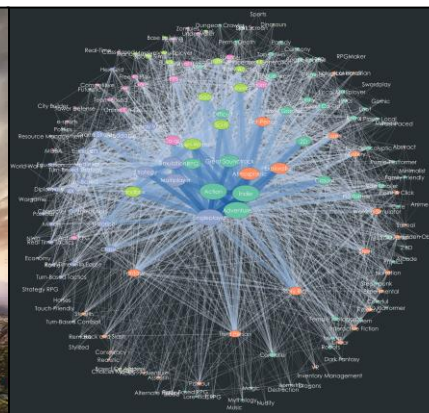




Universiteit
Leiden

Digital Approaches to Historical Inquiries

6th Class



A fatal error has been detected and Assignment 4 has not been handed in.

The problem may be caused by the following:

PreviousClass_Miscommunication.Us

If you encountered this fatal error, follow these steps:
Finish Assignment 4a or 4b and hand in by 20-3-2018

If you overcame the fatal error and managed to hand in Assignment 4, follow either of these steps:

- Do nothing and get 0.5 bonus points on this assignment's grade for sheer grit
- Update your assignment and hand in by 20-3-2018

If you encountered the Assignment-not-handed-in error before, do the following:

- Hand in any missed assignment by 20-3-2018 (one point automatic deduction)
- Do nothing and get marked a 1 for the assignment

Special Exceptions Required, run angus_contact.exe

Technical information:

See the PDF of the lecture for the full description of the assignment. This can be found in the course schedule

Read this description and contact the teacher if anything remains unclear

Read the syllabus to learn about standard assignment deadlines

Assignment 4

- A “mini-FAIR approach” to showing what you can do with Python and XMLs.
 - Findable for others in this course
 - Accessible for others in this course
 - Interoperable by others in this course
 - Re-usable by others (that, in principle means a license!)
- Spend max. three hours on doing this assignment, and 1 hour on keeping a log/writing a reflection.
- Depending on your (self-assessed) skill level with Python:
 - Do assignment 4a
 - Do assignment 4b
- Graded on mini-FAIR principles and progress relative to current level.

Assignment 4a

- Make sure you are able to run through all the steps we have taken over the last two weeks and understand what the code does.
 - To make it a bit more difficult, I did not add commenting to steps 8-14,
 - Google functions, variables, etc. if you are not sure if you understand them.
 - If you need to focus on learning more python, do so with an online tutorial.
 - Provide a written reflection on what you learned in the last two weeks, how you learned this, what challenges you are still experiencing as well as what lessons others could draw from your Python exploring
 - Provide a working script that showcases your “state of the art” Python programming skills
 - NB you have written this script yourself.
 - Even if it is just “Hello World”
 - Submit all your (meta-)data (reflection and your script as well as any other files) in a zip file in Slack, in the digitalapproaches channel (or mail them to me).

Assignment 4b

- Extract all the dates from the descriptions of gifts to Obama and stick it into an XML (using regex)
- If done, keep extracting other information from the description field (e.g. disposition, individual gifts) and stick them into the XML.
- If done, extract donor countries from the donor element in the geonames gazetteer format (www.geonames.org).
- If done, do the same for the Bush era (from the original files in the)
- If done, do the same for all the other presidents
- If done, write a paper with me on the topic of foreign gifts to American presidents
- If done, continue your research career all the way until you are a professor.
- If done, create world peace through your gift research.

- Keep a log that shows how you did this and what challenges you encountered.
- Submit your (meta-)data, i.e. log, and all your scripts, xmls and all other files, in a zip file in Slack, in the digitalapproaches channel (or mail them to me).

Kvothe.py (Kaj)

```
with open('Elodin.txt', 'r') as myfile: #imports the code that's to be decrypted
    ogcode = myfile.read()
alphabet = "abcdefghijklmnopqrstuvwxyz" #writes down the alphabet
newcode = [] #making a list ahead of time to store the new message in because otherwise it won't work
apparently
print(ogcode) #shows the user the code thats being decrypted
print("Turns into...")
for character in ogcode:
    if character in alphabet: #if/else statement to prevent the code from messing up the interpunction
        position = alphabet.find(character)
        newposition = (position+2) %26 #shifts the letters and has them loop so x turns into b etc
        newcharacter = alphabet[newposition]
        newcode.append(newcharacter)
    else:
        newcode.append(character)
print(''.join(newcode))

#This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International
License.
#To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-sa/4.0/.
```

Kvothe and the Chronicler in the Waystone Inn
(emmgoyer7 at [DeviantART](#))



Learn from my experiences (Martine)

- Keep in mind that computers have to be told exactly what to do within scripts/codes. Even if there is a minor mistake in there, the code will not work. Thus, be sure to always check your work. However, most of the times the program will give an error that needs to be solved.
- When experiencing errors in your code, you can google the answer. However, make sure that you know what kind of error it is. A syntax error is relatively easy to solve, since it is an error in the syntax of a sentence. Simply, look over the sentences you have written and look if there are any mistakes in spelling, punctuation, etc. Additionally, when you are not able to solve the code, do not hesitate to ask a professional (or someone else) for help.
- Make sure that there is a path to files you are using within your Python code or that the file is part of the folder you are working in, otherwise your script will not find it. I have had this issue multiple times.

