INNFØRING I PROGRAMMERING

INF100

VÅR 2026

Crystal Chang Din

Med bidrag fra: Torstein Strømme

PRAKTISK INFORMASJON

HVEM ER VI?

Foreleser for INF100

- Emneansvarlig

Crystal Chang Din

https://www4.uib.no/finn-ansatte/Crystal.Chang.Din

Administrator for INF100

- Emneregistrering
- Studieprogram
- Tilrettelegging

https://www4.uib.no/for-studenter/dine-studier/tilrettelegging-for-studenter

Jenny Thunes

https://www4.uib.no/finn-ansatte/Jenny.Kristine.Thunes

Lab-administrator

- Feil med retting
- Problemer med innlevering

Illimar Hugo Rekand

https://www4.uib.no/finn-ansatte/Illimar.Hugo.Rekand

Lab-kickstart ansvarlig

- Feil med retting
- Problemer med innlevering

Sophie Martina Blum

https://www4.uib.no/finn-ansatte/Sophie.Martina.Blum

Hilde Jordal

- Web- og labutviklar

Aleksandr «Sasha» Popov

- Utsettelser
- Fritak

https://www4.uib.no/finn-ansatte/Aleksandr.Popov

GRUPPELEDERE









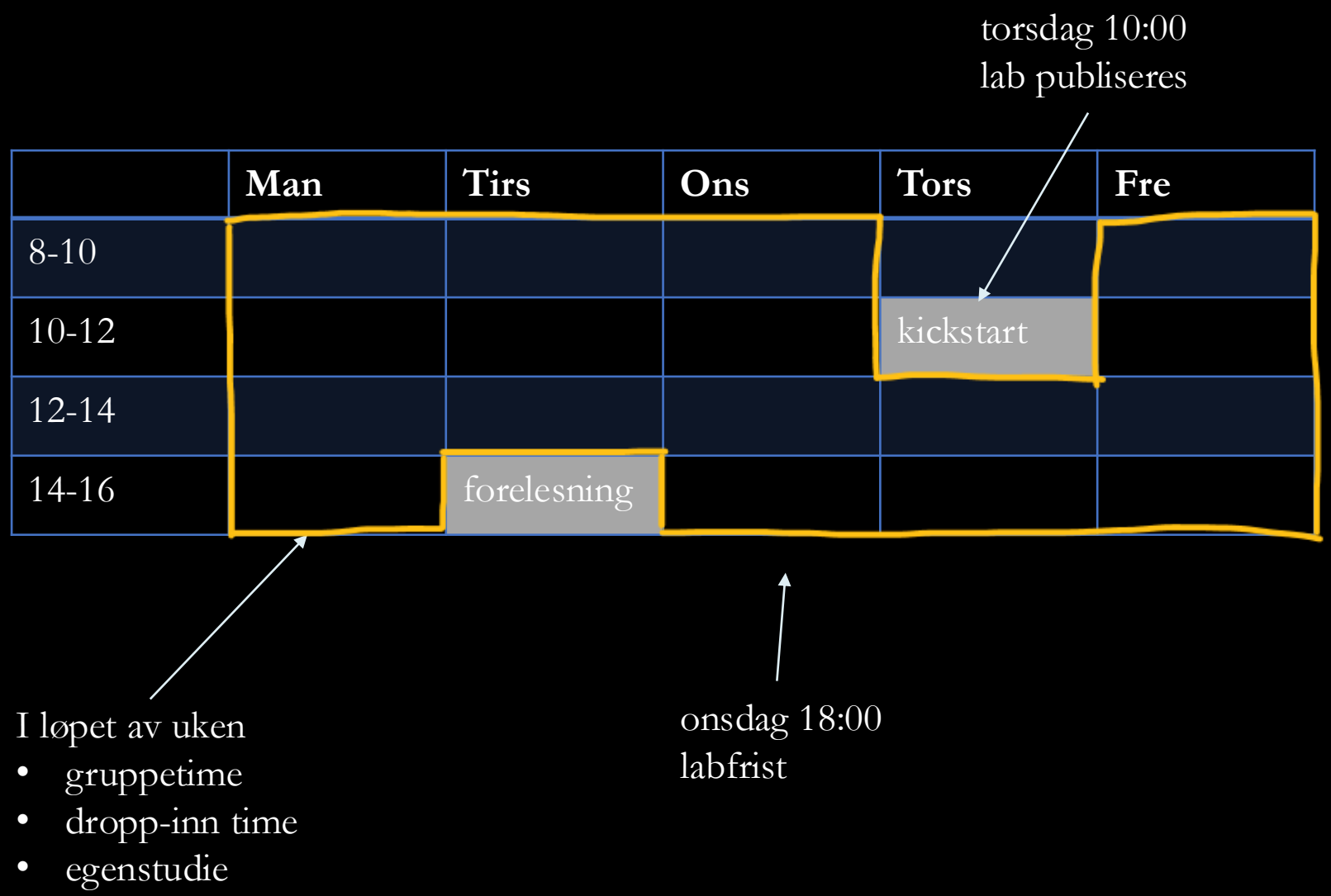






Alexander, Aurora, Bernhard, Brage Henden, Eivind Furuset, Eivind Hobrad, Emil Johan, Hevar, Idris, Ingvild Helen Røli, Karl-fredrik, Kristofer, Ludvik, Malin Nordsveen, Marthe Xinmei, Nickolay Liljeroos, Oscar Stenrød, Sara Elise, Sheldon Apagalang, Sigurd, Thale Marie og Vilde

EN UKE I INF100

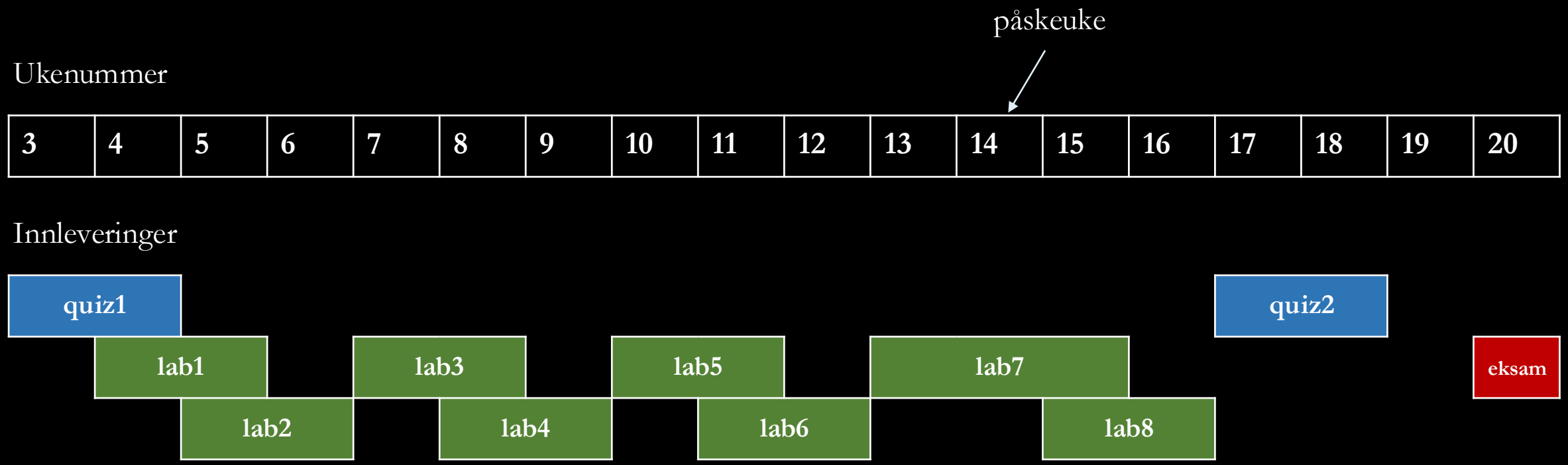


EN UKE I INF100

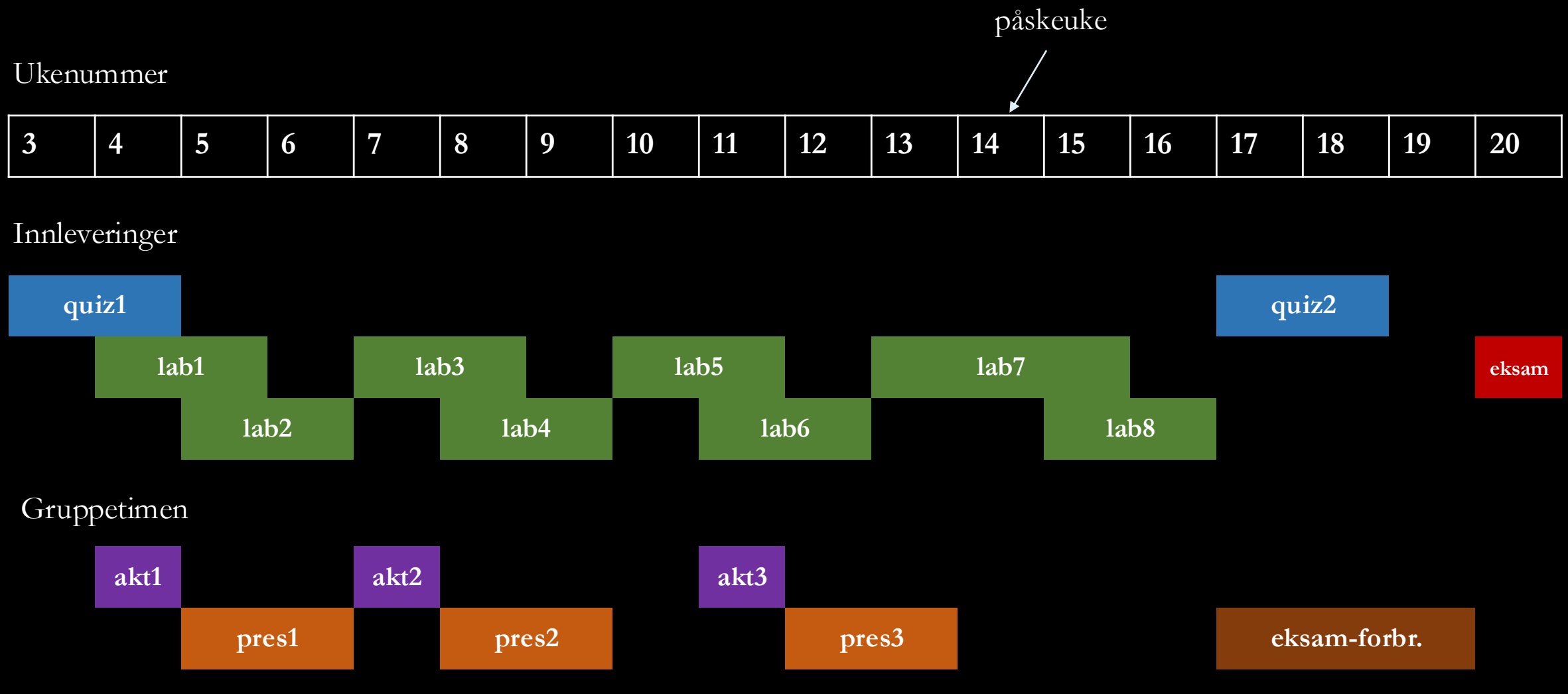
	Man	Tirs	Ons	Tors	Fre
8-10					
10-12				kickstart	
12-14					
14-16		forelesning			

