

# Class 04 On Course: CS-103

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# Google Sheets Advanced Features

- Add images to cells

To place an image straight into a cell type `=image("URL of the image you want to add")`. There are a few options for inserting and formatting images:

`=image("URL of the image",1)` – image scaled to fit the cell

`=image("URL of the image",2)` – image stretched to fit the cell

`=image("URL of the image",3)` – image keeps its original size

`=image("URL of the image",4)` – image in a custom size

# Create QR codes

- QR codes can be used for a number of reasons – including WiFi login, concert tickets, advertisements, and product purchases. Google Sheets lets you generate QR codes with any input you like. Just use the following formula:
- `=image("https://chart.googleapis.com/chart?chs=150×150&cht=qr&chl=" & A2)`.
- A2 is the cell with the URL or text you want to use to create your QR code.

# Get only unique values from a column

- Use the function `UNIQUE( )` to get a list of unique values from a range or column.

# Web scraping with Google Sheets

- You can access data from a website in your spreadsheet without having to copy and paste using the IMPORTHTML( ) or IMPORTXML( ) functions.
- Copy the formula below into A1 and you'll see the same data as the image below:
- =IMPORTHTML("https://en.wikipedia.org/wiki/List\_of\_highest-grossing\_films","[table](#)",1)

# Detect a language

- Google has a built-in language detector. Use the formula `DETECTLANGUAGE( )` and it will return a two letter language code.
- Full language list can be derived from the following link-  
[https://en.wikipedia.org/wiki/List\\_of\\_ISO\\_639-1\\_codes](https://en.wikipedia.org/wiki/List_of_ISO_639-1_codes)

# Translate a language

- Google can detect a language but also translate from one language to another.
- The formula `GOOGLETRANSLATE( )` has three parts – text to translate, the current language of the text, and the language you want to translate into.

# Check for valid emails and URLs

- The function ISEMAIL( ) checks to see if a string of text or cell has a valid email syntax.
- The function ISURL( ) returns true or false if a string of text or cell has a valid URL.



## Project future results with GROWTH( ) - 1

- The GROWTH( ) function can be used to extrapolate a trend and predict future values.
- The image below shows the sales of a product over 5 periods. With the formula =growth(B1:B5,A1:A5,A7:A9) you can estimate what the values would be for 6 – 8.

# Project future results with GROWTH( ) - 2

<i>f<sub>x</sub></i>	=growth(B1:B5,A1:A5,A7:A9)		
	A	B	
1	1	200	
2	2	210	
3	3	235	
4	4	251	
5	5	260	
6			
7	6	284	
8	7	305	
9	8	327	
10			
11			
12			

# Pick randomly from a list

- The functions CHOOSE( ) AND RANDBETWEEN( ) help you pick a value from a defined list. RANDBETWEEN( ) generates a random integer between 1 and 5. CHOOSE( ) helps you pick from the list of entries.
- =CHOOSE(RANDBETWEEN(1,5),"London","Berlin","Rome","Madrid","Lisbon")