FAIR Principles (Pepijn)

- To be Findable:
 - F1. (meta)data are assigned a globally unique and persistent identifier
 - F2. data are described with rich metadata (defined by R1 below)
 - F3. metadata clearly and explicitly include the identifier of the data it describes
 - F4. (meta)data are registered or indexed in a searchable resource
- To be Accessible:
 - A1. (meta)data are retrievable by their identifier using a standardized communications protocol
 - A1.1 the protocol is open, free, and universally implementable
 - A1.2 the protocol allows for an authentication and authorization procedure, where necessary
 - A2. metadata are accessible, even when the data are no longer available
- To be Interoperable:
 - I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
 - I2. (meta)data use vocabularies that follow FAIR principles
 - I3. (meta)data include qualified references to other (meta)data
- To be Reusable:
 - R1. meta(data) are richly described with a plurality of accurate and relevant attributes
 - R1.1. (meta)data are released with a clear and accessible data usage license
 - R1.2. (meta)data are associated with detailed provenance
 - R1.3. (meta)data meet domain-relevant community standards

A Short Word about FAIR

- Meta-data: Information that describes other information
 - Documents
 - Commenting
- Accessibility:
 - Digital Object Identifier <https://www.doi.org/>
 - Unique researcher ID (www.orcid.org)
 - ISO-standards
- Interoperability:
 - Full access to data-set and coding via a repository (e.g. DANS)
 - Open Source Software/Code
 - Creative Commons
- Beware:
 - Data ownership needs to be clear
 - Plan at what moment you make your data available

