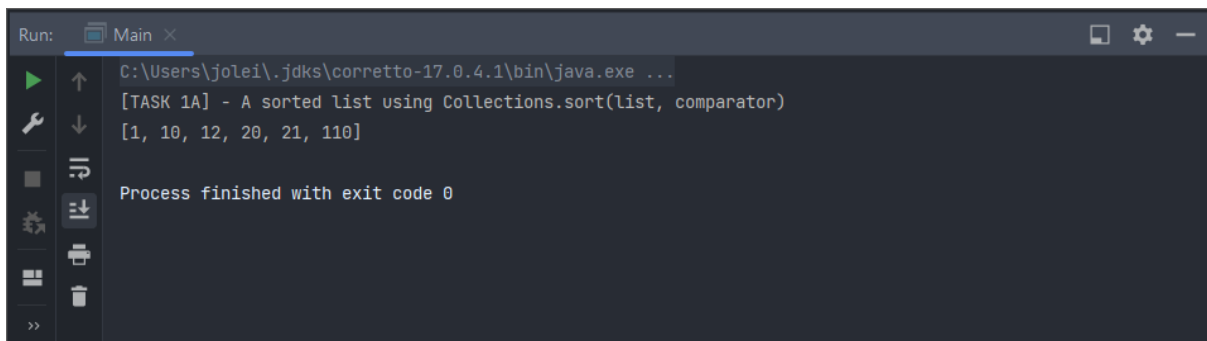


DAT108 Oblig 2  
Gruppe 14

Joachim Leiros  
Finn Arne Crowo Nielsen  
Sindre Holtan  
Preben Johannesen  
Olve Eid

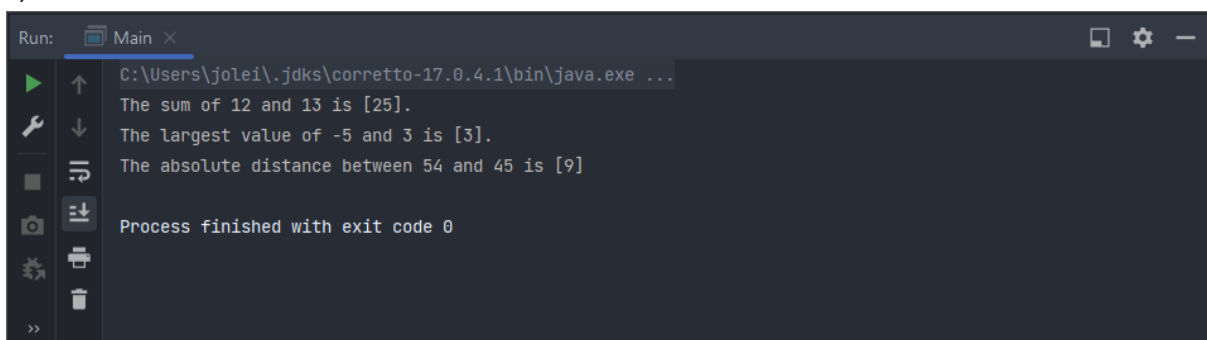
Oppgave 1

a)



```
Run: Main x
C:\Users\jolei\.jdk\corretto-17.0.4.1\bin\java.exe ...
[TASK 1A] - A sorted list using Collections.sort(list, comparator)
[1, 10, 12, 20, 21, 110]
Process finished with exit code 0
```

b)



```
Run: Main x
C:\Users\jolei\.jdk\corretto-17.0.4.1\bin\java.exe ...
The sum of 12 and 13 is [25].
The largest value of -5 and 3 is [3].
The absolute distance between 54 and 45 is [9]
Process finished with exit code 0
```

