Lookups and PivotTables

DATA PREPARATION IN EXCEL

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datacamp

Lookup and reference functions

- Many lookup and reference functions available

- Excel's address book functions
  - Use an address book to find information based on a single criteria

  - Lookup and reference functions allow similar action

Two LOOKUP functions

- Focus on two lookup functions
  - `VLOOKUP()`

  - `HLOOKUP()`

- Can be used to:
  - Lookup specific values based on an input value

  - Transfer information into a dataset from another sheet or file

VLOOKUP

`VLOOKUP()`

- *Syntax:* `VLOOKUP (lookup_value, table_array, col_index_num, [range_lookup])`

- Function arguments include:
  - `lookup_value` - value searched in data

  - `table_array` - table or dataset to be searched

  - `col_index_num` - column number with return value

  - `range_lookup` - exact match (FALSE) or approximate match (TRUE)

VLOOKUP

	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

Student Name	Test Result
Rossy	

VLOOKUP

HLOOKUP

`HLOOKUP()`

- *Syntax:* `HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])`

- Searches data horizontally
  - Has argument row_index_num instead of col_index_num

- Provides output by row number

HLOOKUP

Product	2015	2016	2017	2018	2019	2020
Apples	$ 14,651	$ 10,505	$ 16,795	$ 15,512	$ 18,952	$ 11,830
Pears	$ 18,449	$ 15,862	$ 18,477	$ 17,640	$ 17,115	$ 17,362
Bananas	$ 19,859	$ 12,992	$ 16,214	$ 15,297	$ 10,183	$ 12,541
Oranges	$ 19,743	$ 14,471	$ 16,982	$ 14,681	$ 12,642	$ 14,211

Year	Banana Sales Amount
2017	

HLOOKUP

A new perspective

- Data preparation process
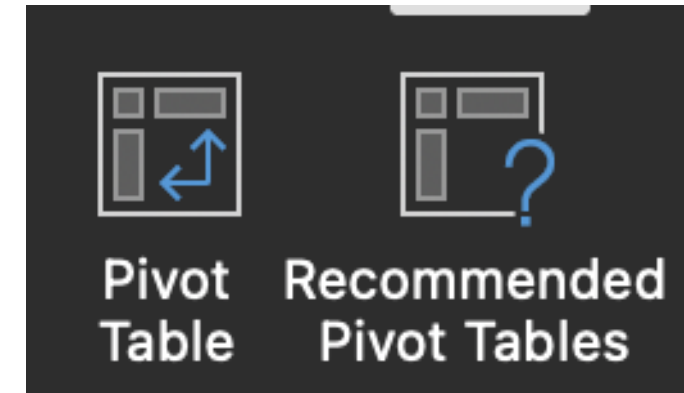 - Transformed raw, tabular data

  - Cleaned, sorted, and organized

- Time to view data differently
  - summarized data

PivotTables

- Able to summarize and analyze large data volumes

- Aggregate and organize data in dynamic tables

- Transform rows to columns, and vice versa

- Group, filter, and aggregate data as we wish

- Identify trends and ensure data readiness for analysis

PivotTables

	A	B
1	**Customer ID**	**Insurance Type**
2	45	Life
3	77	Medical
4	88	Home
5	322	Travel
6	402	Home
7	517	Medical
8	571	Medical
9	603	Life
10	688	Travel
11	708	Home
12	884	Home
13	905	Life
14	944	Travel
15	965	Medical
16	981	Medical
17	1023	Life
18	1024	Travel

PivotTables

	A	B	C	D	E	F	G	H
1	**Customer ID** ⏷⬆	**Insurance Type** ⏷						
2	45	Life						
3	77	Medical						
4	88	Home						
5	322	Travel						
6	402	Home						
7	517	Medical						
8	571	Medical						
9	603	Life			Row Labels ⏷	Count of Customer ID		
10	688	Travel			Home	35677		
11	708	Home			Life	38575		
12	884	Home			Medical	23301		
13	905	Life			Travel	52445		
14	944	Travel			Grand Total	149998		
15	965	Medical						
16	981	Medical						
17	1023	Life						
18	1024	Travel						

Let's practice!

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Referencing and summarization

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Let's practice!

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Congratulations!