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- this is meta-data: this data normally
contains an XML from the federal registry at
https://www.federalregister.gov/d/2018-00365! ",
but now Angus Mol has changed it for this
example in the course. -->
<DATA>
  <GIFTS year="2016">
    <GIFT>
      <NAME>Obama!</NAME>
      <DESCR>Thanks, Obama!</DESCR>
    </GIFT>
  </GIFTS>
</DATA>
```



Showing Time

- A timeline has become the accepted visualization for a chronology, chronologies are frequently based on periodizations
- Things to consider:
 - Subject
 - Data
 - Perspective
 - Scale
 - Layout
 - Dynamic/Interactive
 - Concept of Time

A Wikipedia timeline on European imperialism

([link](#))

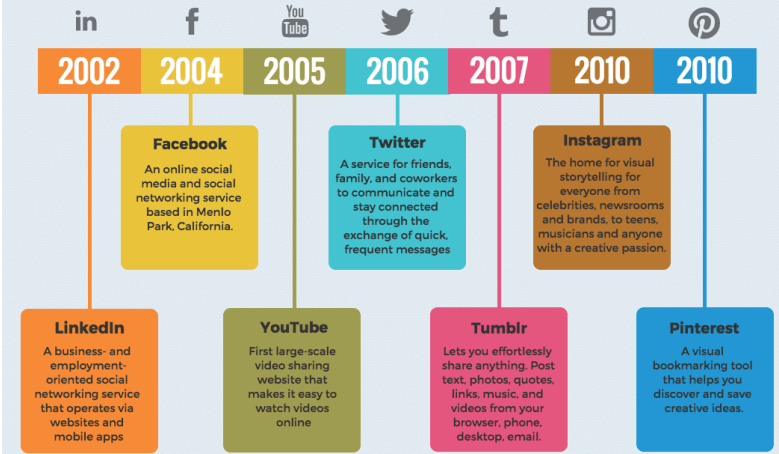
Colonization of North America [edit]

Further information: British colonization of the Americas, French colonization of the Americas, and Spanish colonization of the Americas

- 1565 – Saint Augustine, Florida – Spanish^{[7][8]}
- 1604 – Acadia – French^[9]
- 1605 – Port Royal – French; in Nova Scotia
- 1607 – Jamestown, Virginia – English; established by Virginia Company
- 1607 – Popham Colony – English; failed effort in Maine
- 1608 – Quebec, Canada – French
- 1610 – Cuper's Cove, First English settlement in Newfoundland; abandoned by 1820
- 1610 – Santa Fe, New Mexico – Spanish^[10]
- 1612 – Bermuda – English; established by Virginia Company^{[11][12]}
- 1615 – Fort Nassau – Dutch; became Albany New York
- 1620 – St. John's, Newfoundland – English; capital of Newfoundland
- 1620 – Plymouth Colony, absorbed by Massachusetts Bay– English; small settlement by Pilgrims
- 1621 – Nova Scotia – Scottish
- 1623 – Portsmouth, New Hampshire – English; becomes the Colony of New Hampshire
- 1625 – New Amsterdam – Dutch; becomes New York City
- 1630 – Massachusetts Bay Colony – English; The main Puritan colony.^[13]
