

Code and Language

Class 06

Agenda

- Libraries
- Gennemgang af sample code
 - Text, arrays, funktioner fra RiTa
- Electronic Literature
- Coding

Libraries

- Kode lavet af andre udviklere, som vi kan genbruge
- Gør det lettere for os at programmere
- Vi skal ikke selv kode *from scratch*: Vi kan bare kalde funktionerne i vores library

[https://rednoise.org/rita/
reference/index.php](https://rednoise.org/rita/reference/index.php)

Reference

RiTa

RiTa.VERSION
RiTa.concordance()
RiTa.conjugate()
RiTa.distance()
RiTa.env()
RiTa.getPastParticiple()
RiTa.getPhonemes()
RiTa.getPosTags()
RiTa.getPosTagsInline()
RiTa.getPresentParticiple()
RiTa.getStresses()
RiTa.getSyllables()
RiTa.getWordCount()
RiTa.isAbbreviation()
RiTa.isPunctuation()
RiTa.isQuestion()
RiTa.isSentenceEnd()

RiString

analyze()
charAt()
concat()
copy()
endsWith()
equals()
equalsIgnoreCase()
features()
indexOf()
insertWord()
lastIndexOf()
length()
match()
pos()
posAt()
removeChar()
replaceAll()

RiGrammar

addRule()
expand()
expandFrom()
expandWith()
getGrammar()
hasRule()
load()
loadFrom()
print()
ready()
removeRule()
reset()

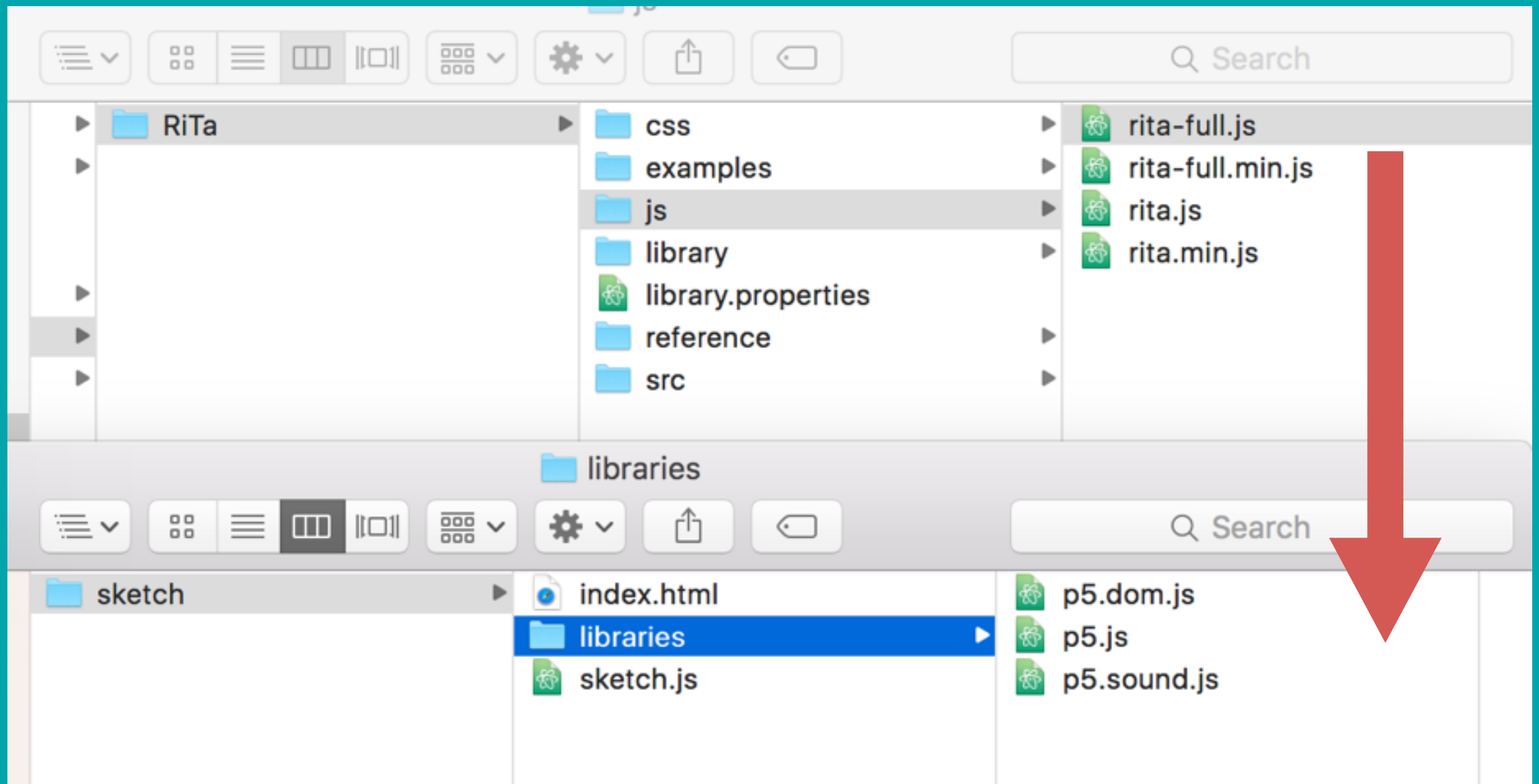
RiMarkov

generateSentences()
generateTokens()