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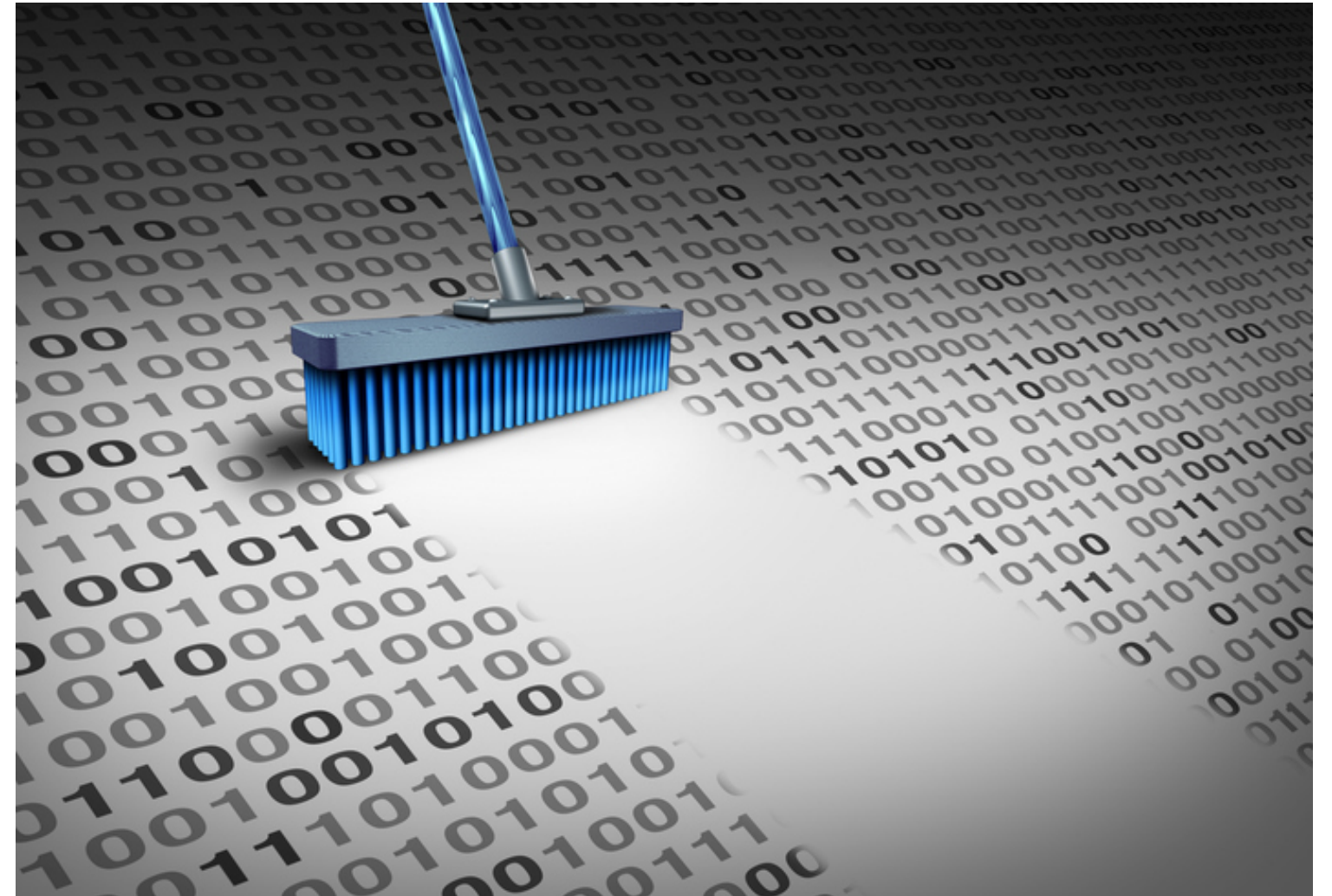Content Developer, DataCamp

Chapter 1

- Ways to import data
  - Using different file types

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- Ways to import data
  - Using different file types

- Clean our data
  - Remove duplicates feature

Chapter 1

- Ways to import data
    - Using different file types

- Clean our data
    - Remove duplicates feature

- Added and manipulated data
    - Utilized Excel fill features

Chapter 2

- Learned new text functions
  - Combined text strings together

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- Learned new date functions
    - Added extra date information to our dataset

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- Considered security and protection in Excel
  - Protecting specific worksheets

Chapter 3

- Used logical operators
  - Created flags for filtering

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- Nested functions using IF() function
  - Added new categorical variables

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- Sharing is caring
  - Notes and comments when sharing files

Chapter 4

- Lookup functions
  - Bring information in from other sheets

Chapter 4

- Lookup functions
  - Bring information in from other sheets

- PivotTables
  - Summarize data in dynamic tables

The Excel journey!

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