- 1632 – Williamsburgh – English; becomes the capital of Virginia.^[14]
- 1633 – Fort Hoop – Dutch settlement; No part of Hartford Connecticut
- 1633 – Windsor, Connecticut – English
- 1634 – Maryland Colony – English
- 1634 – Wethersfield, Connecticut – First English settlement in Connecticut, comprising migrants from Massachusetts Bay.^[15]
- 1635 – Territory of Sagadahock – English
- 1636 – Providence Plantations – English; became Rhode Island* ^[16]
- 1636 – Connecticut Colony – English
- 1638 – New Haven Colony – English; later merged into Connecticut colony
- 1638 – Fort Christina – Swedish; now part of Wilmington Delaware
- 1638 – Hampton, New Hampshire – English^[17]
- 1639 – San Marcos – Spanish
- 1640? – Swedesboro- Swedish
- 1651 – Fort Casimir – Dutch
- 1660 – Bergen – Dutch
- 1670 – Charleston, South Carolina – English^[18]
- 1682 – Pennsylvania – English Quakers.^[19]
- 1683? – Fort Saint Louis (Illinois)- French,^[20]
- 1683 – East New Jersey – Scottish
- 1684 – Stuarts Town, Carolina – Scottish
- 1685 – Fort Saint Louis (Texas)- French
- 1698 – Pensacola, Florida – Spanish

TIMELINE

History of Popular Social Media Platforms



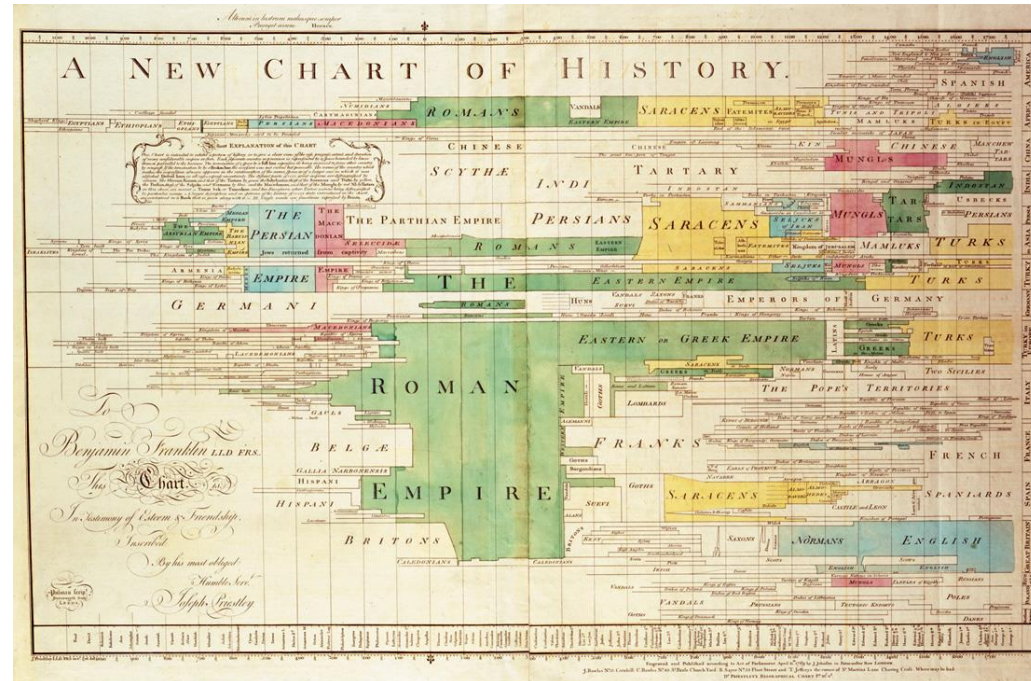
A Timeline of Social Media

Source: [venngage](http://venngage.com)



Older

Younger

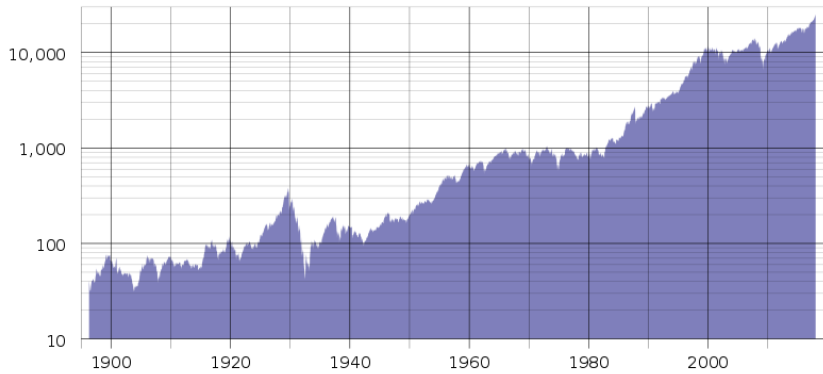


Time & Space:
Joseph Priestley's *A New Chart of History* (1769)
source: Wikipedia

Time Series

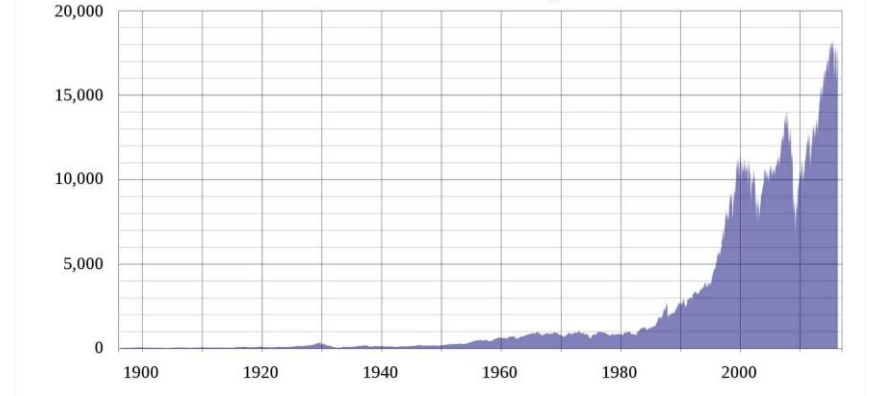
Two time-series with same data

Dow Jones Industrial Average



Source: [WikiMedia](#)

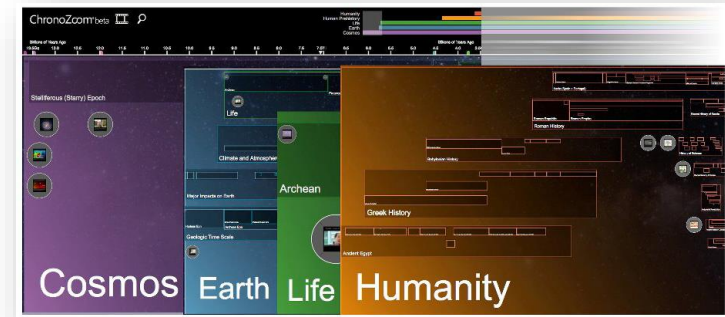
Dow Jones Industrial Average



Source: [Melltemplates](#)

Scale

- How many generations holding hands?
 - Napoleantic Era: 8
 - Ptomelaic Egypt: 80
 - Upper Paleolithic: 400, to Leiden CS
 - Homo Sapiens: 12.600, to Rotterdam suburbs
- Chronozoom
 - University of Berkeley