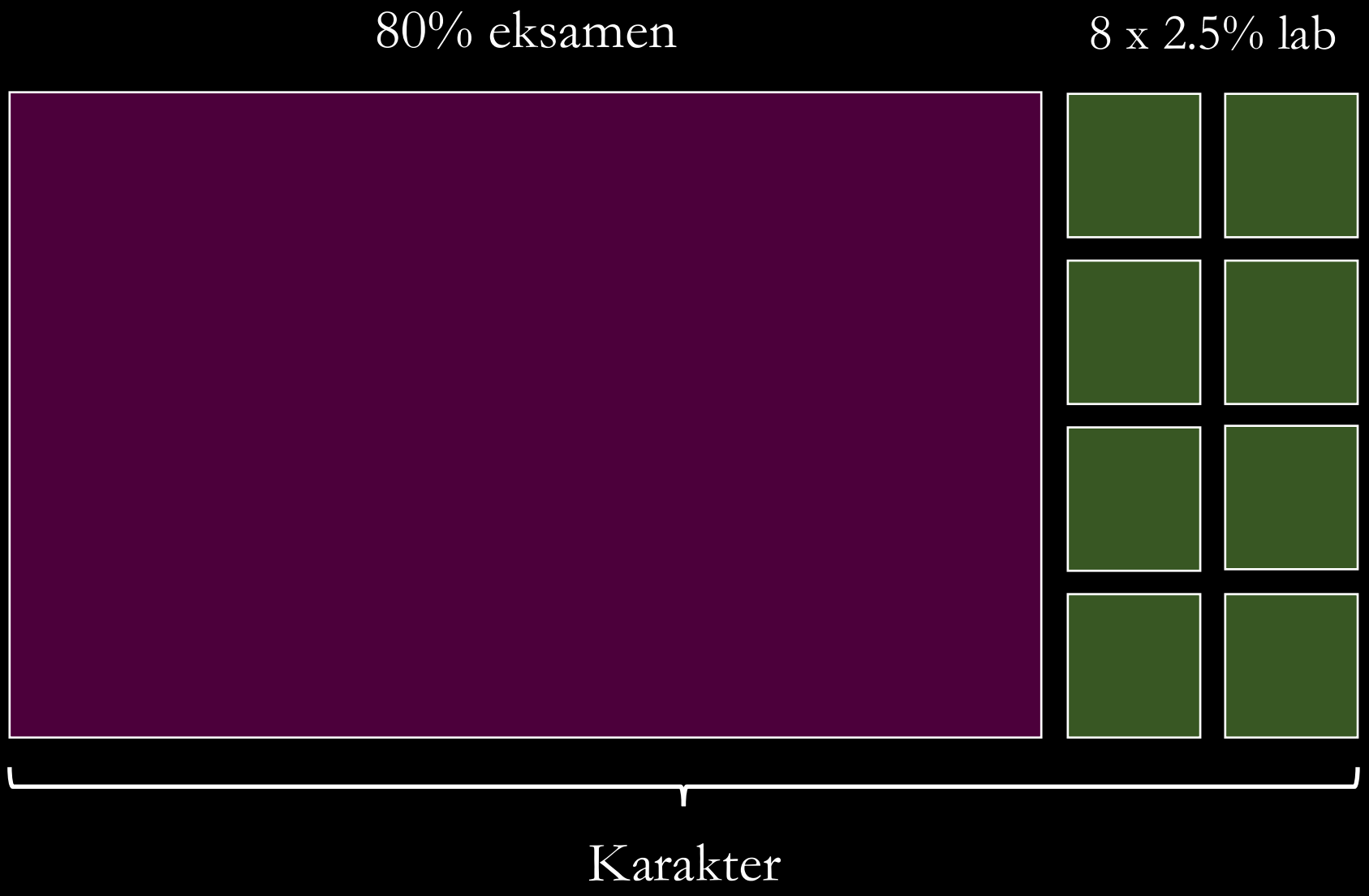
- Gruppetime
- Dropp-inn time

SEMESTEROVERSIKT TENTATIV



SEMESTEROVERSIKT TENTATIV




80% eksamen
8 x 2.5% lab
Karakter

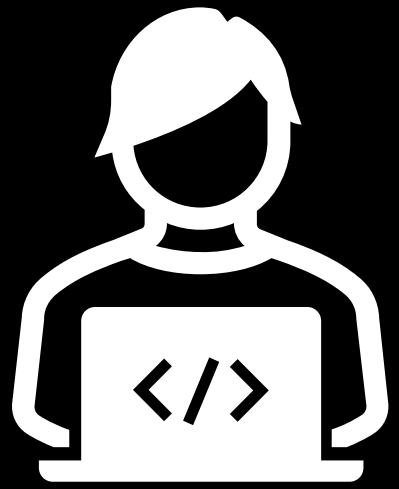
ARBEIDSKRAV

- Gjennomfør 2/2 quizer
- Gjennomfør 3/3 presentasjoner med god innsats
- Få minst 50% poeng på labene

Ved uforskyldte forhold som sykdom, heimevernsøvelse etc., søk om utsettelse eller fritak til Sasha.

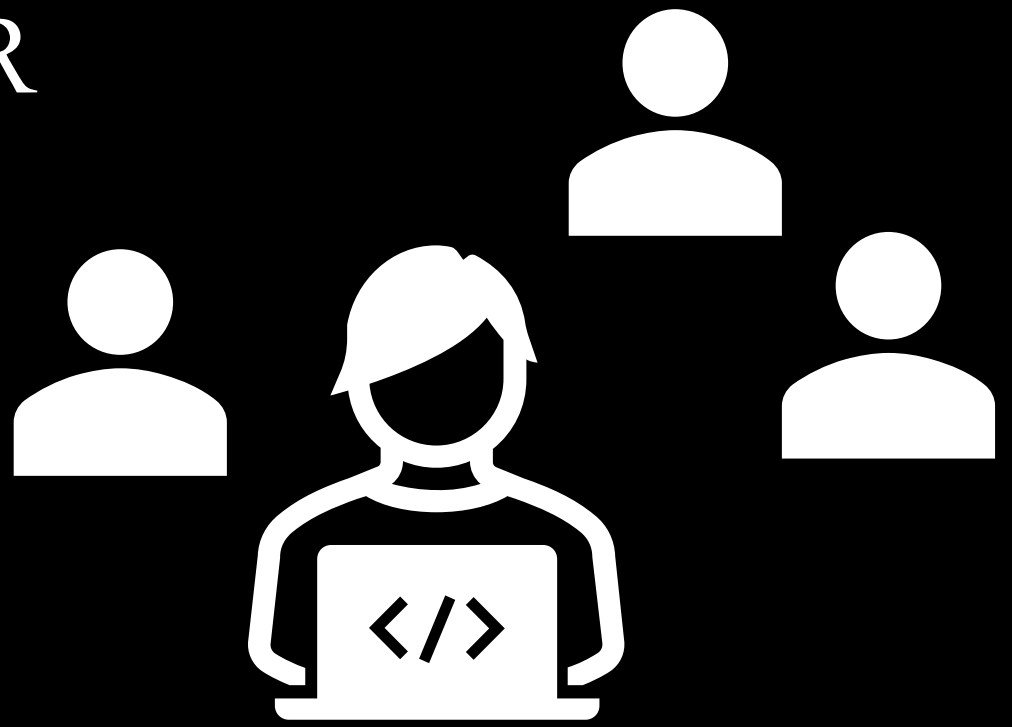
LAB

- 25 poeng per lab
- Beregnet til ca 8-10 arbeidstimer
- Frist: 2 uker



- Noen av labene inkluderer en oppgave basert på gruppeaktivitet. For å få disse poengene, må du møte i gruppen din

PRESENTASJONER

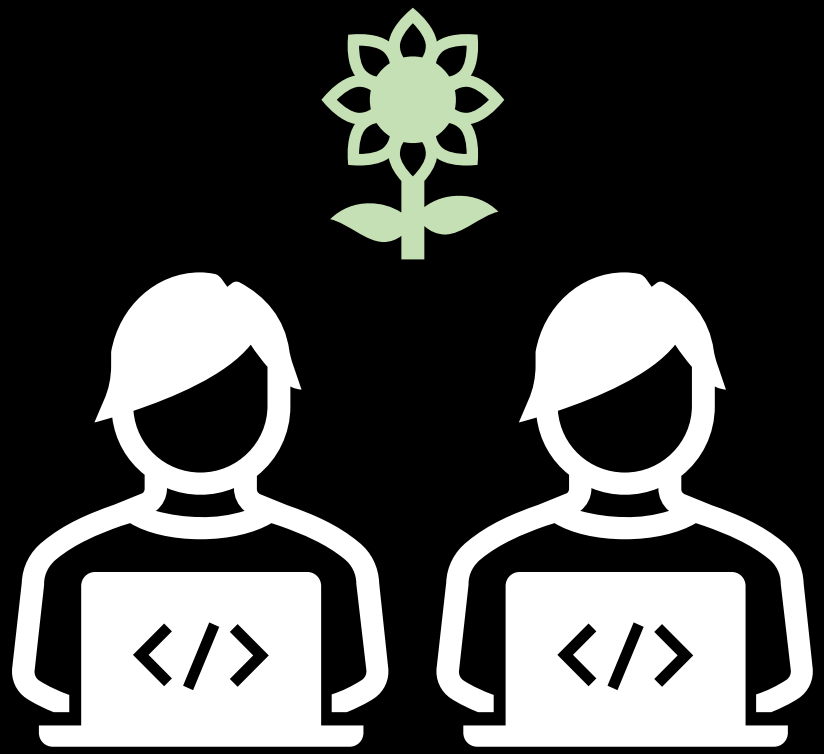


- Tre ganger i semesteret
- Publikum:
  din gruppeleder + ca 3 medstudenter
- Varighet:
  10 minutter presentasjon + spørsmål og diskusjon (x4)

VIKTIG!

MELD DEG INN I EN GRUPPE

SAMARBEID



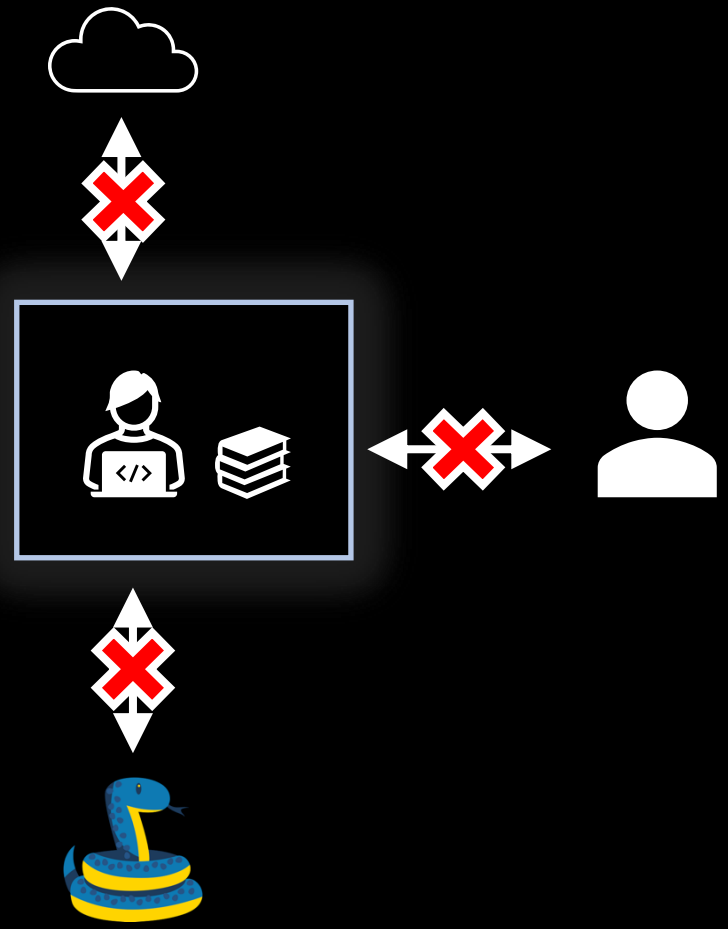
- Samarbeid er **bra**
- Innleveringer er **individuelle**
  - du må skrive og forstå alt selv

- **Viktig å sitere**
  - samarbeid
  - hjelp man mottar
  - kilder man benytter (inkludert KI)

husk **fullt navn** når du siterer

EKSAMEN

- Lukket digital eksamen
- Opp til 6 sider egne notater
- Viktig å sitere kilder



PLATTFORMER

mitt.uib.no
- Kunngjøringer
- Oppgaveinnlevering
- Strømming av forelesning
- Opptak av forelesning

inf100.ii.uib.no
- Kursnotater
- Oppgavetekster

CodeGrade
- Automatisk retting av lab'er
- Manuell feedback på lab'er
- Tilgang via mitt.uib.no

Discord
- Spørsmål og svar
- Tips og triks

Join: https://discord.gg/TnsdWsqC

SNARVEIPRØVE

- For deg som allerede kan programmere (men helt frivillig)
- Automatisk rettet
- Over 70% →
  - Alle presentasjoner regnes som bestått
  - Alle gruppeaktiviteter i alle lab'er regnes som bestått
  - Poeng for labX beregnes som `max(labX_score, lab8_score)`

- Mandag 2. februar kl 16:15 – 20:15
  - Fysisk oppmøte i RFB Aud 1
  - Tillatte hjelpemidler: enkel kalkulator, penn og papir
  - Ta med: student-id og egen laptop. Sjekk at Safe Exam Browser virker.

