Text and date functions

DATA PREPARATION IN EXCEL

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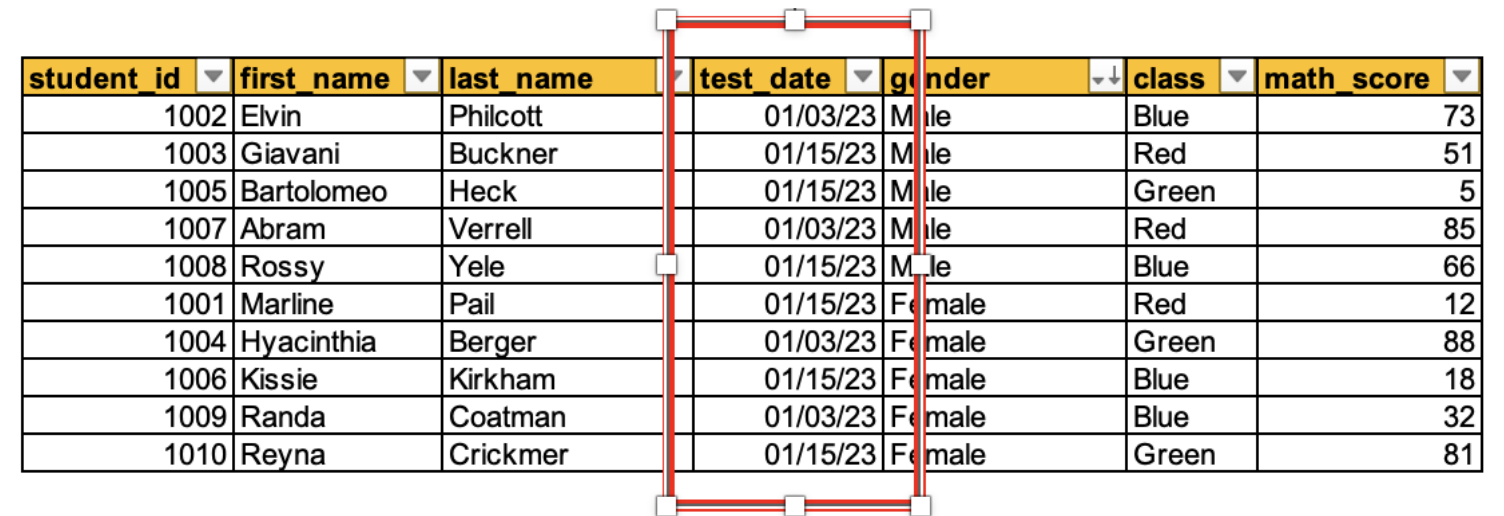
Data types

- Text functions
  - Deal with text strings, e.g., name

student_id	first_name	last_name	test_date	gender	class	math_score
1002	Elvin	Philcott	01/03/23	Male	Blue	73
1003	Giavani	Buckner	01/15/23	Male	Red	51
1005	Bartolomeo	Beck	01/15/23	Male	Green	5
1007	Abram	Yerrell	01/03/23	Male	Red	85
1008	Rossy	Tele	01/15/23	Male	Blue	66
1001	Marline	Mail	01/15/23	Female	Red	12
1004	Hyacinthia	Lerger	01/03/23	Female	Green	88
1006	Kissie	Birkham	01/15/23	Female	Blue	18
1009	Randa	Coatman	01/03/23	Female	Blue	32
1010	Reyna	Crickmer	01/15/23	Female	Green	81

Data types

- Text functions
  - Deal with text strings, e.g., name

- Data & Time functions
  - Deal with date & time information, e.g., test_date

student_id	first_name	last_name	test_date	gender	class	math_score
1002	Elvin	Philcott	01/03/23	Male	Blue	73
1003	Giavani	Buckner	01/15/23	Male	Red	51
1005	Bartolomeo	Heck	01/15/23	Male	Green	5
1007	Abram	Verrell	01/03/23	Male	Red	85
1008	Rossy	Yele	01/15/23	Male	Blue	66
1001	Marline	Pail	01/15/23	Female	Red	12
1004	Hyacinthia	Berger	01/03/23	Female	Green	88
1006	Kissie	Kirkham	01/15/23	Female	Blue	18
1009	Randa	Coatman	01/03/23	Female	Blue	32
1010	Reyna	Crickmer	01/15/23	Female	Green	81

