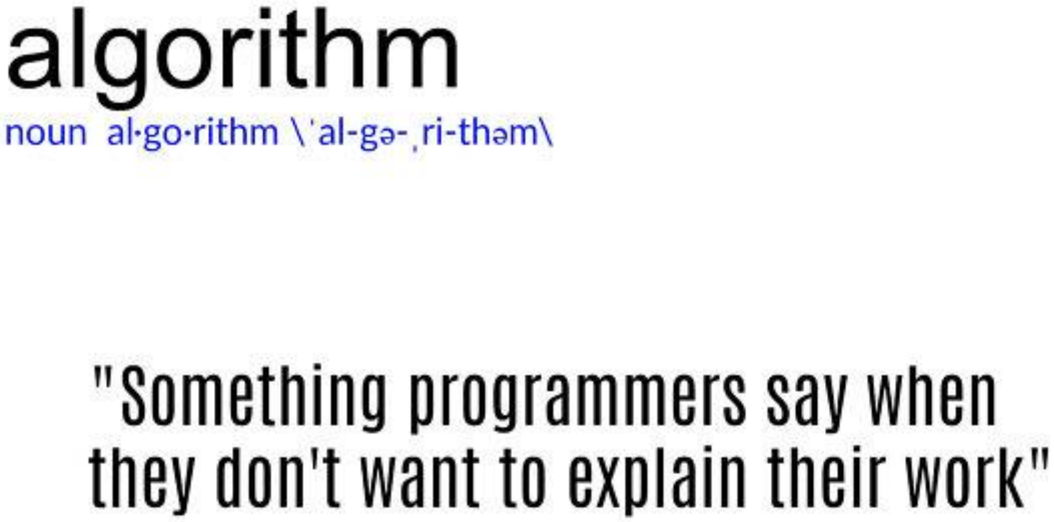
Code and Algorithm

Algoritmer

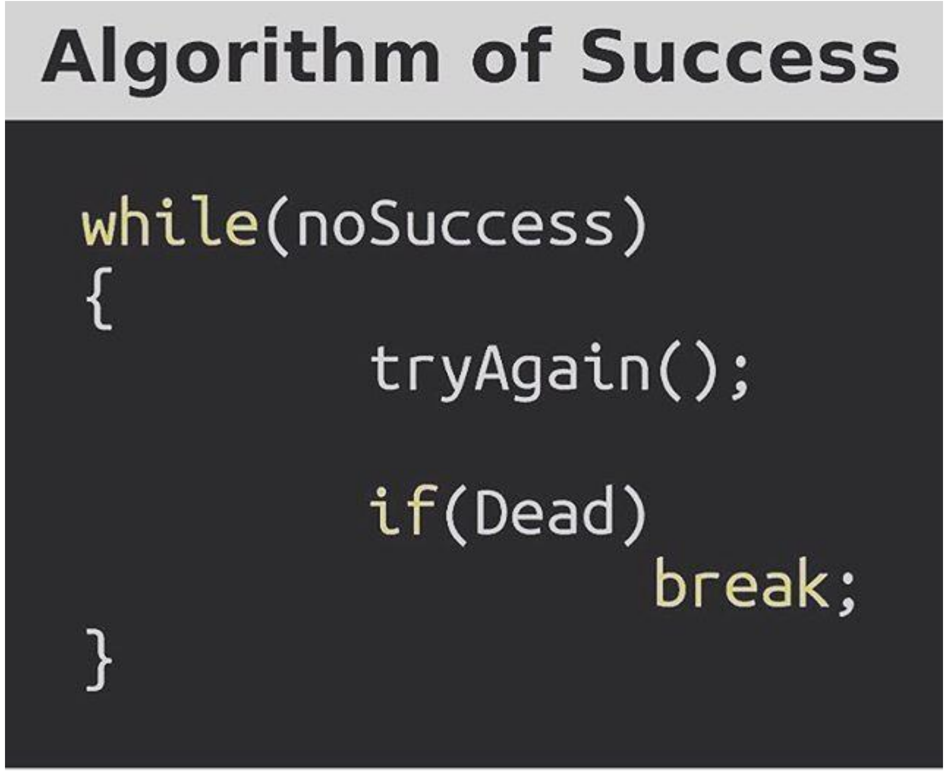
En opskrift repræsenteret som kode, for hvordan et bestemt problem/et problem af en bestemt slags kan løses.



algorithm

noun al·go·rithm \ˈal-gə-ˌri-thəm\

"Something programmers say when they don't want to explain their work"



Algorithm of Success

```
while(noSuccess)
{
        tryAgain();

        if(Dead)
            break;
}
```

Flowchart

Viser en opgave nedbrudt til de mindste trin.