 - Earth and Planetary Science
 - Big History
 - Open Source
 - Interactive
 - Master timeline
 - Ties together specialized timelines



You!

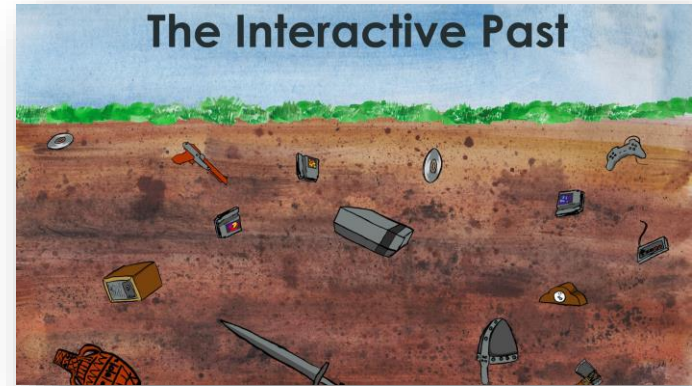


Ptolemaic
ancestor

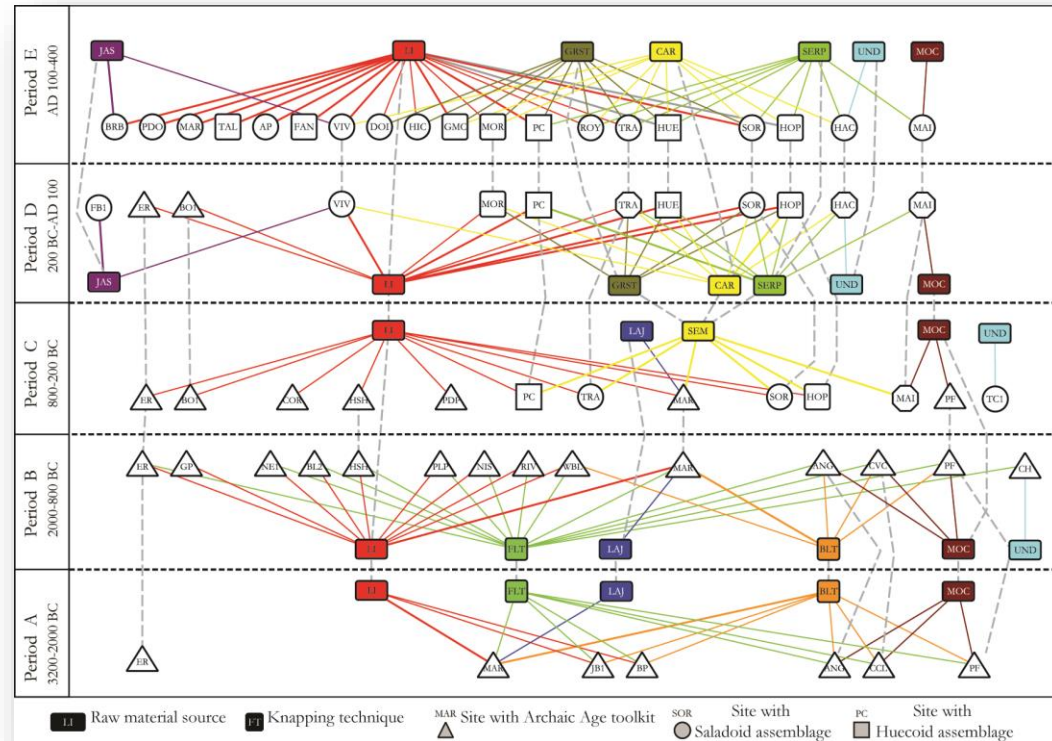
Stratigraphy (Law of Superposition)



Archaeological stratigraphy at the Iron Age site of Goosehill Camp on Bow Hill, West Sussex in Southern England (source: [wikimedia](https://www.wikimedia.org/))



Artistic impression of a gaming stratigraphy
By [Alexander Aries](#)



A trade network stratigraphy (Mol 2014)

Whose time is it?

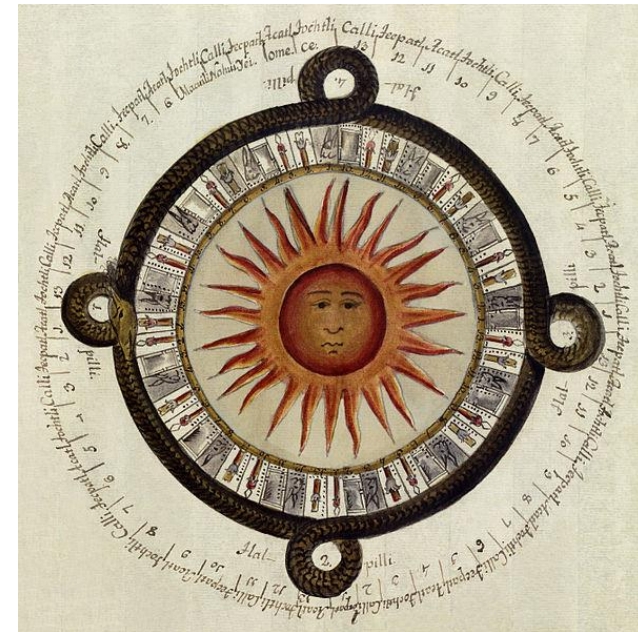


God of Death and Life and 26 days in the [Codex Yoalli Ehēcatl/Borgia](#)
Source: [WikiMedia](#)



Roman sundial in Side (Turkey)

Source: [WikiMedia](#)



Colonial era explanation of the
Aztec calendar (1792)

Source: [WikiMedia](#)

Assignment 5

- Hand in by **27-3-2018**
- 5a: Designing Time
 - Design a visual element that shows time (a logo, a time series, a data point, a whole infographic)
- 5b: Critiquing the design of time
 - Find a historical infographic/time series that you think has really “good” design
 - Find a historical infographic/time series that you think has really “bad” design
 - Write a review of them both in which you compare the two.
- Hand in via your **dighistproject[groupnumber]** channel in Slack

Break!

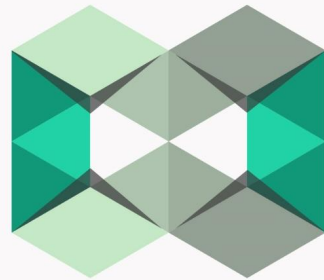
- Please start Adobe Photoshop!
- Download this picture from [here](#) and open it in Adobe Photoshop



Digital Approaches to Historical Inquiries

Some design tips and best-practices

Krijn Boom | 14-03-2018



INTERACTIVE
PASTS

The design process

Think about what you want to tell people, what are the core ideas. If you make a logo – don't make this too explicit; avoid clichés.

Start with a basic shape, color, rough mental image of 'what it should look like'. Work from there and see what comes out.