Text functions - LEN()

`LEN()`

- *Syntax:* `LEN(text)`

- Counts the number of characters in a text string
  - Including spaces and special characters

Business case

- Identify anomalies

- Ensure phone numbers stored have been entered correctly

Phone Number ▼	Length ▼
+1202-555-379	13
+1202-555-643	13
+1202-555-112	=LEN(B6)
+1202-555-889	13
+1202-555-434	13
+1202-555-37	12
+1202-555-339	13
+1202-555-237	13
+1202-555-566	13
+1202-555-983	13

Text functions - CONCAT()

`CONCAT()`

- *Syntax:* `CONCAT(text1, [text2],...)`

- Combines the text from multiple ranges and/or strings

- Delimiters have to be entered manually

Business case

- Create new categories and reduce columns

- Combine delivery address information

Street ▼	City ▼	Address ▼
12 Field Close	London	12 Field Close,London
43 Way Street	Bristol	43 Way Street,Bristol
555 Hassocks Road	Leeds	=CONCAT(B6,",",C6)
63 Name Way	Manchester	63 Name Way,Manchester
100 George Street	Brighton	100 George Street,Brighton
7 Neal Street	Norwich	7 Neal Street,Norwich
88 Timber Close	Newcastle	88 Timber Close,Newcastle
443 Beulah Hill	Bath	443 Beulah Hill,Bath
7878 Side Street	Birmingham	7878 Side Street,Birmingham
29 Main Way	Nottingham	29 Main Way,Nottingham

Text functions - TEXTJOIN()

`TEXTJOIN()`

- *Syntax:*

  `TEXTJOIN(delimiter, ignore_empty, text1, [text2],...)`

- Combines text from multiple ranges and/or strings, and includes a delimiter

- Can include/exclude empty cells

Business case

- Create URL address

URL Start	URL Name	URL Domain	URL Address
www	dataco-hr	co.uk	www.dataco-hr.co.uk
www	dataco-marketing	com	www.dataco-marketing.com
www	dataco-supplies	edu	www.dataco-supplies.edu
www	dataco-stores	org	www.dataco-stores.org
www	dataco-hq	net	=TEXTJOIN(".",FALSE,B8,C8,D8)
www	dataco-office	info	www.dataco-office.info
www	dataco-transport	com	www.dataco-transport.com
www	dataco-employee	net	www.dataco-employee.net
www	dataco-sites	info	www.dataco-sites.info
www	dataco-internal	org	www.dataco-internal.org

Date and time functions - TODAY()

`TODAY()`

- *Syntax:* `TODAY()`

- Returns the serial number of the current date

- The serial number is the date-time code used by Excel

Stock Item	Stock Delivery Dates
Cheese	06/03/23
Banana	06/27/23
Watermelon	06/28/23
Milk	06/15/23
Bread	06/30/23
Pasta	06/21/23
Butter	06/20/23
Lettuce	06/26/23
Chocolate	06/10/23
Lemon	06/08/23

Data Last Updated
07/19/23

Business case

- Inform users of last update of table

Date and time functions - WEEKDAY()

WEEKDAY()

- *Syntax:*

  WEEKDAY(serial_number,[return_type])

- Returns the day of the week corresponding to a date, as an integer
  - Default: 1 (Sunday) to 7 (Saturday)

Business case

- Calculating day of the week using sales date information for analysis

Stock Item	Stock Delivery Dates	Weekday
Cheese	06/03/23	7
Banana	06/27/23	3
Watermelon	06/28/23	4
Milk	06/15/23	5
Bread	06/30/23	=WEEKDAY(C8,1)
Pasta	06/21/23	4
Butter	06/20/23	3
Lettuce	06/26/23	2
Chocolate	06/10/23	7
Lemon	06/08/23	5

Date and time functions - WORKDAY()

`WORKDAY()`

- *Syntax:*

  `WORKDAY(start_date, days, [holidays])`

- Returns a number that represents a date that is the number of working days before or after a starting date.

- Excludes weekends and holidays

Business case

- Calculate employee availability based on time to complete current project

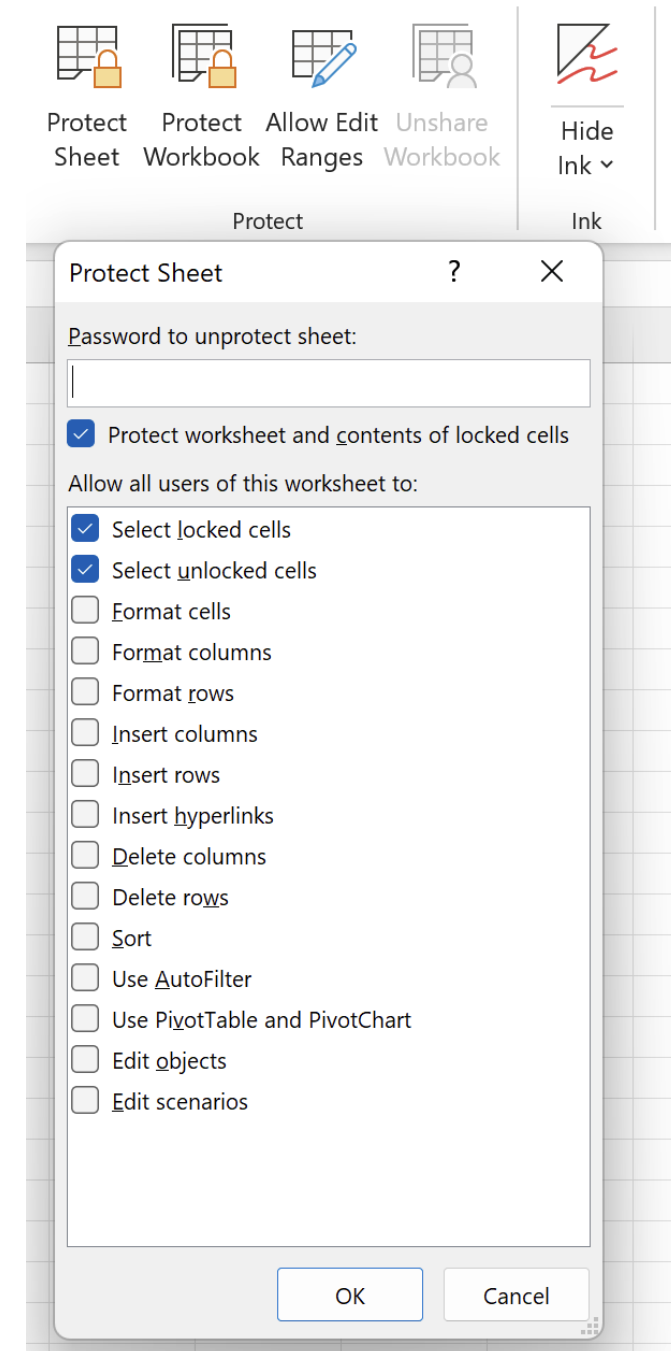| Employee	Project Start Date	Next Availabe Date
Jess	07/03/23	08/01/23
Carl	07/27/23	08/25/23
Maarten	07/28/23	08/28/23
Nick	07/15/23	08/14/23
Jacob	07/30/23	08/28/23
Agata	07/21/23	=WORKDAY(C9,F4)
Iason	07/20/23	08/18/23
Jim	07/18/23	08/16/23
Lisa	07/10/23	08/08/23
Sara	07/08/23	08/07/23

Average Days per Project
21

Protection and security

Various options to protect your data:

- File-level

- Workbook-level

- Worksheet-level

Protecting the worksheet

- Controls how users can work within a sheet

- Enabling whether users can:
  - Add or remove rows and columns

  - Sort data

  - AutoFilter data

- Includes cells, ranges, and formulas

Let's practice!

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More functions, better preparation

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