be selected on the form.

Note that if a table contains images/figures, you only need to provide an image description for the whole table (you don't need to provide separate descriptions for the images within it). Please select the 'Table with graphics' as the Table Type when listing it in the Image Descriptions Submission Form. The exception is inline graphics (characters such as glyphs or emoticons that are in line with the text). These still need alt-text (provided in the Icons_InlineGraphics tab of the Image Descriptions Submission Form).

Please see more on writing image descriptions for tables [below](#)

Examples:

Simple tables:

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	82	71	91	86
C	53	55	67	67
D	61	85	73	70
E	42	39	40	51
F	89	78	84	80

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	-	71	91	86
C	53	-	67	67
D	61	85	-	70
E	42	39	-	51
F	89	78	84	-

Complex tables:

Multiple header rows:

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	82	71	91	86
C	53	55	67	67
D	61	85	73	70
E	42	39	40	51
F	89	78	84	80
	Activity 1 mark (/5)	Activity 2 mark (/5)	Activity 3 mark (/5)	Activity 4 mark (/5)
A	4	4	3	3
B	5	4	2	3
C	4	3	3	5
D	2	1	5	5
E	4	5	4	4
F	4	3	2	5

You could break this down into two separate tables, which could be treated as Simple tables. If they have to stay as one table, it would be Complex and require alt-text and long description.

Example image description:

Alt-text: Table showing the test grades and marks for the activities undertaken by the six test subjects. See long description.

Long description:

The test subjects are labelled A to F. They took four tests (marked as a percentage), and did four activities (marked out of five). What follows are their scores in order from test one to test four, then activity one to activity four.

- A scored 76%, 33%, 65%, 52% on the tests. A scored 4, 4, 3, 3 on the activities.
- B scored 82%, 71%, 91%, 86% on the tests. B scored 5, 4, 2, 3 on the activities.
- C scored 53%, 55%, 67%, 67% on the tests. C scored 4, 3, 3, 5 on the activities.
- D scored 61%, 85%, 73%, 70% on the tests. D scored 2, 1, 5, 5 on the activities.
- E scored 42%, 39%, 40%, 51% on the tests. E scored 4, 5, 4, 4 on the activities.

on the activities.

- F scored 89%, 78%, 84%, 80% on the tests. F scored 4, 3, 2, 5 on the activities.

Multiple header rows and empty cells:

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
Class 1				
A	76	33	65	52
B	82	71	91	86
C	53	55	67	67
D	61	85	73	70
E	42	39	40	51
F	89	78	84	80
Class 2				
A	67	54	78	45
B	73	66	81	43
C	32	76	46	57
D	57	76	59	60
E	61	87	63	55
F	72	58	39	77

You could break this down into two separate tables, keeping the first header row for each and clarifying the class in the table's title. They could then be treated as Simple tables. If they have to stay as one table, it would be Complex and require alt-text and long description.

Multiple header rows and merged cells:

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
Class 1				
A	76	33	65	52
B	82	71	91	86
C	53	55	67	67
D	61	85	73	70
E	42	39	40	51
F	89	78	84	80
Class 2				
A	67	54	78	45
B	73	66	81	43
C	32	76	46	57
D	57	76	59	60

E	61	87	63	55
F	72	58	39	77

You could break this down into two separate tables, keeping the first header row for each and clarifying the class in the table's title. They could then be treated as Simple tables. If they have to stay as one table, it would be Complex and require alt-text and long description.

Empty cells:

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	82	71		86
C		55	67	67
D	61	85	73	70
E	42	39	40	
F	89	78	84	80

This could be remedied by simply adding dashes to the empty cells to indicate they're intentionally left blank. It could then be treated as a Simple table. If this wasn't possible for any reason, it would be Complex and require alt-text and long description.

Multiple header rows and merged cells:

	Logic tests		Comprehension tests	
Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	-	71	91	86
C	53	-	67	67
D	61	85	-	70
E	42	39	-	51
F	89	78	84	-

You could break this down into two separate tables, one for logic tests and one for comprehension tests. They could then be treated as Simple tables. Or you could keep it as one table but incorporate the first header row into the second ('Logic test 1 grade', 'Logic test 2 grade', 'Comprehension test 1 grade', 'Comprehension test 2 grade'). It could then be treated as a Simple table. If it had to stay as is, it would be Complex and require alt-text and long description.

Some examples of things that shouldn't be tables:

Note that screen readers read everything from left to right.

1.

