Tables
Table is a data type suitable for column-oriented data that is often stored as columns in a text file or in a spreadsheet.
Tables consist of rows and column-oriented variables. Each variable in a table can have a different data type and a different size with the one restriction that each
variable must have the same number of rows.

Tables	
Text file 'simple.csv' containing the information: Format: "Column Separated Values (CSV): standard text-based format for spreadsheet, u	used for example by Microsoft Excel
"towid", "tpoints", "island", "Will_longit.em", "sox", "year" 12, "Addle", "Torgersen", 35, "male", 2007 "3", "Addle", "Torgersen", 46, 3, "feale", 2007 "4", "Addle", "Torgersen", 48, 3, "feale", 2007 "5", "Addle", "Torgersen", 35, "feale", 2007 "5", "Addle", "Torgersen", 35, 3, "feale", 2007 "7", "Addle", "Torgersen", 35, 9, "feale", 2007	Header (name of the variables) we of value; each row contains use for all variables. ose values may be of different types: 'umbers 'ategory leat

>> peng	une – readtable	'simple csv')				
>> peng		simplex.sv)				
>> penguins	=readtable("si	mple.csv")				
nenquins =						
pongazno						
7×6 <u>table</u>	1					
7×6 <u>table</u> rowid	species	island	bill_length_mm	sex	year	
7×6 <u>table</u> rowid	species	island	bill_length_mm	sex	year	
7×6 table	<pre>species {'Adelie'}</pre>	island {'Torgersen'}	bill_length_mm 	sex 	year 2007	
7×6 table rowid 1 2	<pre>species {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'}	bill_length_mm 	<pre>sex {'male' } {'female'}</pre>	year 2007 2007	
7×6 table rowid 1 2 3	<pre>species {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'}	bill_length_mm 	<pre>sex {'male' } {'female'} {'female'}</pre>	2007 2007 2007	
7×6 table rowid 1 2 3 4	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'}	bill_length_mm 	<pre>sex {'male' } {'female'} {'female'} {'NA' }</pre>	year 2007 2007 2007 2007	
7×6 table rowid 1 2 3 4 5	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'} {'Torgersen'}	bill_length_mm 	<pre>sex {'male' } {'female'} {'female'} {'NA' } {'female'}</pre>	year 2007 2007 2007 2007 2007 2007	
7×6 table rowid 1 2 3 4 5 6	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'} ('Torgersen'}	bill_length_mm 39.1 39.5 40.3 NaN 36.7 39.3	<pre>sex {'male' } {'female'} {'female'} {'nA' } {'female'} {'male' }</pre>	year 2007 2007 2007 2007 2007 2007 2007	

Table: variable names (column headers)	
>> penguins.Property.VariableNames >> penguins.Properties.VariableNames	
ans = 1×6 <u>cell</u> array	
<pre>('rowid') ('species') ('island') ('bill_length_mm') ('sex') ('year') >></pre>	

>> penguin	ns = renamevars	(penguins, ["sex","	rowid","t	oill length mm'	l	
["Gen	der","Number",	"Bill"])		- 0 -		
nenquine	- renamewars(r	enquine ["sey" "	rowid" "	bill length m	e1	
Gender", "N	umber", "Bill"])	, ,	bitte_tengen_m		
inguins =						
7v6 table						
7×6 <u>table</u>						
7×6 <u>table</u> Number	species	island	Bill	Gender	year	
7×6 <u>table</u> Number	species	island	Bill	Gender	year	
7×6 <u>table</u> Number	species	island	Bill	Gender	year	
7×6 <u>table</u> Number 1 2	<pre>species {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'}	Bill 	Gender 	year 	
7×6 <u>table</u> Number	<pre>species {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'}	Bill 39.1 39.5 40.3	Gender {'male' } {'female'}	year 2007 2007 2007	
7×6 <u>table</u> Number 1 2 3 4	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'}	Bill 39.1 39.5 40.3 NaN	Gender {'male' } {'female'} {'female'} {'NA' }	year 2007 2007 2007 2007 2007	
7×6 table Number 1 2 3 4 5	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'}	Bill 39.1 39.5 40.3 NaN 36.7	<pre>Gender {'nale' } {'female'} {'female'} {'NA' } {'female'}</pre>	year 2007 2007 2007 2007 2007 2007	
7×6 table Number 1 2 3 4 5 6	<pre>species {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'} {'Adelie'}</pre>	island {'Torgersen'} {'Torgersen'} {'Torgersen'} {'Torgersen'} {'Torgersen'}	Bill 39.1 39.5 40.3 NaN 36.7 39.3	<pre>{'male' } {'female' } {'female' } {'female' } {'female' } {'female' }</pre>	year 2007 2007 2007 2007 2007 2007 2007	