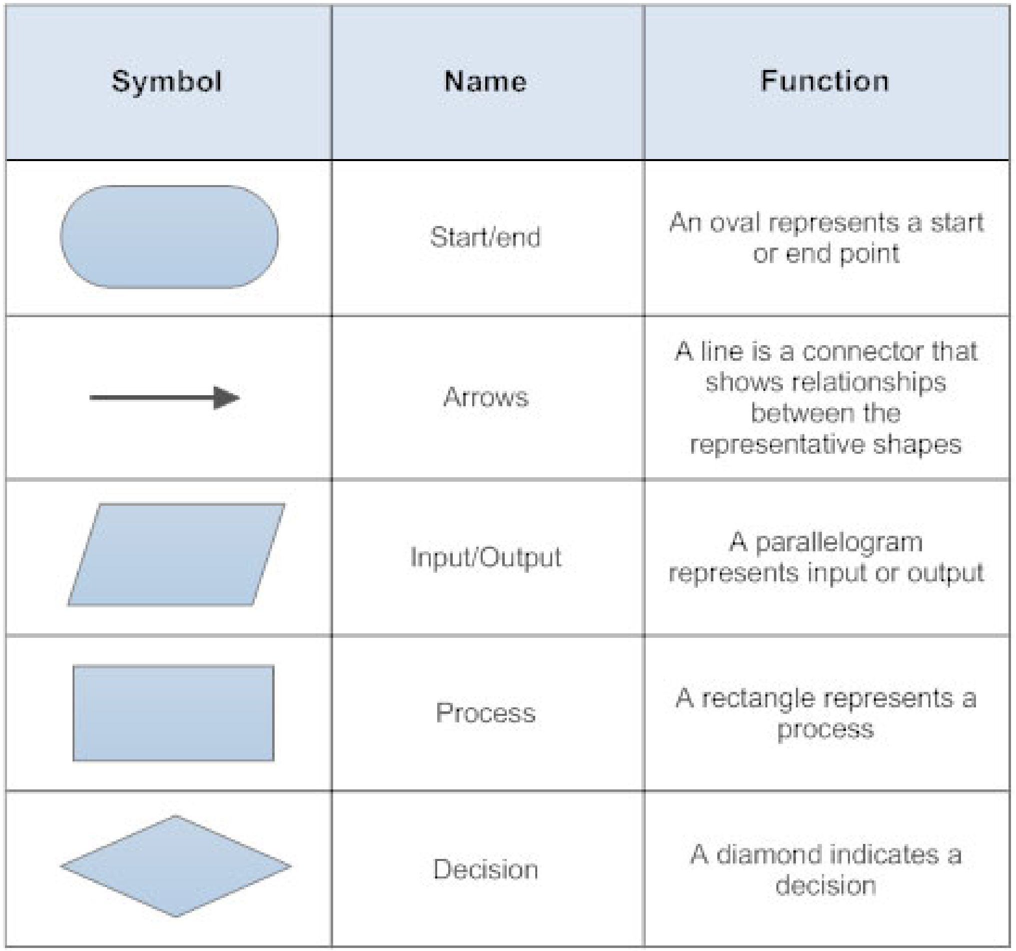
Hvert trin repræsenteres med et symbol og pile der forbinder dem.

Symbolet afhænger af funktionen af trinnet.

Hermed bliver det ofte lettere at oversætte ”opgaven” til kode.

I bestemmer selv hvordan I vil lave flowchartet

- Axure
- illustrator
- PowerPoint
- https://www.draw.io/
- https://creately.com/
- Eller noget helt andet