The cat is black and white
Die Katze ist schwarz und weiß

There is no header row and there are too few columns and rows, plus this is not data, so this should not be a table. Instead, this should be displayed as a list or normal text.

2.

Adam: Where are we going?
 Sue: Why do you want to know?
 Adam: What kind of question is that?
 Sue: Who are you to ask?
 Adam: How else am I meant to know?

This is currently a table, just with the lines hidden. This should be changed from a table to normal text. Tabs can be used to add the spacing.

3.

Red	Rouge
Green	Verte
Yellow	Jaune
Blue	Bleu
Pink	Rose

Column headers could be added to make this into a Simple table. It's not strictly data though (which is what tables should ideally be used for). Alternatively, this could be displayed as a two-column list.

4.

Red	Green	Yellow	Blue	Pink
Rouge	Verte	Jaune	Blue	Rose
Rot	Grün	Gelb	Blau	Rosa
Roja/o	Verde	Amarilla/o	Azul	Rosa
Rossa/o	Verde	Gialla/o	Blu	Rosa

These still need alt-text (provided in the Icons_InlineGraphics tab of the Image Descriptions Submission Form).

All image descriptions must be recorded in the ComplexTables tab of the Image Descriptions Submission form. The exception is LaTeX titles where the Complex tables should be recorded in the form, then the descriptions can be added straight to the LaTeX code – please see our Image Descriptions – LaTeX guidance.

Image Description Examples

Example 1

Test subject	Test 1 grade (%)	Test 2 grade (%)	Test 3 grade (%)	Test 4 grade (%)
A	76	33	65	52
B	82	71	91	86
C	53	55	67	67
D	61	85	73	70
E	42	39	40	51
F	89	78	84	80
	Activity 1 mark (/5)	Activity 2 mark (/5)	Activity 3 mark (/5)	Activity 4 mark (/5)
A	4	4	3	3
B	5	4	2	3
C	4	3	3	5
D	2	1	5	5
E	4	5	4	4
F	4	3	2	5

Alt-text: Table showing the test grades and marks for the activities undertaken by the six test subjects. See long description.

Long description:

The test subjects are labelled A to F. They took four tests (marked as a percentage), and did four activities (marked out of five). What follows are their scores in order from test one to test four, then activity one to activity four.

- A scored 76%, 33%, 65%, 52% on the tests. A scored 4, 4, 3, 3 on the activities.
- B scored 82%, 71%, 91%, 86% on the tests. B scored 5, 4, 2, 3 on the activities.
- C scored 53%, 55%, 67%, 67% on the tests. C scored 4, 3, 3, 5 on the activities.

- D scored 61%, 85%, 73%, 70% on the tests. D scored 2, 1, 5, 5 on the activities.
- E scored 42%, 39%, 40%, 51% on the tests. E scored 4, 5, 4, 4 on the activities.
- F scored 89%, 78%, 84%, 80% on the tests. F scored 4, 3, 2, 5 on the activities.

Example 2

	Survey Respondents						
	A	B	C	D	E	F	G
I learnt something new	Strongly agree	Agree	Disagree	Agree	Disagree	Strongly agree	Agree
The tutor was engaging	Strongly agree	Neutral	Disagree	Strongly agree	Disagree	Agree	Strongly agree
I would recommend the course	Strongly agree	Agree	Neutral	Agree	Strongly disagree	Agree	Agree
I enjoyed the course	Strongly agree	Neutral	Disagree	Agree	Disagree	Agree	Agree
I can apply what I learnt in my role	Strongly agree	Agree	Disagree	Agree	Disagree	Strongly agree	Agree

In this table, you should ask yourself what the reader needs to know. Do they need to know exactly what was said? If so, you'd need to list each answer, as in Version 1 below. If not, and they just need to know the high level results, you could do something like Version 2.

Version 1

Alt-text: Table showing answers to survey questions after the Agile Project Management course. See long description.

Long description:

Seven survey respondents are labelled from A to G and their answers to five statements are shown, describing how far they agree or disagree.

- For the statement 'I learnt something new', the results from A to G were Strongly Agree, Agree, Disagree, Agree, Disagree, Strongly Agree, Agree.
- For the statement 'The tutor was engaging', the results from A to G were Strongly Agree, Neutral, Disagree, Strongly Agree, Disagree, Agree, Strongly Agree.
- For the statement 'I would recommend the course', the results from

A to G were Strongly Agree, Agree, Neutral, Agree, Strongly Disagree, Agree, Agree.