'spark', 'inspiration', 'something happens'



The design process

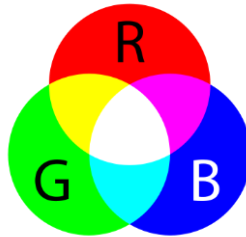
Three core activities of the VALUE foundation:

- 1) Develop knowledge activation and dissemination;
- 2) Connect individuals and organizations;
- 3) Facilitate and conduct research on gaming and how play can be used in research and outreach.

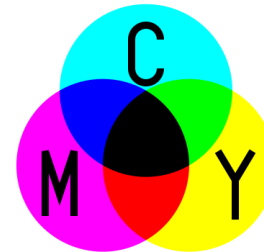
Triforce = gaming
Shield = Strength, resilience, protector
Strong font; bold, contemporary design.

logo

RGB versus CMYK



- RGB stands for Red, Blue, Green;
- **Additive color:** a method to create color by mixing a number of different light colors – spectrum ends in white;
- Used primarily for digital media, such as computer monitors and tv's: pixels are build up of RGB dots.



- CMYK stands for Cyan, Magenta, Yellow and Key (black);
- **Subtractive color:** model which explains the mixing of a limited set of dyes, inks, paint pigments or natural colorants to create a wider range of colors – spectrum ends in black;
- Used primarily for color printing.

Color codes

Hex codes, for instance #000000 = black;

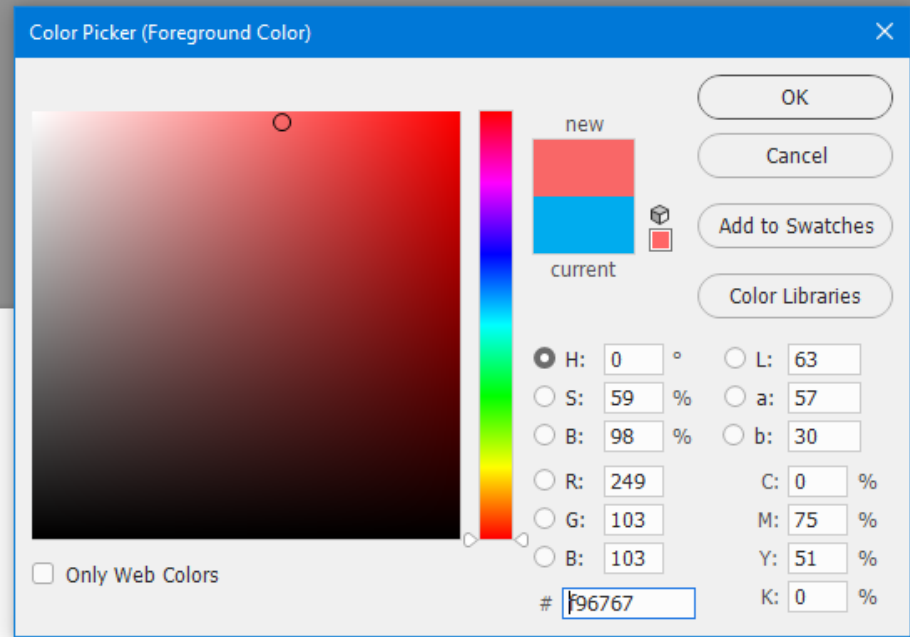
- Six-digit, three-byte hexadecimal number used in HTML, CSS, SVG, and other computing applications to represent colors.
- Used for a variety of color models, including RGB and CMYK;
- The number of colors that can be represented by this system is $16^6 = 16,777,216$.

RGB range

- Value of 0-255 for each color.

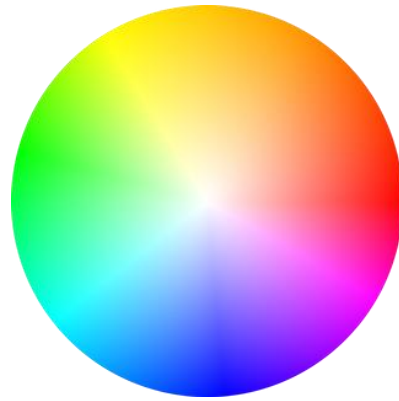
CMYK range

- Percentage (0-100%) for each color.
-



VALUE

Color harmony basics



Complementary
color schemes use two opposite colors on the color wheel.



Monochromatic
color schemes use three different values of the same color.



Analogous color schemes use three adjacent colors on the color wheel.