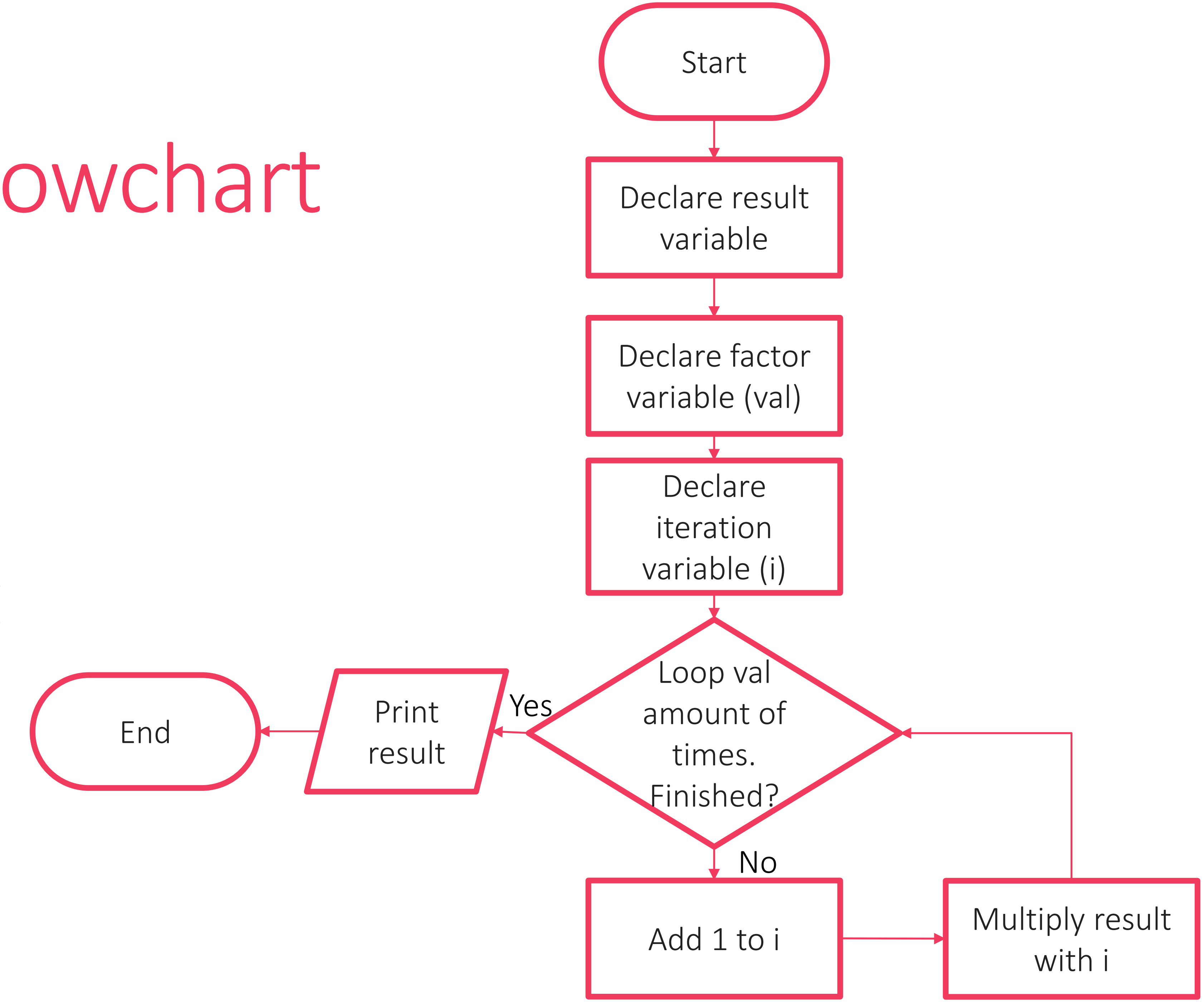


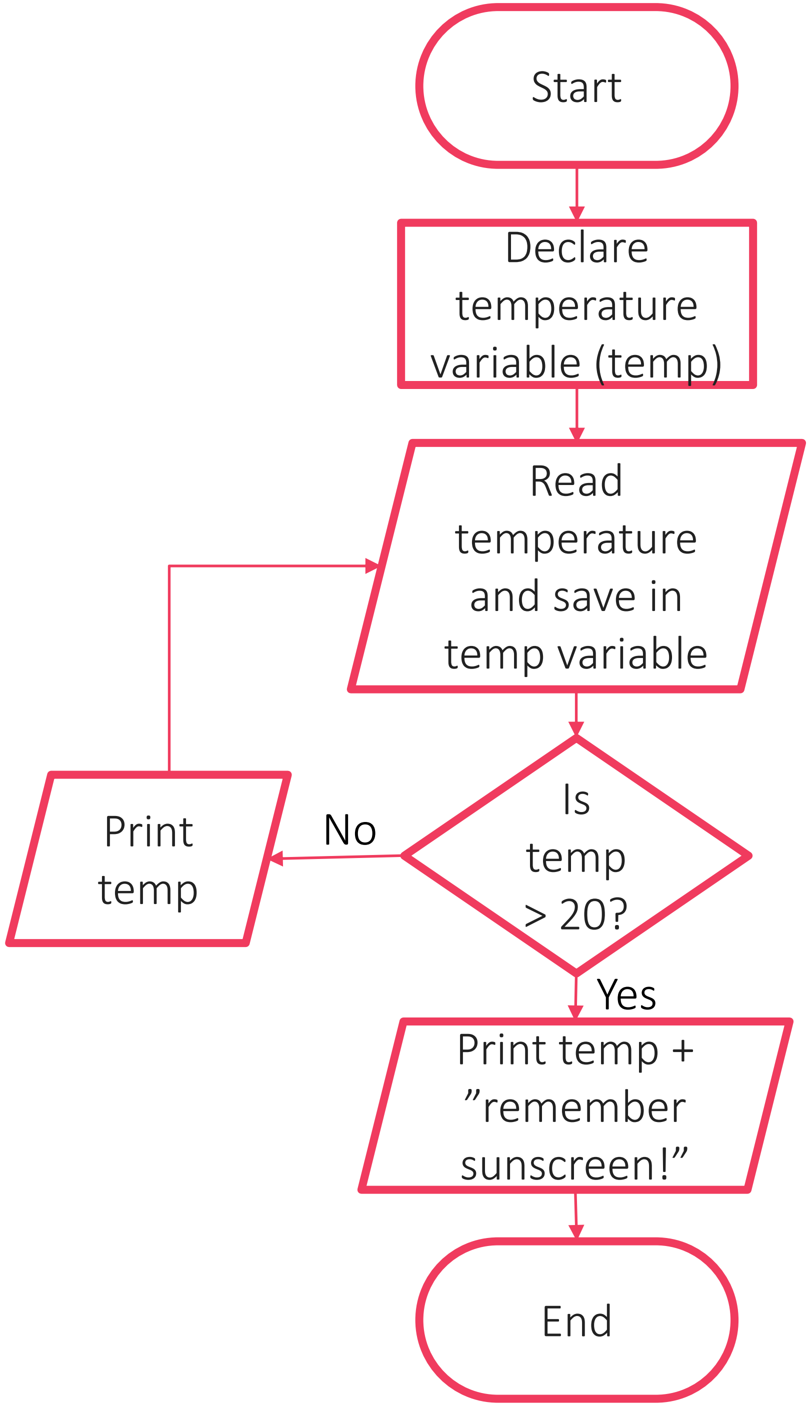
Symbol	Name	Function
⬭	Start/end	An oval represents a start or end point
→	Arrows	A line is a connector that shows relationships between the representative shapes
▱	Input/Output	A parallelogram represents input or output
▭	Process	A rectangle represents a process
◇	Decision	A diamond indicates a decision

Fra kode til flowchart

Fakultetsfunktion:

```
var result = 1;

var val = 8;


for (var i = 1; i <= val; i++) {

   result = result * i;

 }

 console.log(result);
```


Start
Declare result variable
Declare factor variable (val)
Declare iteration variable (i)
Loop val amount of times. Finished?
Yes
Print result
End
No
Add 1 to i
Multiply result with i


Start
Declare temperature variable (temp)
Read temperature and save in temp variable
Is temp > 20?
No
Print temp
Yes
Print temp + ”remember sunscreen!”
End

Fra flowchart til kode

```
var on = true;

var temp = 0;


while (on) {
   temp = readTemp();
   console.log(temp);
   if (temp > 20) {
     console.log(”remember sunscreen!”);
     on = false;
   }
}
```

MiniEx8 - Discussion

Sæt jer sammen i grupper, der ikke er dem I ellers er i gruppe med.

Præsenter jeres miniEx fra sidst for hinanden.

- Forklar jeres vision.
- Vær så præcis som mulig med hvorfor I bruger lige præcis den syntax det sted igennem koden.
- Giv gerne feedback og forslag til hinanden.

MiniEx9

Individuel:

Revisit your previous mini exercises and select **the most technically complex one**

Draw an individual **flow chart** to present the program (Pay attention to: which items you select to present through a flow chart)

In the readme file:

- Attach the **flowchart image**
- You need to have a **hyperlink that links to your chosen mini_ex folder**.
- What may be the difficulty in drawing the flow chart?

MiniEx9

I Studiegrupper:

Get together as a study group and **brainstrom the forthcoming program** for the final project

In the readme file:

- **Present two different ideas** with two different flow charts (it is important to think about the balance between simplicity and complexity. How can we get a sense of what's your program about?)
- What might be the **possible technical challenges** for the two ideas and how are you going to solve them?
- Individual: How is this flow chart different from the one that you had in #2 (in terms of the role of a flow chart)?
- Individual: If you have to bring the concept of algorithms **from flow charts to a wider cultural context**, how would you reflect **the notion of algorithms**? (see if you could refer to the text and articulate your thoughts?)

Create a readme file together (README.md) and upload to the mini_ex9

MiniEx9 - Peer feedback

This time you are not giving feedback on the actual code/program, but something in a graphic form.

The departure question would be: Do you understand the algorithms through a flow chart?

MiniEx9

Sæt jer sammen i jeres studiegrupper.

Brainstorm emner og udformninger for jeres endelige projekt.

- Ideer til emner I gerne vil reflektere over i jeres program
- Hvordan I teknisk kan udtrykke disse emner og de refleksioner I har om dem

Jeg går fra gruppe til gruppe og lytter/spørger ind til jeres ideer