- For the statement ‘I enjoyed the course’, the results from A to G were Strongly Agree, Neutral, Disagree, Agree, Disagree, Agree, Agree.
- For the statement, ‘I can apply what I learnt in my role’, the results from A to G were Strongly Agree, Agree, Disagree, Agree, Disagree, Strongly Agree, Agree.

[Note: This long description is assuming that the answer to each question is what is most important. However, if it was more important to interrogate what each individual said, you could flip the description to say ‘Respondent A answered the five questions as Strongly Agree, Strongly Agree... etc.]

Version 2

Alt-text: Table showing answers to survey questions after the Agile Project Management course. See long description.

Long description:

Seven survey respondents are labelled from A to G and their answers to five statements are shown, describing how far they agree or disagree. The statements were, I learnt something new, the tutor was engaging, I would recommend the course, I enjoyed the course, and I can apply what I learnt in my role. Four respondents answered positively to all the statements, selecting either Agree or Strongly Agree, one answered with either positive or neutral answers, and two answered all the statements with negative answers, selecting either Disagree or Strongly Disagree, plus one Neutral.

Example 3

	Effectiveness (%)											
Concentration (%)	A	B	C	D	E	F	G	H	I	J	K	L
0	0	0	0	0	0	0	0	0	0	0	0	0
10	3	5	3	3	2	5	1	3	3	3	3	2
20	6	8	6	7	5	9	3	5	6	6	7	6
30	22	25	21	19	23	29	3	21	22	22	21	22
40	38	40	38	36	37	39	5	38	38	38	36	34
50	45	46	45	42	44	50	5	45	45	45	46	34
60	59	58	58	57	59	67	5	56	59	60	59	34
70	66	65	66	68	66	78	5	63	65	66	66	34
80	66	60	66	68	66	78	5	63	65	66	66	34
90	66	57	66	68	66	78	5	63	65	66	66	34
100	66	55	66	68	66	78	5	63	65	66	66	34
Take forward?						Y						

In this table, you should ask yourself what the reader needs to know. Do they only need to know the trends and ultimate results? If so, you could summarise this as in Version 1 below. If they need every piece of data, it would be easiest to create a Simple version of the table for the long description. If everything the user needs to know is already described in the surrounding text, then you can simply select this option in the Image Descriptions Submission Form.

Version 1

Alt-text: Table showing the effectiveness of solutions A to L depending on the concentration of Substance 23 added. See long description.

Long description:

The concentration of Substance 23 added to each solution was increased in increments of 10 per cent, starting at 0 and finishing at 100. The effectiveness is measured as a percentage. For the majority of the solutions, the effectiveness increased incrementally as the concentration increased, but stopped at 70 per cent concentration, after which effectiveness remained static at an average of 66 per cent effectiveness. However, there were three exceptions. Solution G showed very low effectiveness, stalling at 40% concentration, with just 5 per cent effectiveness. Solution B increased in effectiveness at a comparable level to the other solutions until reaching 70% effectiveness. After this, the effectiveness decreased with each incremental concentration added. Solution L stalled at 40 per cent concentration at 34 per cent effectiveness. Solution F proved the most effective, consistently scoring the highest effectiveness, finishing at an effectiveness of 78 per cent. The table marks that only Solution F will be taken forward to the next stage.

Version 2

Alt-text: Table showing the effectiveness of solutions A to L depending on the concentration of Substance 23 added. See long description.

Long description:

The concentration of Substance 23 added to each solution was increased in increments of 10 per cent, starting at 0 and finishing at 100. The effectiveness is measured as a percentage. The column headers list the Solutions A to L and the row headers list the percentage of concentration of Substance 23 added. The data in the table shows the effectiveness of the solution as a percentage. The result is that only Solution F will be taken forward to the next stage. See table for full data.

Concentration (%)	A	B	C	D	E	F	G	H	I	J	K	L
0	0	0	0	0	0	0	0	0	0	0	0	0
10	3	5	3	3	2	5	1	3	3	3	3	2
20	6	8	6	7	5	9	3	5	6	6	7	6
30	22	25	21	19	23	29	3	21	22	22	21	22
40	38	40	38	36	37	39	5	38	38	38	36	34
50	45	46	45	42	44	50	5	45	45	45	46	34
60	59	58	58	57	59	67	5	56	59	60	59	34
70	66	65	66	68	66	78	5	63	65	66	66	34
80	66	60	66	68	66	78	5	63	65	66	66	34
90	66	57	66	68	66	78	5	63	65	66	66	34
100	66	55	66	68	66	78	5	63	65	66	66	34

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