Oppgave 2

```
Run: Main x
C:\Users\jolei\jdk\corretto-17.0.4.1\bin\java.exe ...
[TASK 2] - The list of employees before any adjustments:
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1000000],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000],
Employee [Name = Ole, Lastname = Karlson, Gender = MALE, position = Sales, salary = 500000],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 700000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = Backend, salary = 500000],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 600000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]]
Increase all salaries by 50_000
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1050000],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 550000],
Employee [Name = Ole, Lastname = Karlson, Gender = MALE, position = Sales, salary = 550000],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 750000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = Backend, salary = 550000],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 650000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 550000]]
```

```
Run: Main x
Increase all salaries by 7%
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1123500],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 588500],
Employee [Name = Ole, Lastname = Karlson, Gender = MALE, position = Sales, salary = 588500],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 802500],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = Backend, salary = 588500],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 695500],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 588500]]

Increase salaries < 600_000 by INCREASED_LOW_SALARY
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1123500],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 618500],
Employee [Name = Ole, Lastname = Karlson, Gender = MALE, position = Sales, salary = 618500],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 802500],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = Backend, salary = 618500],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 695500],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 618500]]
```

```
Run: Main x
Increase salary by 15% if the employee is MALE
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1292025],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 618500],
Employee [Name = Ole, Lastname = Karlson, Gender = MALE, position = Sales, salary = 711275],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 922875],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = Backend, salary = 618500],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 695500],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 711275]]

Process finished with exit code 0
```

### Oppgave 3

```
Run: Main x
C:\Users\jolei\.jdk\corretto-17.0.4.1\bin\java.exe ...
[INITIAL LIST] -
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1000000],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000],
Employee [Name = Ole, Lastname = Karlsen, Gender = MALE, position = Sales, salary = 500000],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 700000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = BackEnd, salary = 500000],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 600000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]]

[TASK A] - The list consisting of only lastnames is:
[Aanstad, Aarsen, Crowo, Hansen, Hansen, Karlsen, Nielsen]

[TASK B] - The number of FEMALE employees is 2

[TASK C] - The average salary for FEMALE employees is 550000

[TASK D] - The list of employees after [Boss] has received a 7 percent increase in salary:
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1070000],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000],
Employee [Name = Ole, Lastname = Karlsen, Gender = MALE, position = Sales, salary = 500000],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 700000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = BackEnd, salary = 500000],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 600000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]]
```

```
Run: Main x
[TASK E] - It is [true] that someone has a salary > 800.000

[TASK F] - Printed using a pre-created toString() method in the Employee-class
[
Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1070000],
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000],
Employee [Name = Ole, Lastname = Karlsen, Gender = MALE, position = Sales, salary = 500000],
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 700000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = BackEnd, salary = 500000],
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 600000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]]

[TASK F cont.] - Printed using a stream with a .forEach call

Employee [Name = Tom, Lastname = Hansen, Gender = MALE, position = Boss, salary = 1070000]
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000]
Employee [Name = Ole, Lastname = Karlsen, Gender = MALE, position = Sales, salary = 500000]
Employee [Name = Per, Lastname = Crowo, Gender = MALE, position = FullStack, salary = 700000]
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = BackEnd, salary = 500000]
Employee [Name = Lise, Lastname = Aanstad, Gender = FEMALE, position = FrontEnd, salary = 600000]
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]

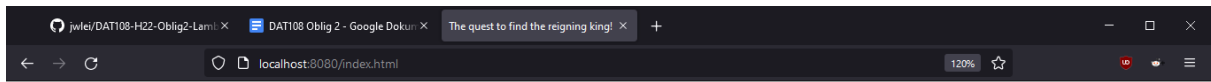
[TASK G] - The lowest salary of all employees is:
Optional[
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000]]

[TASK G cont.] - The employees sharing the lowest salary is:
[
Employee [Name = Kari, Lastname = Nielsen, Gender = THEY, position = Sales, salary = 500000],
Employee [Name = Ole, Lastname = Karlsen, Gender = MALE, position = Sales, salary = 500000],
Employee [Name = Mona, Lastname = Aarsen, Gender = FEMALE, position = BackEnd, salary = 500000],
Employee [Name = Jurgen, Lastname = Hansen, Gender = MALE, position = FrontEnd, salary = 500000]]

The sum of numbers [1, ..., < 1000] divisible by 3 or 5 is: 233168

Process finished with exit code 0
```

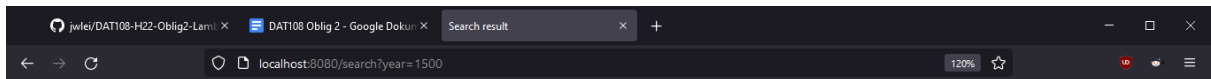
## Oppgave 4 (Frivillig)



### Search for a King

Find the king of Norway for your specified time (1426-1648)

## Search for a King

In the year of 1500, King Hans ruled over Norway.

He was born 1455, and ruled from 1482 to 1513.



[Do another search](#)