01010110011001010110110001101011011011110110110101101100101011011110

01010110011001010110110001101011011011110110110101101101011001010110110

01010110011001010110110001101011011011110110110101101101011001010101101110

Binary	Oct	Dec	Hex	Glyph		
				1963	1965	1967
010 0000	040	32	20	space (no visible glyph)		
010 0001	041	33	21	!		
010 0010	042	34	22	"		
010 0011	043	35	23	#		
010 0100	044	36	24	$		
010 0101	045	37	25	%		
010 0110	046	38	26	&		
010 0111	047	39	27	'		
010 1000	050	40	28	(		
010 1001	051	41	29	)		
010 1010	052	42	2A	*		
010 1011	053	43	2B	+		
010 1100	054	44	2C	,		
010 1101	055	45	2D	-		
010 1110	056	46	2E	.		
010 1111	057	47	2F	/		

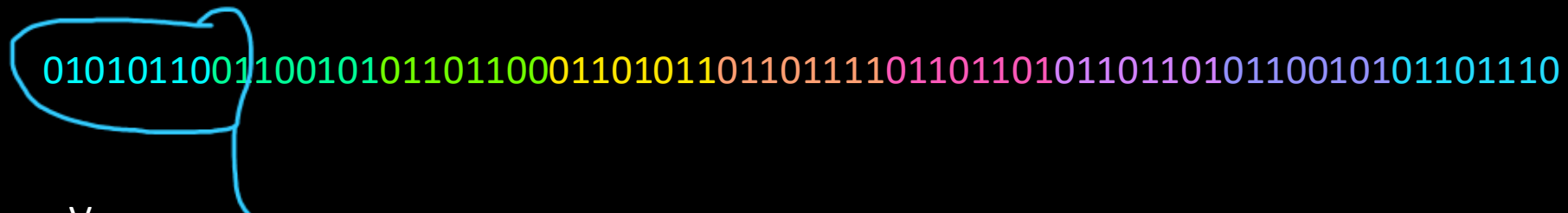
011 0000	060	48	30	0
011 0001	061	49	31	1
011 0010	062	50	32	2
011 0011	063	51	33	3
011 0100	064	52	34	4
011 0101	065	53	35	5
011 0110	066	54	36	6
011 0111	067	55	37	7
011 1000	070	56	38	8
011 1001	071	57	39	9
011 1010	072	58	3A	:
011 1011	073	59	3B	;
011 1100	074	60	3C	<
011 1101	075	61	3D	=
011 1110	076	62	3E	>
011 1111	077	63	3F	?
100 0000	100	64	40	@ ` @

100 0001	101	65	41	A
100 0010	102	66	42	B
100 0011	103	67	43	C
100 0100	104	68	44	D
100 0101	105	69	45	E
100 0110	106	70	46	F
100 0111	107	71	47	G
100 1000	110	72	48	H
100 1001	111	73	49	I
100 1010	112	74	4A	J
100 1011	113	75	4B	K
100 1100	114	76	4C	L
100 1101	115	77	4D	M
100 1110	116	78	4E	N
100 1111	117	79	4F	O
101 0000	120	80	50	P
101 0001	121	81	51	Q
101 0010	122	82	52	R

101 0011	123	83	53	S
101 0100	124	84	54	T
101 0101	125	85	55	U
101 0110	126	86	56	V
101 0111	127	87	57	W
101 1000	130	88	58	X
101 1001	131	89	59	Y
101 1010	132	90	5A	Z
101 1011	133	91	5B	[
101 1100	134	92	5C	\ ~ \
101 1101	135	93	5D	]
101 1110	136	94	5E	↑ ^
101 1111	137	95	5F	← _
110 0000	140	96	60	@ `
110 0001	141	97	61	a
110 0010	142	98	62	b
110 0011	143	99	63	c
110 0100	144	100	64	d
110 0101	145	101	65	e

110 0110	146	102	66	f
110 0111	147	103	67	g
110 1000	150	104	68	h
110 1001	151	105	69	i
110 1010	152	106	6A	j
110 1011	153	107	6B	k
110 1100	154	108	6C	l
110 1101	155	109	6D	m
110 1110	156	110	6E	n
110 1111	157	111	6F	o
111 0000	160	112	70	p
111 0001	161	113	71	q
111 0010	162	114	72	r
111 0011	163	115	73	s
111 0100	164	116	74	t
111 0101	165	117	75	u
111 0110	166	118	76	v
111 0111	167	119	77	w
111 1000	170	120	78	x
111 1001	171	121	79	y
111 1010	172	122	7A	z
111 1011	173	123	7B	{

UTF-8



V

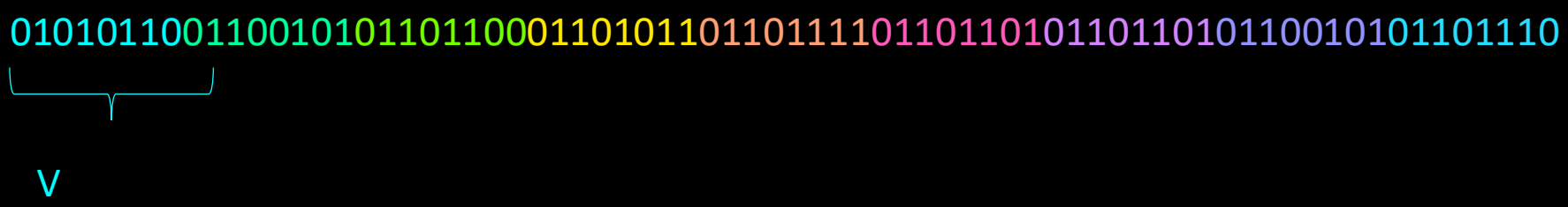
Binary	Oct	Dec	Hex	Glyph 1963	Glyph 1965	Glyph 1967
010 0000	040	32	20	space (no visible glyph)		
010 0001	041	33	21	!		
010 0010	042	34	22	"		
010 0011	043	35	23	#		
010 0100	044	36	24	$		
010 0101	045	37	25	%		
010 0110	046	38	26	&		
010 0111	047	39	27	'		
010 1000	050	40	28	(		
010 1001	051	41	29	)		
010 1010	052	42	2A	*		
010 1011	053	43	2B	+		
010 1100	054	44	2C	,		
010 1101	055	45	2D	-		
010 1110	056	46	2E	.		
010 1111	057	47	2F	/		

011 0000	060	48	30	0
011 0001	061	49	31	1
011 0010	062	50	32	2
011 0011	063	51	33	3
011 0100	064	52	34	4
011 0101	065	53	35	5
011 0110	066	54	36	6
011 0111	067	55	37	7
011 1000	070	56	38	8
011 1001	071	57	39	9
011 1010	072	58	3A	:
011 1011	073	59	3B	;
011 1100	074	60	3C	<
011 1101	075	61	3D	=
011 1110	076	62	3E	>
011 1111	077	63	3F	?
100 0000	100	64	40	@ ` @

100 0001	101	65	41	A
100 0010	102	66	42	B
100 0011	103	67	43	C
100 0100	104	68	44	D
100 0101	105	69	45	E
100 0110	106	70	46	F
100 0111	107	71	47	G
100 1000	110	72	48	H
100 1001	111	73	49	I
100 1010	112	74	4A	J
100 1011	113	75	4B	K
100 1100	114	76	4C	L
100 1101	115	77	4D	M
100 1110	116	78	4E	N
100 1111	117	79	4F	O
101 0000	120	80	50	P
101 0001	121	81	51	Q
101 0010	122	82	52	R

101 0011	123	83	53	S
101 0101	125	85	55	U
101 0110	126	86	56	V
101 0111	127	87	57	W
101 1010	132	90	5A	Z
101 1011	133	91	5B	[
101 1100	134	92	5C	\ ~ \
101 1101	135	93	5D	]
101 1110	136	94	5E	↑ ^
101 1111	137	95	5F	← _
110 0000	140	96	60	@ `
110 0001	141	97	61	a
110 0010	142	98	62	b
110 0011	143	99	63	c
110 0100	144	100	64	d
110 0101	145	101	65	e

110 0110	146	102	66	f
110 0111	147	103	67	g
110 1000	150	104	68	h
	151	105	69	i
	152	106	6A	j
	153	107	6B	k
	154	108	6C	l
	155	109	6D	m
	156	110	6E	n
110 1111	157	111	6F	o
111 0000	160	112	70	p
111 0001	161	113	71	q
111 0010	162	114	72	r
111 0011	163	115	73	s
111 0100	164	116	74	t
111 0101	165	117	75	u
111 0110	166	118	76	v
111 0111	167	119	77	w
111 1000	170	120	78	x
111 1001	171	121	79	y
111 1010	172	122	7A	z
111 1011	173	123	7B	{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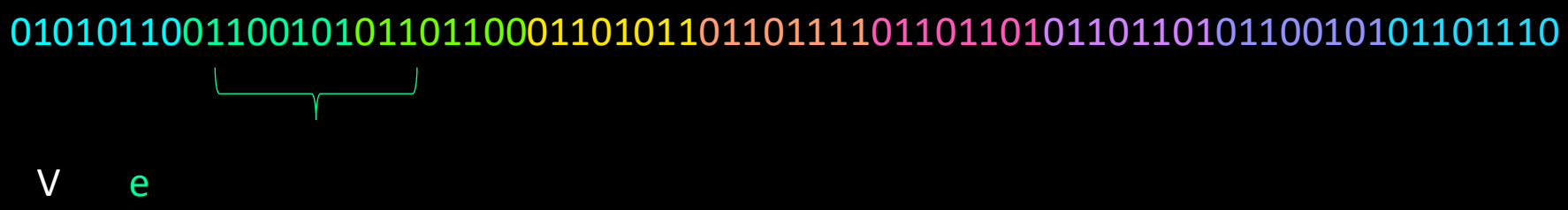
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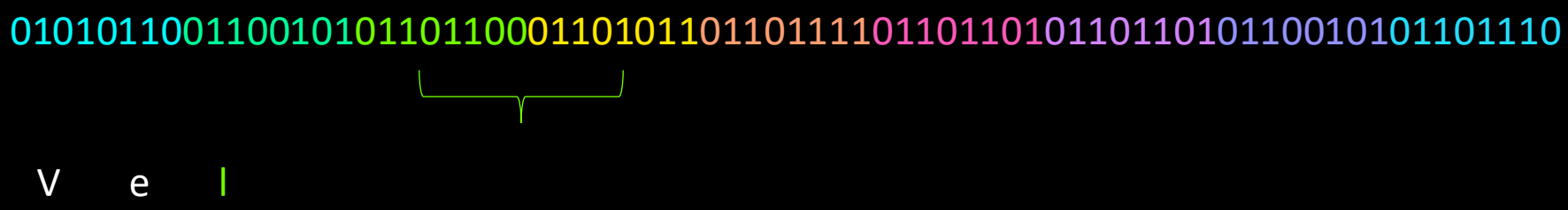
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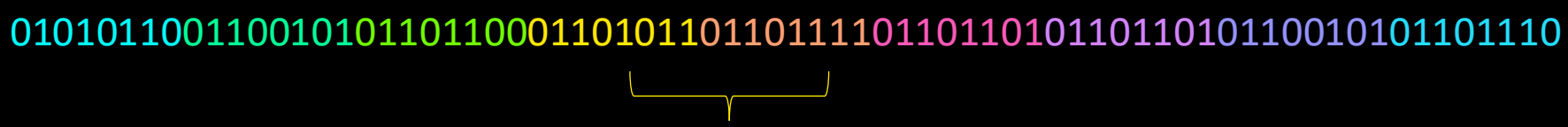
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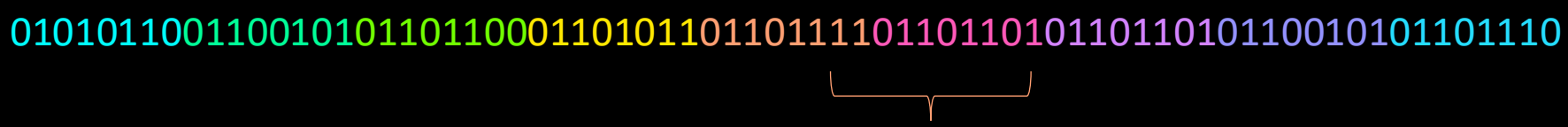
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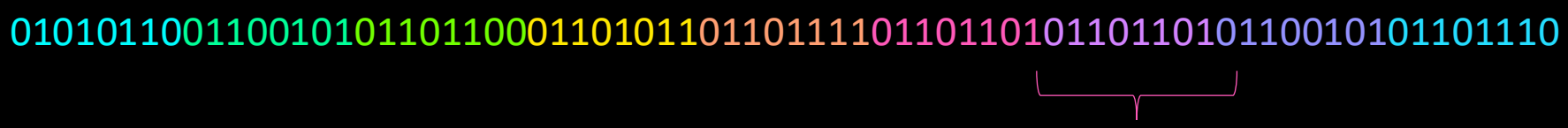
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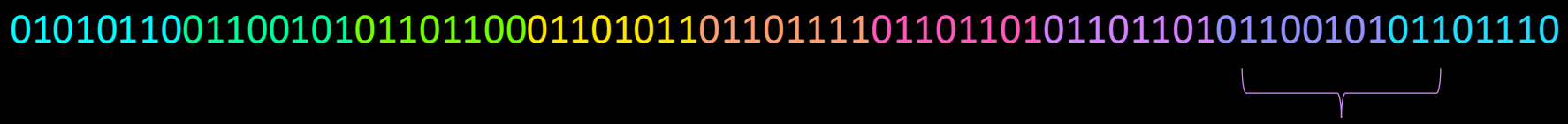
V e l k o m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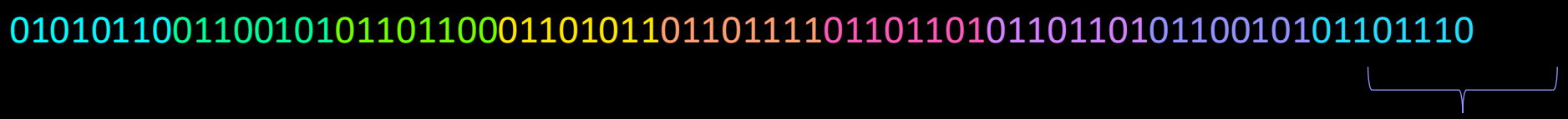
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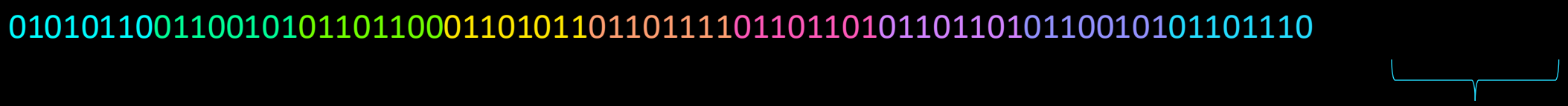
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V e l k o m m e n

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V e l k o m m e n

01110100011010001011011 00

t i l

110 1000	150	104	68		h
110 1001	151	105	69		i
110 1010	152	106	6A		j
110 1011	153	107	6B		k
110 1100	154	108	6C		l
110 1101	155	109	6D		m
110 1110	156	110	6E		n
110 1111	157	111	6F		o
111 0000	160	112	70		p
111 0001	161	113	71		q
111 0010	162	114	72		r
111 0011	163	115	73		s
111 0100	164	116	74		t
111 0101	165	117	75		u
111 0110	166	118	76		v

01010110011001010110110001101011011011110110110101101101011001010110 1110

V e l k o m m e n

01110100011010001011011 00

t i l

100 0101	105	69	45	E
100 0110	106	70	46	F
100 0111	107	71	47	G
100 1000	110	72	48	H
100 1001	111	73	49	I
100 1010	112	74	4A	J
100 1011	113	75	4B	K
100 1100	114	76	4C	L
100 1101	115	77	4D	M
100 1110	116	78	4E	N

011 0000	060	48	30	0
011 0001	061	49	31	1
011 0010	062	50	32	2
011 0011	063	51	33	3
011 0100	064	52	34	4
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011 1000	070	56	38	8
011 1001	071	57	39	9
011 1010	072	58	3A	:
011 1011	073	59	3B	;
011 1100	074	60	3C	<
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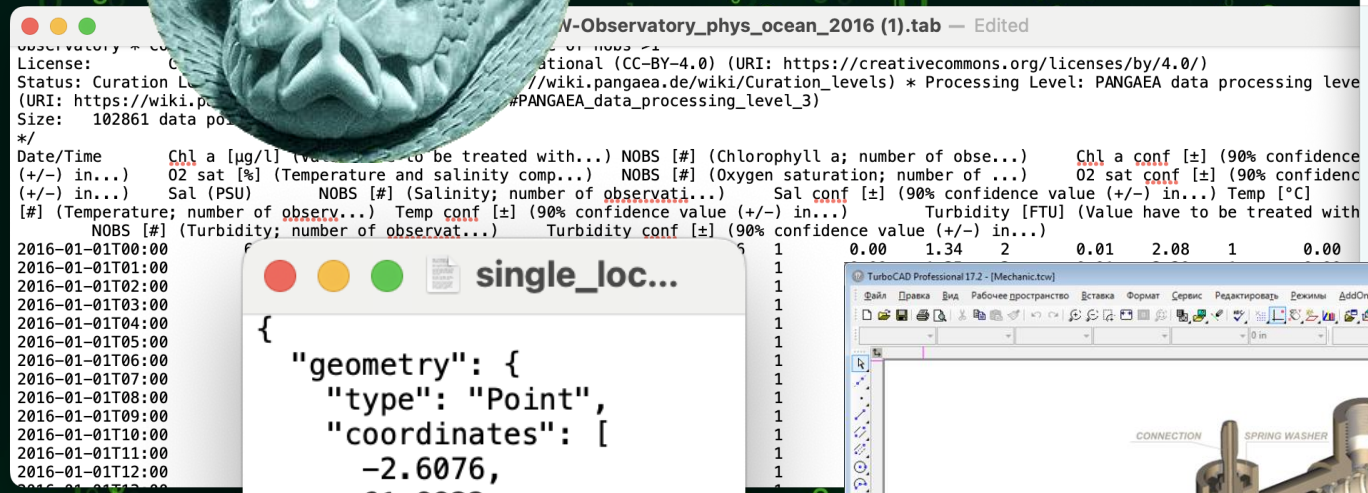
I N F 1 0 0

Hva er data?

Hva er programmering?