>> pengu	ins = rmmissing	(penguins)				
>> penquins-	rmmissing(peng	uins)				
>> pengurns-	r mitsstny (peny	011137				
penguins =						
6×6 <u>table</u>						
Number	species	island	Bill	Gender	year	
1	{'Adelie'}	{'Torgersen'}	39.1	{'male' }	2007	
	/ WOELTE)	(Torgersen)	49.3	{'female'}	2007	
2	{'Adelie'}	a roroersen z				
3	{'Adelie'} {'Adelie'}	{'Torgersen'}	36.7	{'female'}	2007	
2 3 5 6	{'Adelie'} {'Adelie'} {'Adelie'}	{'Torgersen'} {'Torgersen'}	36.7	{'female'} {'male' }	2007 2007	

>> var = j	penguins.Proper	ties.VariableNames; ins Cender"male	" vər)					
>> inale=	pengunis(pengu	ms.Gender mare	,vai)					
le =								
2×6 <u>table</u>								
Number	species	island	Bill	Gender	year			
1	{'Adelie'}	{'Torgersen'}	39.1	{'male'}	2007			
6	{'Adelie'}	{'Torgersen'}	39.3	{'male'}	2007			

	Тε	ible: Rei	novii	ng a colu	1
>> pe	enguins.year=[]				
>> pengu	uins.year=[]				
penguins 6×5 <u>ta</u>	ble				
Numb	er species	island	Bill	Gender	
1 2 3 5	{'Adelie' {'Adelie' {'Adelie' {'Adelie'	<pre>{'Torgersen'} {'Torgersen'} {'Torgersen'} {'Torgersen'} } {'Torgersen'}</pre>	39.1 39.5 40.3 36.7	{'male' } {'female'} {'female'} {'female'}	
6 7	{'Adelie' {'Adelie'	} {'Torgersen'} } {'Torgersen'}	39.3 38.9	{'male' } {'female'}	

 Table: Select columns based on names
>> penguin2=penguins(./{species' Gender' year})
<pre>>> netwars = (species 'Gender 'year'); >> penguin2=penguins(:,netwars) > penguin2=penguins(:,{'species' 'Gender' 'year'})</pre>
Gx3 <u>table</u> species Gender year
('Adelle') ('male') 2007 ('Adelle') ('femole') 2007
('Adelle') ('male') 2007 ('Adelle') ('fenale') 2007 >

T.	1.1	E		.1	. C	
15	ible:	Extra	cung va	aue	s from	selec
	Number	species	island	Bill	Gender	year
	1	(Indelial)	(ITorgorcon!)	20.1	(imploi)	
	2	{'Adelie'}	{'Torgersen'}	39.5	{'female'}	2007
	5	{'Adelie'} {'Adelie'}	{'Torgersen'}	40.3	{'female'}	2007
	7	{'Adelie'} {'Adelie'}	{'Torgersen'} {'Torgersen'}	39.3	{'female'}	2007
	- values -	f populine Bil	I nonquine yoor]			
	>> varues -	- [pengunis.bii	i pengunis.yearj			
va	lues =					
	1.0e+03 *					
	0.0391	2.0070				
	0.0395	2.0070				
	0.0367 0.0393	2.0070 2.0070				
	0.0389	2.0070				

Additional Information	
Complete tutorial on tables in Matlab: https://www.mathworks.com/belo/matlab/tables.html	