Split complements use a color and the two adjacent tertiary colors of its complement.



Triadic color schemes use three evenly spaced colors on the color wheel.



Tetradic color schemes use two complementary pairs.

Opslaan



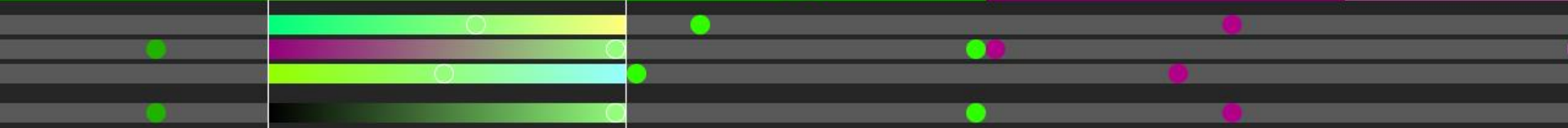
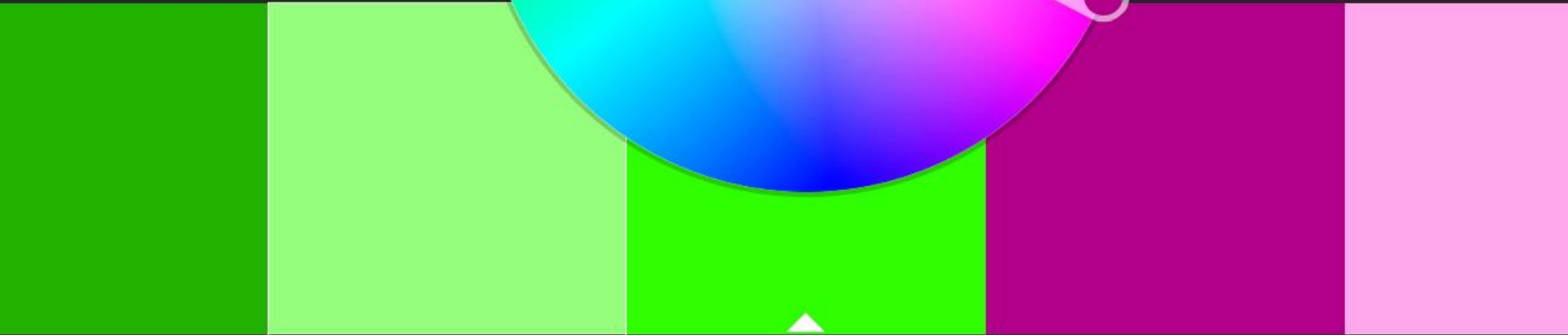
- Kleurenregel
- Analoog
 - Monochromatisch
 - Drietal
 - Complementair
 - Samengesteld
 - Schaduwen
 - Aangepast

<https://color.adobe.com>



RGB	4	177	0
HEX	047F00		
RGB	83	255	76
HEX	53FF4C		
RGB	9	255	0
HEX	09FF00		
RGB	46	177	43
HEX	2E7F2B		
RGB	7	204	0
HEX	07CC00		

- regel
- ↑
- bog
- ochromatisch
- al
- plementair**
- engesteld
- duwen
- gepast



RGB 34 178 0
HEX 228200

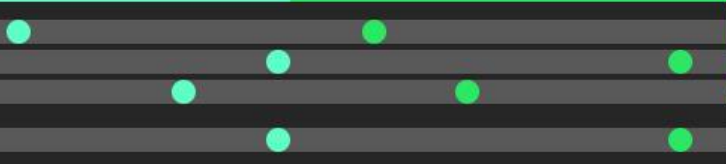
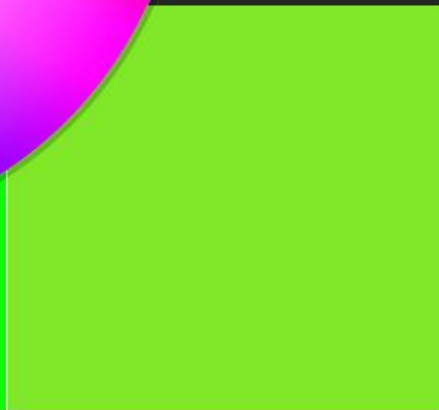
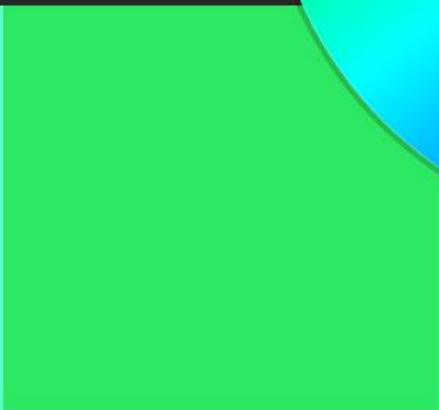
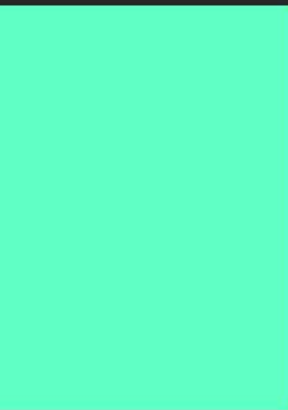
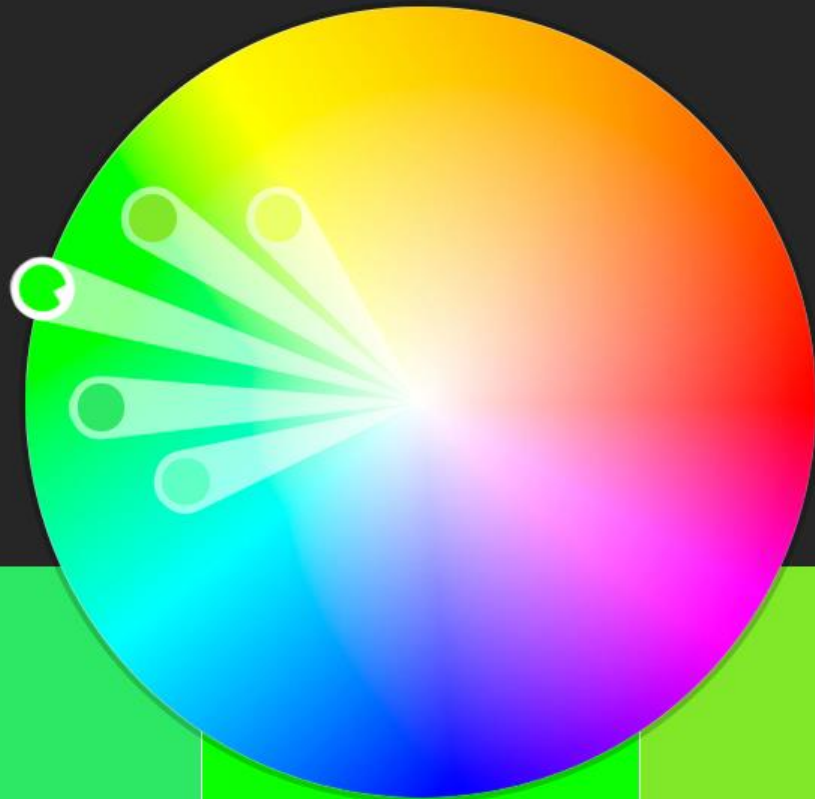
▶ RGB 149 255 125
HEX 95FF7D

RGB 48 255 0
HEX 30FF00

RGB 178 0 138
HEX ED008A

RGB 255 168 255
HEX FFABE8

- ↑
- omatisch
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RGB 95 255 197
HEX #5FFC95

RGB 44 232 101
HEX #2CE865

▶ RGB 10 255 0
HEX #0AFF00

RGB 178 232 41
HEX #B0E829

RGB 235 255 105
HEX #E8FF69

Positive on
negative

'negative'

negative
on
positive

'positive'





Use of colors

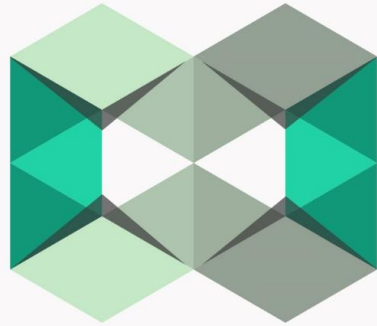
- Choose a color scheme that has 1-3 primary colors and an additional 1-3 secondary colors that contrast and complement each other.



- Primary colors



- Secondary colors



INTERACTIVE PASTS



• Primary colors



• Secondary colors

Fonts/typefaces



- Serifs originated in the Latin alphabet with inscriptional lettering;
 - Mostly used for longer writings, printing, or to resemble the 'old'
- Sans Serif also originated in the Latin alphabet; Roman square capitals had prominent serifs.