HVA ER DATA?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License: ational (CC-BY-4.0) (URI: https://creativecommons.org/licenses/by/4.0/)
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(URI: https://wiki.p #PANGAEA_data_processing_level_3)
Size: 102861 data po
*/
Date/Time Chl a [µg/l] (V to be treated with...) NOBS [#] (Chlorophyll a; number of obse...) Chl a conf [±] (90% confidence
(+/-) in...) O2 sat [%] (Temperature and salinity comp...) NOBS [#] (Oxygen saturation; number of ...) O2 sat conf [±] (90% confidenc
(+/-) in...) Sal (PSU) NOBS [#] (Salinity; number of observati...) Sal conf [±] (90% confidence value (+/-) in...) Temp [°C]
[#] (Temperature; number of observ...) Temp conf [±] (90% confidence value (+/-) in...) Turbidity [FTU] (Value have to be treated with
NOBS [#] (Turbidity; number of observat...) Turbidity conf [±] (90% confidence value (+/-) in...)
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2016-01-01T01:00 1
2016-01-01T02:00 1
2016-01-01T03:00 1
2016-01-01T04:00 1
2016-01-01T05:00 1
2016-01-01T06:00 1
2016-01-01T07:00 1
2016-01-01T08:00 1
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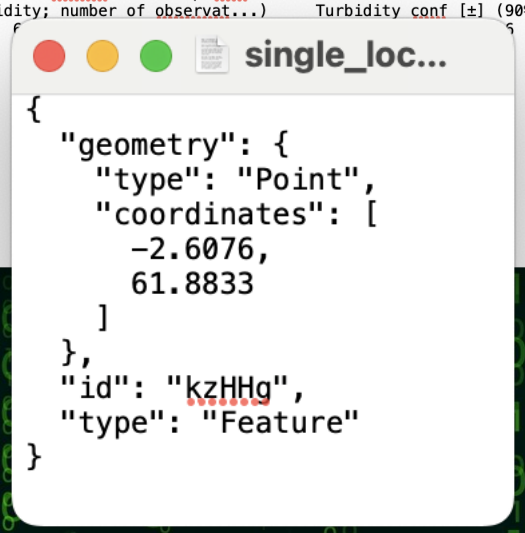
2016-01-01T11:00 1
2016-01-01T12:00 1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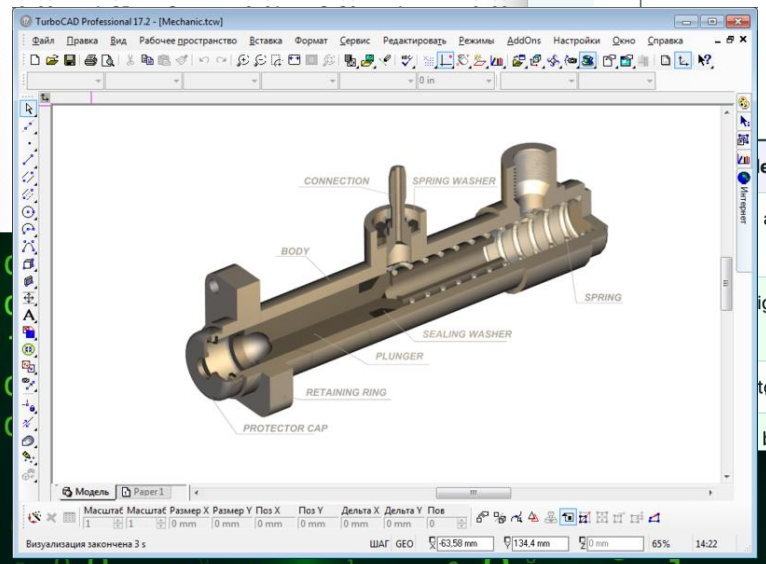
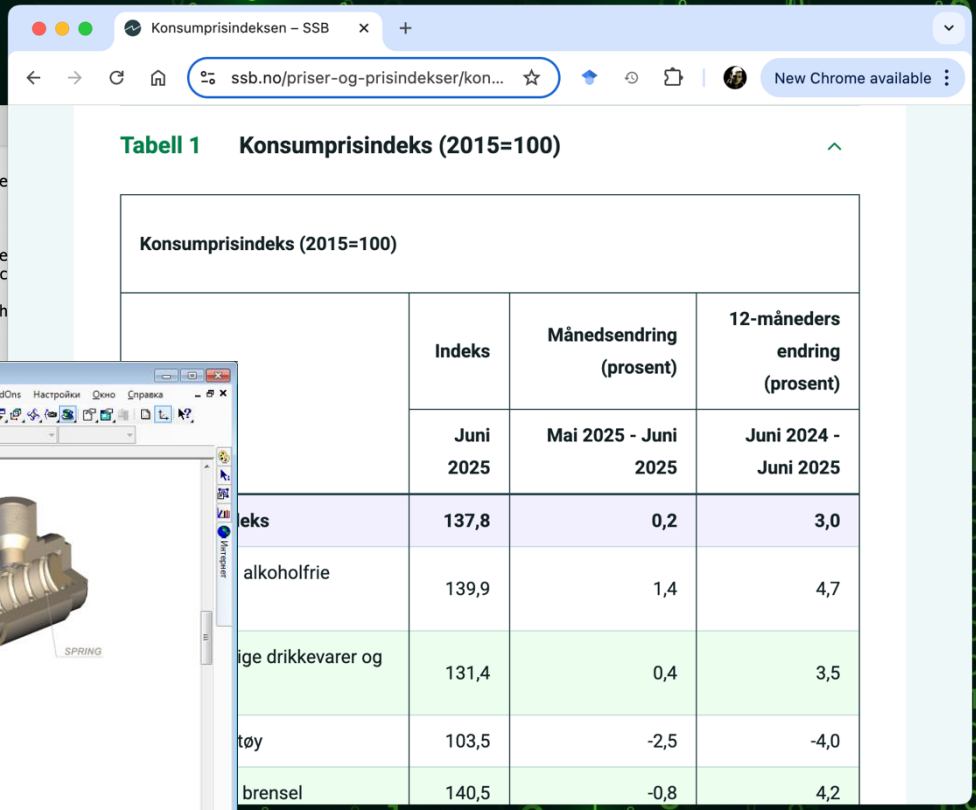
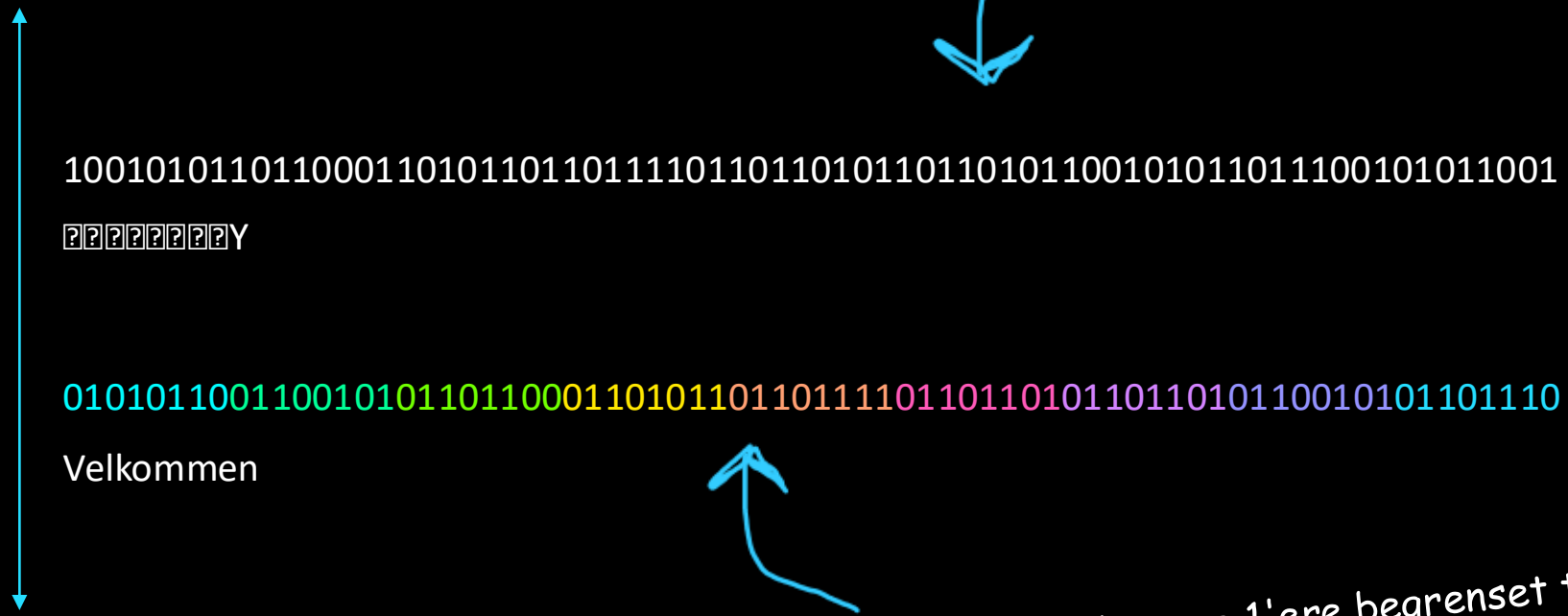
"type": "Feature"
}


TurboCAD Professional 17.2 - [Mechanic.tcw]
CONNECTION
SPRING WASHER
BODY
SPRING
SEALING WASHER
PLUNGER
RETAINING RING
PROTECTOR CAP


Konsumprisindeksen – SSB
ssb.no/priser-og-prisindekser/kon...
New Chrome available
Tabell 1 Konsumprisindeks (2015=100)
Konsumprisindeks (2015=100)
Indeks
Månedsendring (prosent)
12-måneders endring (prosent)
Juni 2025
Mai 2025 - Juni 2025
Juni 2024 - Juni 2025
eks 137,8 0,2 3,0
alkoholfrie 139,9 1,4 4,7
ige drikkevarer og 131,4 0,4 3,5
tøy 103,5 -2,5 -4,0
brensel 140,5 -0,8 4,2

Data med lite struktur

En hvilken som helst sekvens av 0'ere og 1'ere



En sekvens med 0'ere og 1'ere begrenset til å kunne tolkes med UTF-8

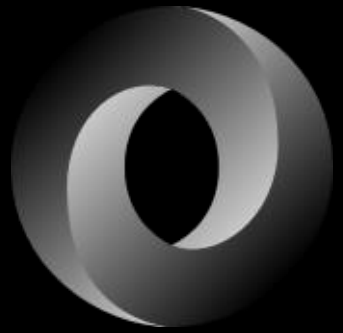
Data med mye struktur

Marielle er ni år og 138cm høy.
Den andre jente heter Hege. Hun er 7 år og er 1 m og 20 cm høy. Tina er 60 cm lang og 3 måneder gammel.

```
[
  {
    "name": "Marielle",
    "age": 9,
    "height": 138
  },
  {
    "name": "Hege",
    "age": 7,
    "height": 120
  },
  {
    "name": "Tina",
    "age": 0.25,
    "height": 60
  }
]
```

data med lite struktur ⟷ data med mye struktur

JSON



Oppgave (avgi svar på mitt.uib.no):

Familien adopterer en ny jente:
Sigrid på 5 år, som er 98 cm.

Endre på filen slik at Sigrid også er med.


```
[
  {
    "name": "Marielle",
    "age": 9,
    "height": 138
  },
  {
    "name": "Hege",
    "age": 7,
    "height": 120
  },
  {
    "name": "Tina",
    "age": 0.25,
    "height": 60
  }
]
```

DATATYPER

int

```
[
  {
    "name": "Marielle",
    "age": 9,
    "height": 138
  },
  {
    "name": "Hege",
    "age": 7,
    "height": 120
  },
  {
    "name": "Tina",
    "age": 0.25,
    "height": 60
  }
]
```

DATATYPER

int

float

```
[
  {
    "name": "Marielle",
    "age": 9,
    "height": 138
  },
  {
    "name": "Hege",
    "age": 7,
    "height": 120
  },
  {
    "name": "Tina",
    "age": 0.25,
    "height": 60
  }
]
```

DATATYPER

int

float

str

```
[
 {
  "name": "Marielle",
  "age": 9,
  "height": 138
 },
 {
  "name": "Hege",
  "age": 7,
  "height": 120
 },
 {
  "name": "Tina",
  "age": 0.25,
  "height": 60
 }
]
```

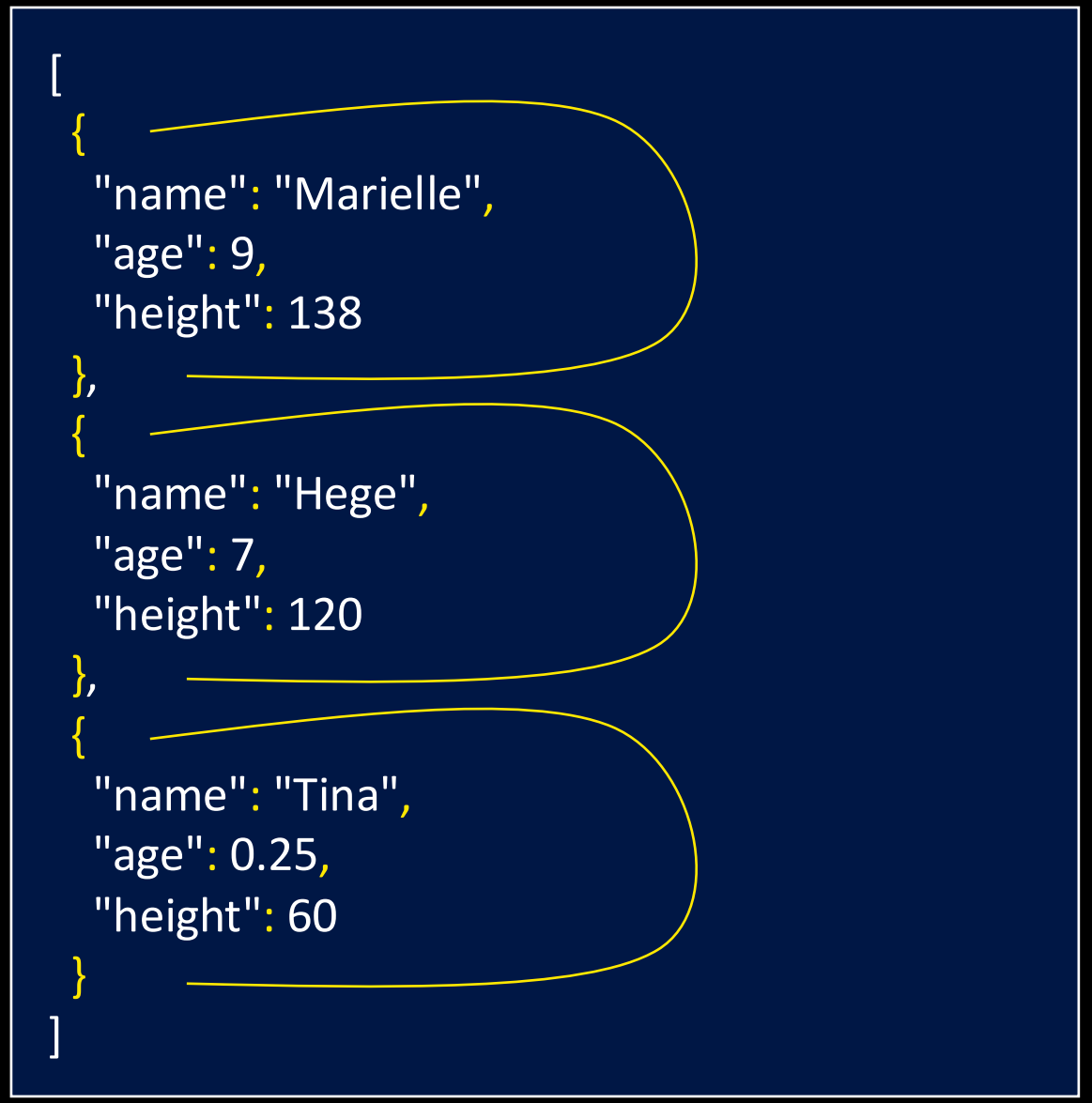
DATATYPER

int

float

str

dict



DATATYPER

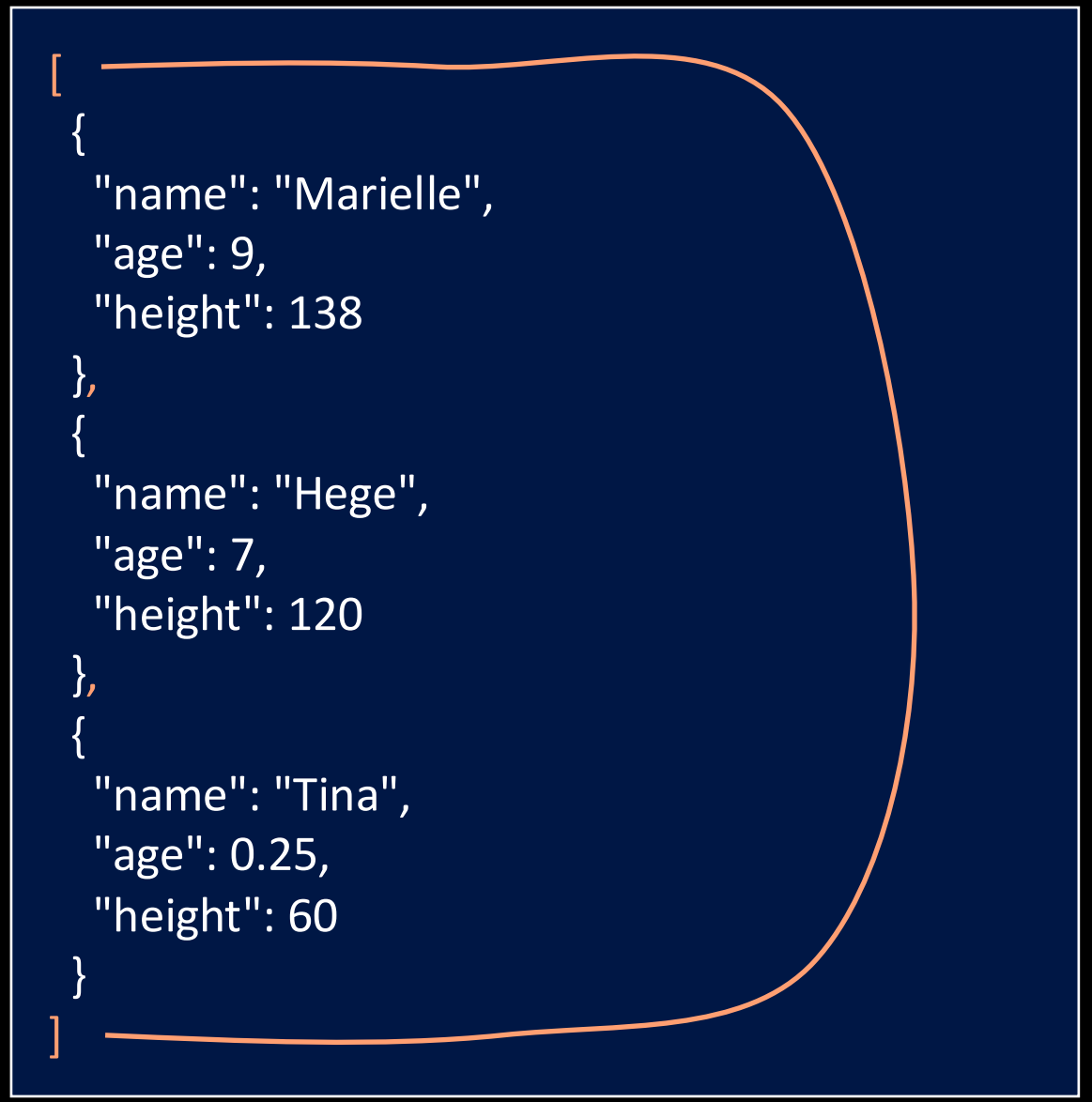
int

float

str

dict

list



DATATYPER

int 42

float 1.5

str "....."

dict { ...: ..., ...: ... }

list [..., ..., ...]


```
[
 {
  "name": "Marielle",
  "age": 9,
  "height": 138
 },
 {
  "name": "Hege",
  "age": 7,
  "height": 120
 },
 {
  "name": "Tina",
  "age": 0.25,
  "height": 60
 }
]
```

Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

int 42

float 1.5

str "....."

dict { ...: ..., ...: ... }

list [..., ..., ...]


```
[
 {
  "name": "Marielle",
  "age": 9,
  "height": 138
 },
 {
  "name": "Hege",
  "age": 7,
  "height": 120
 },
 {
  "name": "Tina",
  "age": 0.25,
  "height": 60
 }
]
```

Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

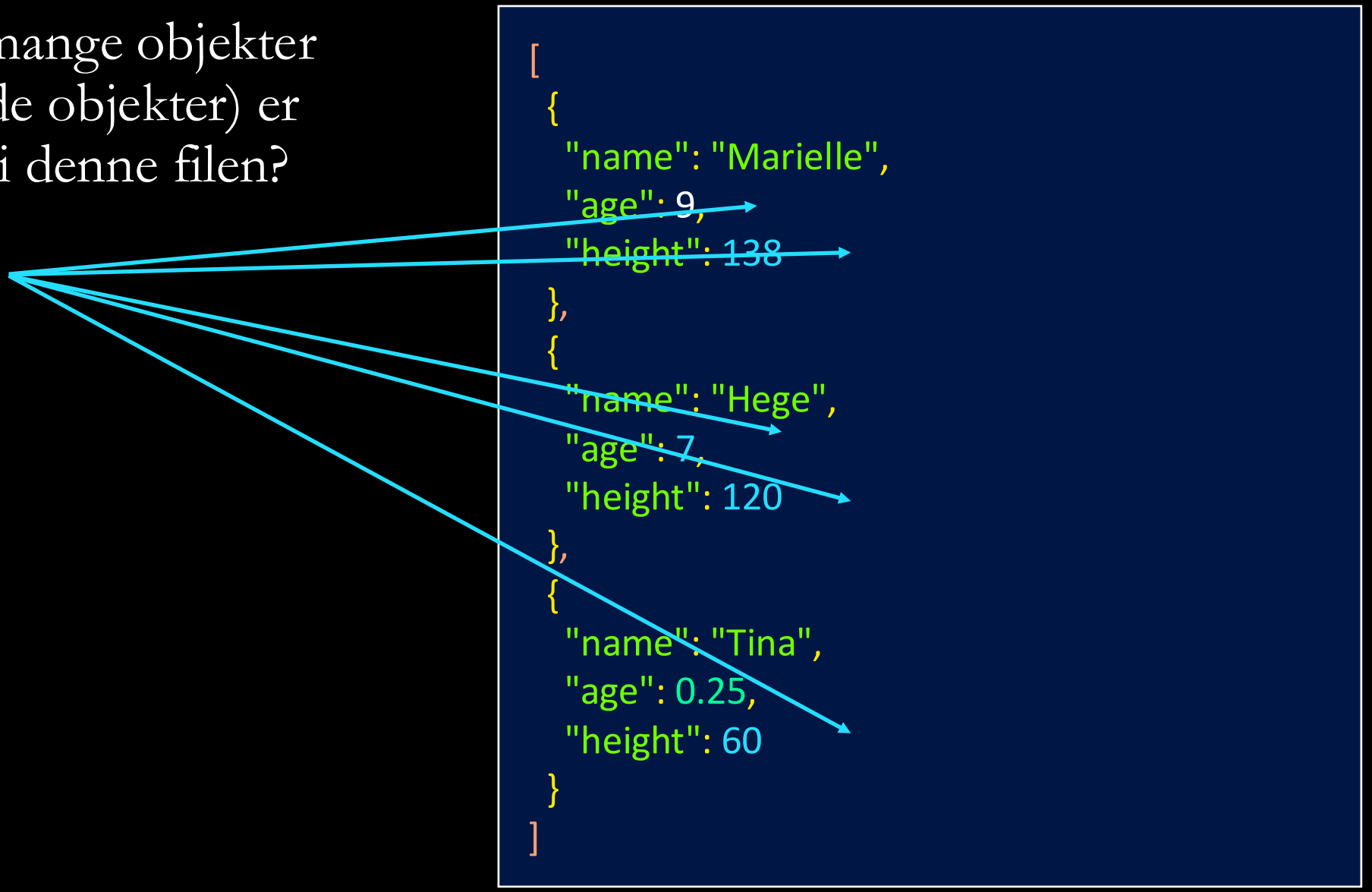
int 5

float

str

dict

list



Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

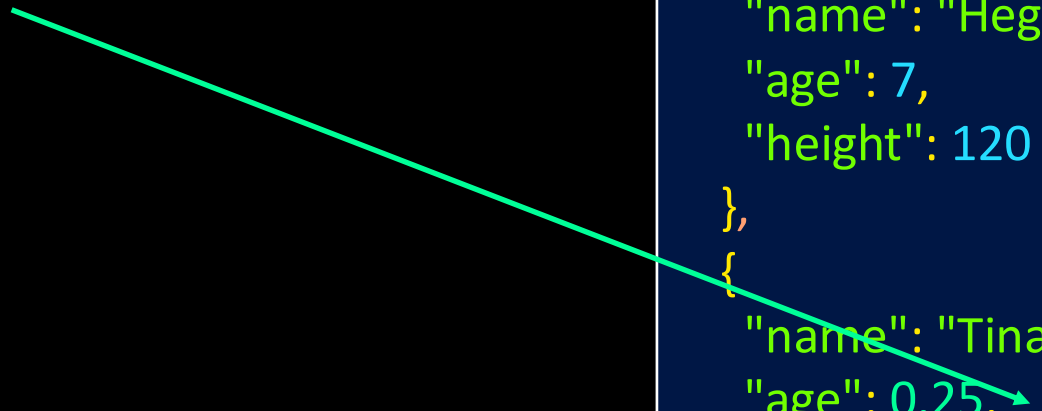
int 5

float 1

str

dict

list



```
[
 {
  "name": "Marielle",
  "age": 9,
  "height": 138
 },
 {
  "name": "Hege",
  "age": 7,
  "height": 120
 },
 {
  "name": "Tina",
  "age": 0.25,
  "height": 60
 }
]
```

Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

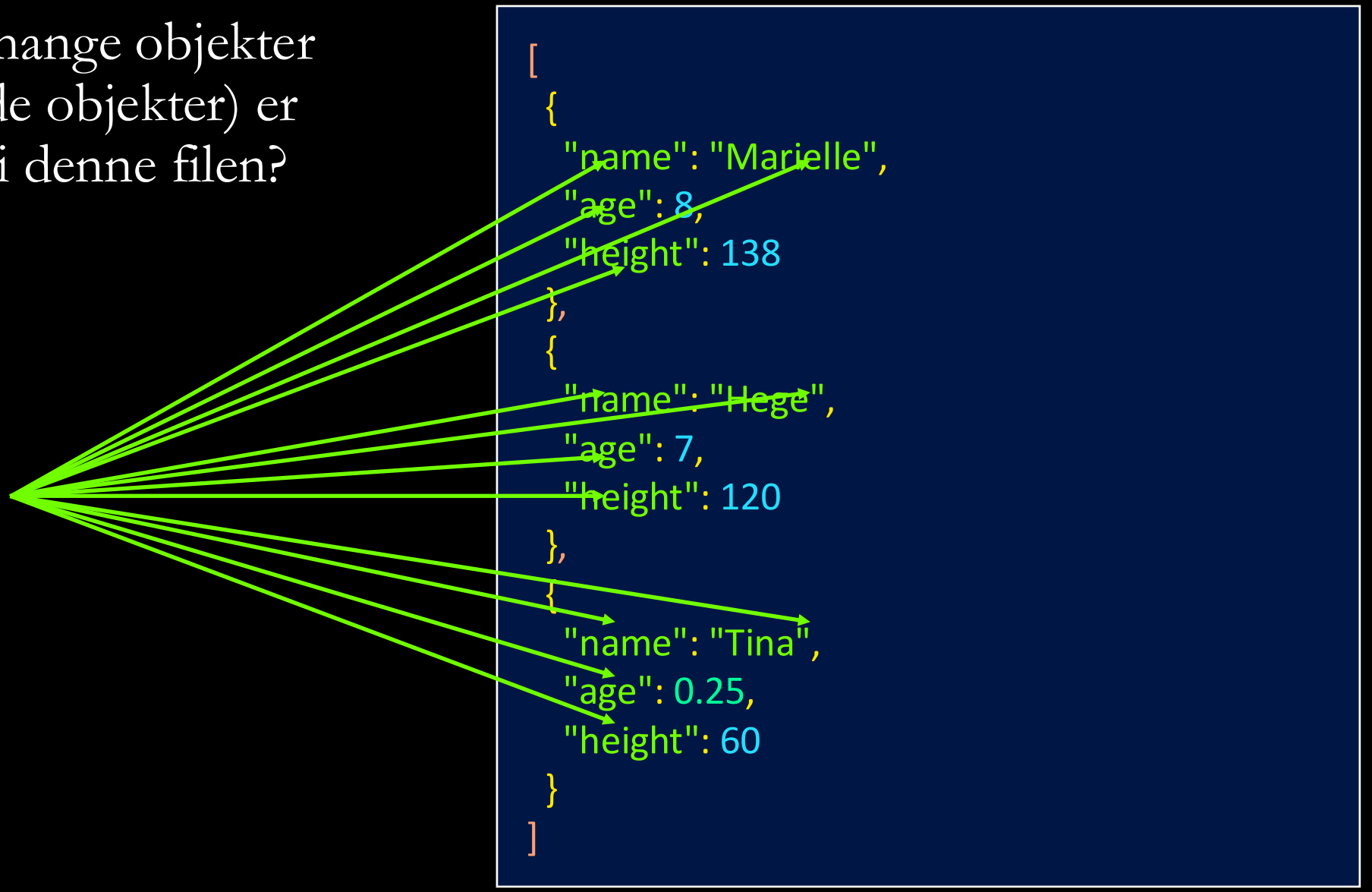
int 5

float 1

str 12

dict

list



Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

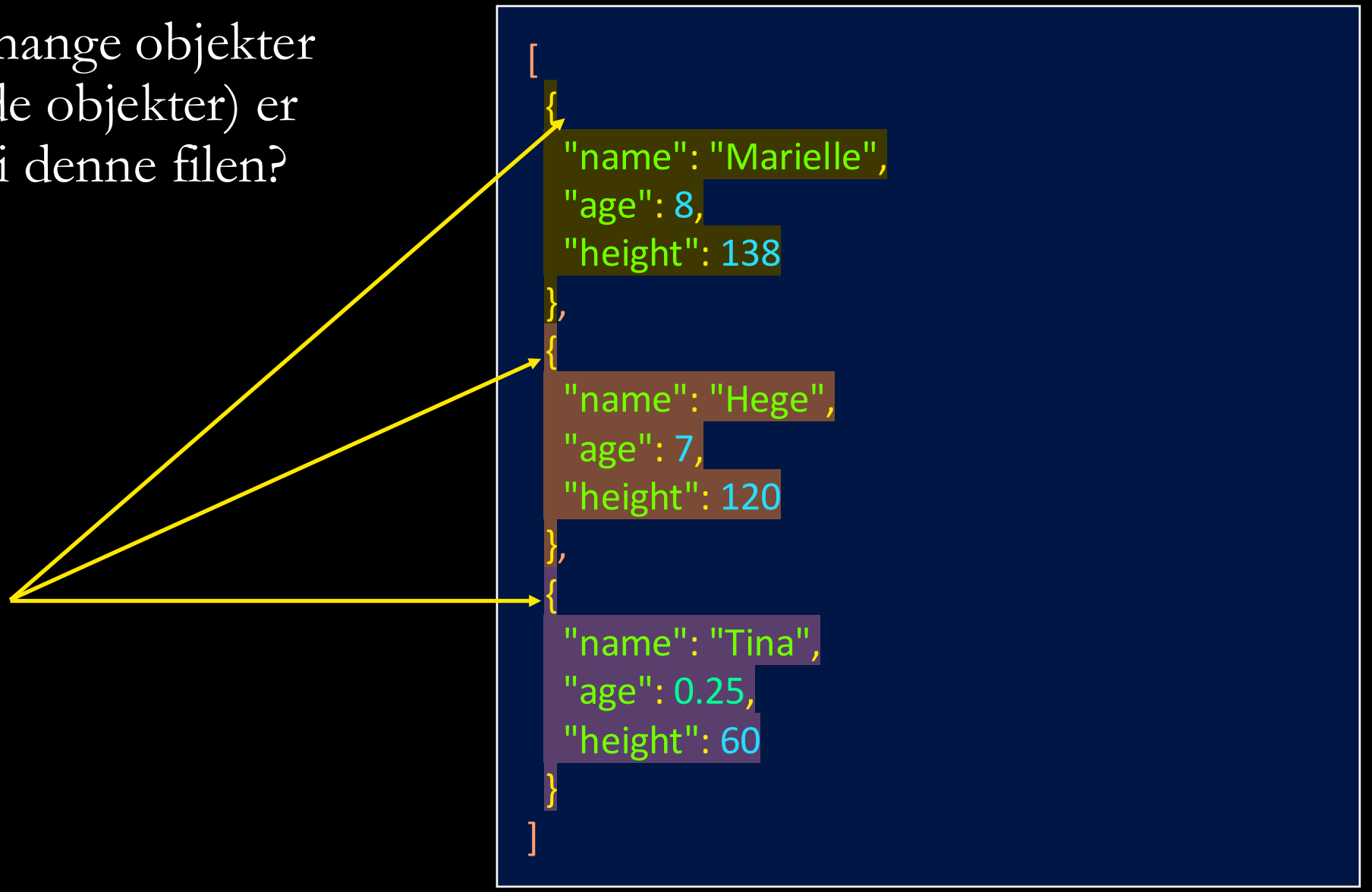
int 5

float 1

str 12

dict 3

list



Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

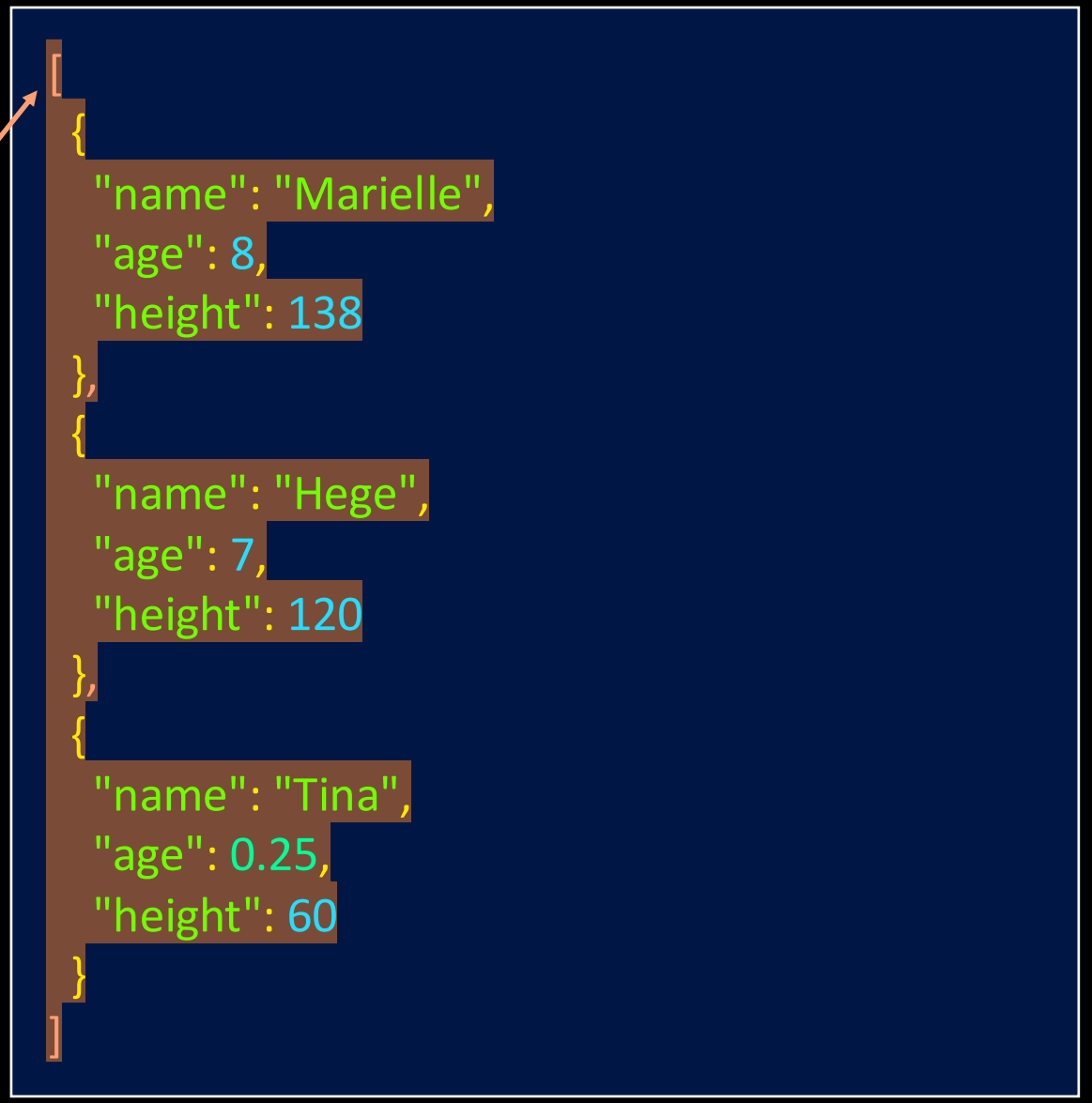
int 5

float 1

str 12

dict 3

list 1



```
[
  {
    "name": "Marielle",
    "age": 8,
    "height": 138
  },
  {
    "name": "Hege",
    "age": 7,
    "height": 120
  },
  {
    "name": "Tina",
    "age": 0.25,
    "height": 60
  }
]
```

Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

int 42

float 1.5

str "....."

dict { ...: ..., ...: ... }

list [..., ..., ...]


```
{
 "type": "FeatureCollection",
 "features": [
  {
   "id": 42,
   "type": "Feature",
   "properties": {
    "Name": "Gruppetimer"
   },
   "geometry": {
    "coordinates": [
     5.32938628135696,
     60.38151104034819
    ],
    "type": "Point"
   }
  }
 ]
}
```

Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

int 42

float 1.5

str "....."

dict { ...: ..., ...: ... }

list [..., ..., ...]


```
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 "type": "FeatureCollection",
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Oppgave: hvor mange objekter (inkludert nøstede objekter) er det av hver type i denne filen?

int

float

str

dict

list


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{
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     5.32938628135696,
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float

str

dict

list


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{
 "type": "FeatureCollection",
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   "id": 42,
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    "Name": "Gruppetimer"
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    "coordinates": [
     5.32938628135696,
     60.38151104034819
    ],
    "type": "Point"
   }
  }
 ]
}
```
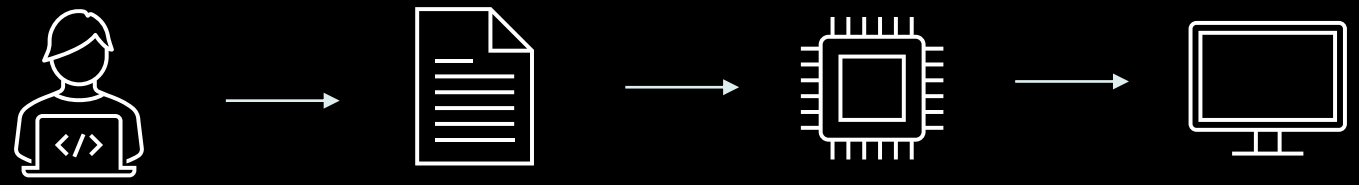

HVA ER PROGRAMMERING?



```python
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {total_earnings}')
```

Variabler	Verdier

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {total_earnings}')
```

Variabler	Verdier
	200

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
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```
# Input
hourly_wage = 200
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# Output
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```

Variabler	Verdier
hourly_wage	200

```
# Input
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Variabler	Verdier
hourly_wage	200
	7.5

```
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Variabler	Verdier
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daily_hours	7.5

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hourly_wage	200
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# Input
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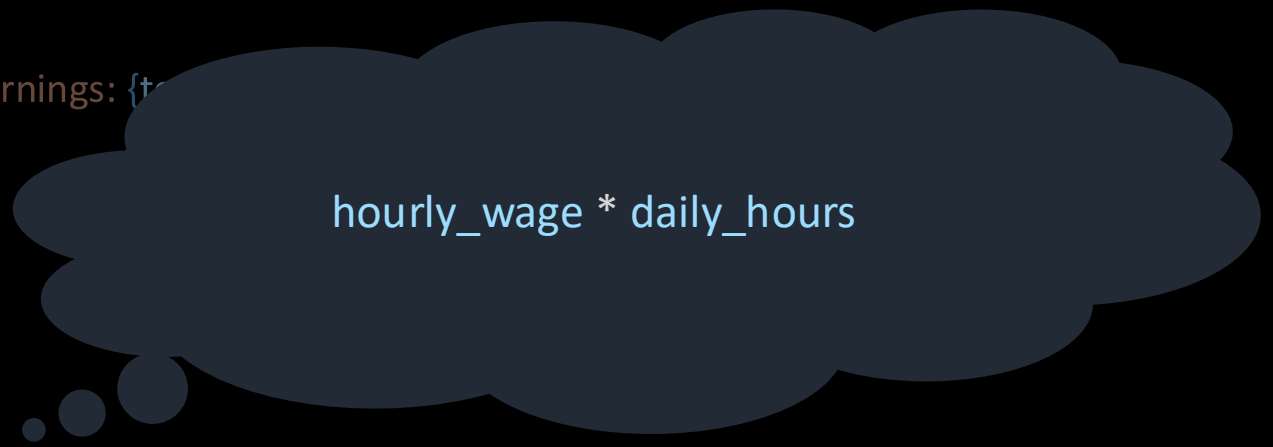
# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {t
```



Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {t
```

200 * daily_hours

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {t
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```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {t
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20

```
# Input
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daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {total_earnings}')
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20
	1500.0

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {total_earnings}')
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20
daily_earnings	1500.0

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {total_earnings}')
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20
daily_earnings	1500.0

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {to
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20
daily_earnings	1500.0

daily_earnings * days_worked

```
# Input
hourly_wage = 200
daily_hours = 7.5
days_worked = 20

# Calculation
daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

# Output
print(f'Total earnings: {to
```

Variabler	Verdier
hourly_wage	200
daily_hours	7.5
days_worked	20
daily_earnings	1500.0

1500.0 * days_worked

```
# Input
hourly_wage = 200
daily_hours = 7.5
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print(f'Total earnings: {total_earnings}')
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Variabler	Verdier
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daily_hours	7.5
days_worked	20
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	30000.0

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→

Variabler	Verdier
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days_worked	20
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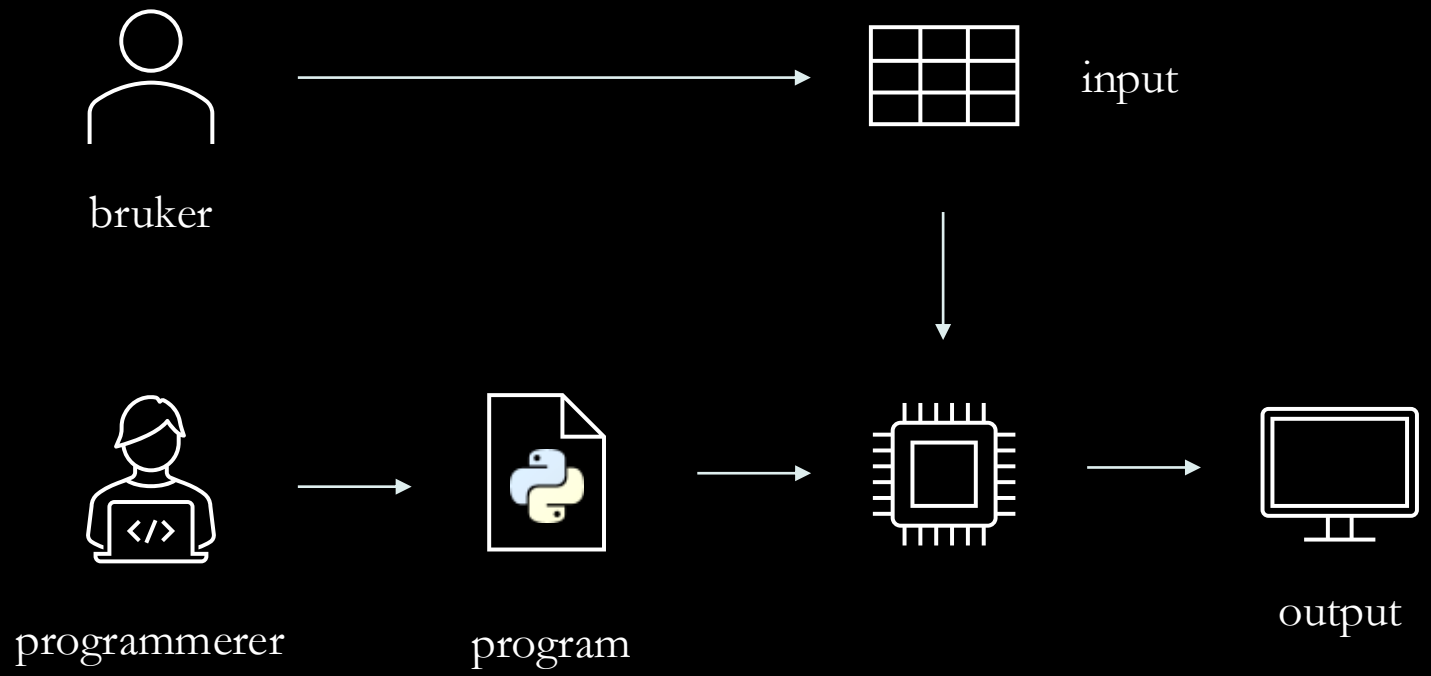
input
bruker
programmerer
program
output

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daily_hours = 7.5
days_worked = 20

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total_earnings = daily_earnings * days_worked

print(f'Total earnings: {total_earnings}')
```



```
print('Total earnings: 30000.0')
```

INPUT

Ulike måter å få input

- Brukeren kan endre på verdier i selve programmet 
- Programmet er interaktivt 
- Programmet leser input fra en fil eller fra internett 
- Argumenter på kommandolinjen når programmet starter

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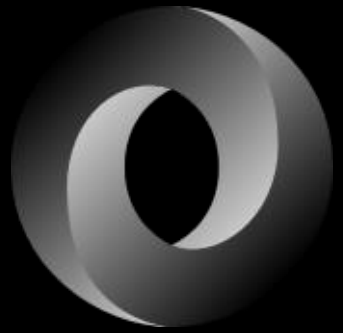
JSON



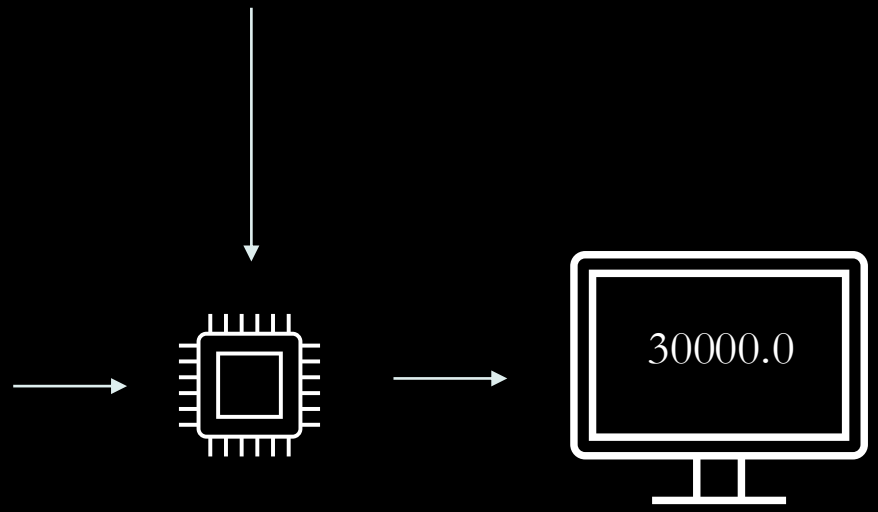
```
{
  "hourly_wage": 200,
  "daily_hours": 7.5,
  "days_worked": 20
}
```

total_earnings.py

```python
from pathlib import Path
import json

file_contents = (Path("data.json")
                 .read_text(encoding="utf-8"))
data = json.loads(file_contents)

hourly_wage = data["hourly_wage"]
daily_hours = data["daily_hours"]
days_worked = data["days_worked"]

daily_earnings = hourly_wage * daily_hours
total_earnings = daily_earnings * days_worked

print(f"Total earnings: {total_earnings}")
```

data.json

```json
{
  "hourly_wage": 200,
  "daily_hours": 7.5,
  "days_worked": 20
}
```



VIKTIG!

MELD DEG INN I EN GRUPPE