RiLexicon

addWord()
alliterations()
clear()
containsWord()
isAdjective()
isAdverb()
isAlliteration()
isNoun()
isRhyme()
isVerb()
lexicalData()
randomWord()
reload()
removeWord()
rhymes()
similarByLetter()
similarBySound()

Installation



Installation

```
1 <html>
2 <head>
3   <meta charset="UTF-8">
4   <script language="javascript" type="text/javascript" src="libraries/p5.js"></script>
5   <!-- uncomment lines below to include extra p5 libraries -->
6   <script language="javascript" src="libraries/p5.dom.js"></script>
7
8   <script language="javascript" src="libraries/rita.full.js"></script>
9
10  <script language="javascript" type="text/javascript" src="sketch.js"></script>
11  <!-- this line removes any default padding and style. you might only need one of these values set. -->
12  <style> body {padding: 0; margin: 0;} </style>
13 </head>
14
15 <body>
16 </body>
17 </html>
```

Load external font

```
5 var myFont;
```

```
9 ▾ function preload() {  
10   myFont = loadFont("data/MorePerfectDOSVGA.ttf");
```

```
22 ▾ function draw() {  
23   background(0);  
24   textFont(myFont);
```

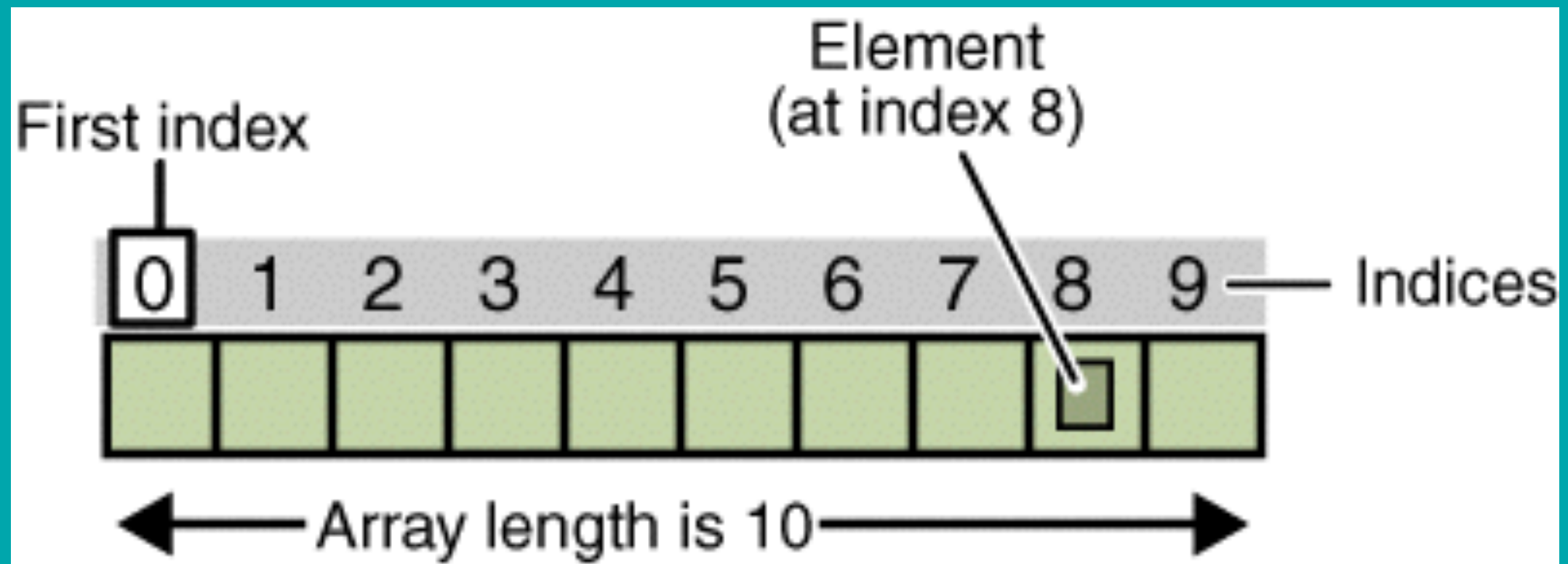
- Husk at lægge skrifttypen i sketch'ens folder

Load external text file

- `loadStrings(data/text.txt);`
- `String`: En variabel der holder tekst
- `loadStrings()` indlæser filen og laver et **String array** af de individuelle linjer
- Tip: Kald den i `preLoad(){}` , så den bliver færdig før `setup(){}` og `draw(){}`

Array

- En variabel, der indeholder en række værdier med hver deres index
- Starter fra 0 og opefter



0 Does anyone know if Olivia ever made it off the island?
1 do you believe we'll ever find ourselves in this position again?
2 she's brilliant isn't she?
3 What causes cancers of the head and neck?

Load external text file

```
7 var longstring;
```

```
9 ▾ function preload() {  
10     myFont = loadFont("data/MorePerfectDOSVGA.ttf");  
11     longstring = loadStrings("data/questions.txt");  
12 }
```

Fra Array til én lang String

```
7  var longstring;
```

```
14  function setup() {  
15    createCanvas(800, 600);    //create a drawing canvas  
16    background(0);  
17    noStroke();  
18    frameRate(10);  
19    loadlongstring();  
20  }
```

```
58  function loadlongstring() {  
59  
60    for (var i = 0; i < longstring.length; i++) {  
61      getlongstring = getlongstring + longstring[i];  
62    }  
63  
64  
65  }
```

DIY Array

```
22 ▾ function draw() {  
23     background(0);  
24     textFont(myFont);  
25     writeText(); //function without an argument
```

```
29 ▾ function writeText() {  
30     var words = [] //array -> starts with 0  
31     words[0] = "hello world";  
32     words[1] = "what is code aesthetics?";  
33     words[2] = "array";  
34     words[3] = "using match";  
35     words[4] = "to draw";
```

- Array markeres med []
- Winnie deklarerer hver værdi manuelt

match()

- Funktion fra RiTa library
- Sammenligner en String med en anden, og tester om de er ens
- Hvis ja, “returnerer” den det fundne match

match()

```
37 ▾ for (var i=0; i<words.length; i++) { //for loop
38
39     var m1 = match(words[i], "to");
40 ▾   if (m1 != null) { // If not null, then a match was found (bo
41       fill(255, 255, 0); //yellow color
42 ▾   } else {
43       fill(255);
44   }
45
46   textSize(13);
47   text(words[i], width/4, (height/4)+50*i); //display text
48   var size = words[i].length; //include space character counting
49   drawRect(size, i); //invoke a function with an argument
50 }
```

using match


to draw

- NB: null betyder, at variabelen ikke indeholder noget data

Winnie's drawRect()

- Længden af ord = længden på rect()
- words[i].length: Længden på et ord i array'et

```
48     var size = words[i].length; //include space character counting
49     drawRect(size, i); //invoke a function with an argument
50 }
51 }
52
53 function drawRect(getSize, geti) {
54     rect(width/4, (height/4)+50*geti, getSize*5, 10); //rect visualization underneath the text
55 }
56
57
```



Hvor kom vi fra?

```
22 ▾ function draw() {  
23     background(0);  
24     textFont(myFont);  
25     writeText(); //function without an argument  
26     displaychar();  
27 }
```

Vis ét bogstav af gangen

```
4 var getindex = 0;
```

```
67 ▾ function displaychar() {  
68     var lengthcount = getlongstring.length;  
69     var one = getlongstring.charAt(getindex);  
70     getindex++;  
71 ▾     if (getindex == lengthcount) { //restart the text when it reaches the max  
72         getindex = 0;  
73     }  
74     fill(255);  
75     textSize(16);  
76     text(">>> " + one, width/2, height/1.2); //you can see text can be added.  
77 }
```

- `charAt()`: “Returner” bogstavet på det givne index. Fra RiTa
- for-loop ville være for hurtigt i denne sammenhæng

Opsumming

BREAK

10 min.

Electronic literature



Definition

- Ifølge Electronic Literature Organization (ELO):
*“[Electronic literature] refers to works with an important literary aspect that **takes advantage** of the capabilities and contexts provided by the stand-alone or networked computer.”*

Hvilke eksempler på
elektronisk litteratur kan I
nævne?

Brug 5 min. med sidemanden

E-bøger



Text Adventures



YOU ARE IN THE FRONT YARD OF A LARGE
ABANDONED VICTORIAN HOUSE. STONE STEPS
LEAD UP TO A WIDE PORCH
----- ENTER COMMAND?■

Chatterbots



Love Song

YOU ARE
TO ME
SOMETHING I
MY IT
LOUD LET
LIKE OH
KEEP IT
I CAN'T
THOUSAND YEARS
THAT SOMETHING
OH LET

LOVE YOU
LIKE A
OH OH
LET ME
I LOVE
A LOVE
YOU LIKE
SONG BABY
LOVE SONG
I I
PLAY IT
ME PLAY
IT LOUD
BABY I
YOUR HAND
IT GIRL
HOLD YOUR

I WANNA
FOR A
WANNA HOLD
A THOUSAND
YOU FOR
YOU COULD
I AM
COULD BE
AND I
THE POWER
POWER OF
OF LOVE
I HAVE
HAND I



Mini ex5

- 3: Find some found text (spam/lyrics/poems/books), and use them to explore and experiment RiTa library
- 4: Design an electronic literature using found text and RiTa.js library.

HUSK: Vi ses igen
fredag d. 17/3