 - Mostly used in headers, statements and titles; used to represent the 'new'.

Vector vs Bitmap



Vectors

Vectors are based on mathematical formulas and can be scaled infinitely without any loss in quality. Every line and shape has a value that changes when the image expands.

Bitmaps

Bitmaps rely on a series of square blocks called pixels, arranged on a grid. The quality of the images depends on the amount of pixels per square inch. The more pixels, the better the quality.



Quick design wins

1) Don't get carried away with fonts;

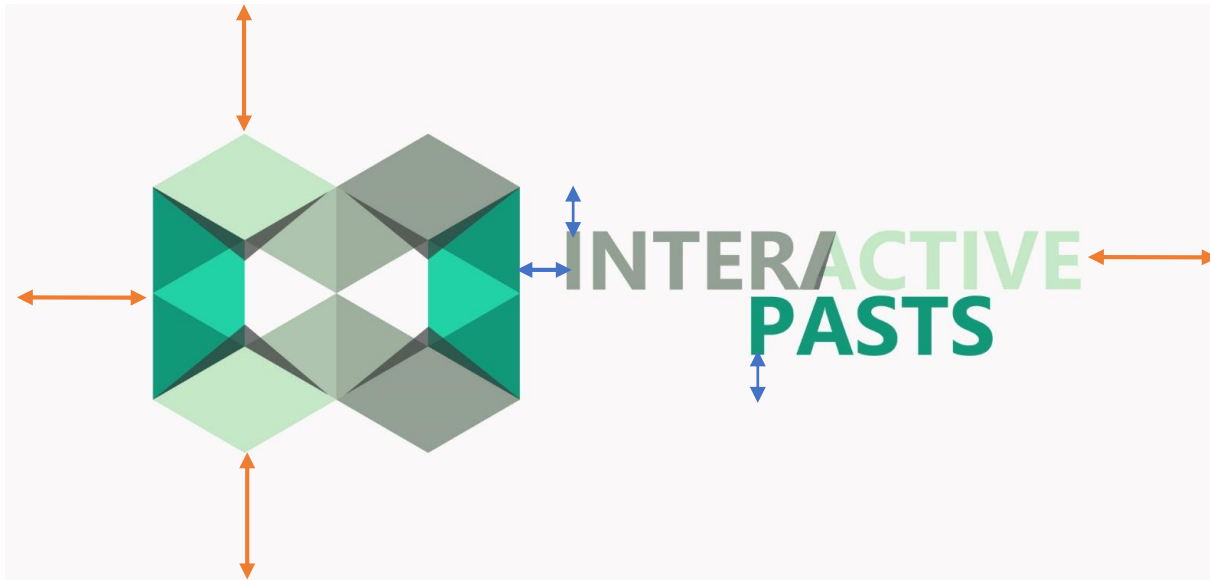
- Use 1 or 2 font-families;
- Vary between font-size and bold/italic, but not too much:
1 header, 2 sub headers, one paragraph size for, for instance, a website.

2) Align your objects

- Helps to keep design elements in a presentable order, regardless of their differing sizes.
- Proper alignment is an easy way to give your images a sophisticated and professional look – it represents **continuity**.

3) Margins/white space (together with 2)

- Be abundant in your use of margins! Pick a two or three margin sets and stick to them (literally).
 - Use white space to let elements breathe. The application of space around text boxes, images and other graphic elements makes a design easier to read.
-



Deadlines

- **Deadline for all missed assignments: 20-3-2018**
 - No deduction for assignment 4
 - 1 point deduction for assignments 1-3
- **Hand-in “Final Project” Concept: 21-3-2018**
 - Planning
 - Project synopsis
 - Expected outcome
 - Expected feedback from peers
 - Current progress
- **Assignment 5: Tuesday 27-3-2028**
 - Option for feedback!
- **Deadline “Final Project”: Thursday 14-6-2018**

See you next week!

I'll send you a course survey via Google Forms again.

Please take the time to fill it out before the end of next week

Next week:

- No open office (same for the week after)
- Guest: