Eksamen PGR201

Kandidatnr 8016

Oppgave 2

For å teste om objektene blir lagt til på riktig måte, kan vi opprette .toString() metoder som er spesifisert per klasse. Når man da itererer gjennom arrayet og kaller .toString(), vil .toString()-metoden som overrides forskjellig for hver klasse kjøres. Vi kan da se om objektene er opprettet av ritkig type, og kjører som de skal.

Hvis det er et objekt av typen «ball» vil denne koden kjøres:

```java
@Override
public String toString() {
    return "Ball, id: " + id + ", type: " + ballType + ", LockerNum: " +
lockerNum + ", Needs Replacement: " + needsReplacement + ", Needs Air: " +
needsAir;
}
```

Hvis det er et objekt av typen «TableTennisRacket» vil denne koden kjøres:

```java
@Override
public String toString() {
    return "Table Tennis Racket, id: " + id + ", LockerNum: " + lockerNum +
", Needs Replacement: " + needsReplacement + ", Needs Rubber Change: " +
needsRubberChange;
}
```

Når vi da kjører en funksjon som går gjennom alle objektene i Arrayet, vil man se om objektene er lagt til riktig

```
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    ALL EQUIPMENT
--------------------
Ball, id: 12, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 15, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 14, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 1, type: Handball, LockerNum: Locker 3, Needs Replacement: false, Needs Air: false
Ball, id: 2, type: Handball, LockerNum: Locker 3, Needs Replacement: false, Needs Air: true
Ball, id: 12, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: false
Ball, id: 3, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 5, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Ball, id: 6, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Table Tennis Racket, id: 16, LockerNum: Locker 5, Needs Replacement: false, Needs Rubber Change: false
Table Tennis Racket, id: 17, LockerNum: Locker 5, Needs Replacement: true, Needs Rubber Change: false
Table Tennis Racket, id: 18, LockerNum: Locker 5, Needs Replacement: false, Needs Rubber Change: true
Ball, id: 20, type: Volleyball, LockerNum: Locker 6, Needs Replacement: false, Needs Air: false
Ball, id: 21, type: Volleyball, LockerNum: Locker 6, Needs Replacement: false, Needs Air: true
Ball, id: 31, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: false
Ball, id: 32, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: false
Ball, id: 33, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: true
Ball, id: 34, type: Basketball, LockerNum: Locker 7, Needs Replacement: true, Needs Air: false
```

Oppgave 4

```
Main ×
C:\Users\marie\.jdks\openjdk-15.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Commu
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        MENU
--------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
1

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    ALL EQUIPMENT
--------------------
Ball, id: 12, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 15, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 14, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 1, type: Handball, LockerNum: Locker 3, Needs Replacement: false, Needs Air: false
Ball, id: 2, type: Handball, LockerNum: Locker 3, Needs Replacement: false, Needs Air: true
Ball, id: 12, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: false
Ball, id: 3, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 5, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Ball, id: 6, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Table Tennis Racket, id: 16, LockerNum: Locker 5, Needs Replacement: false, Needs Rubber Change: false
Table Tennis Racket, id: 17, LockerNum: Locker 5, Needs Replacement: true, Needs Rubber Change: false
Table Tennis Racket, id: 18, LockerNum: Locker 5, Needs Replacement: false, Needs Rubber Change: true
Ball, id: 20, type: Volleyball, LockerNum: Locker 6, Needs Replacement: false, Needs Air: false
Ball, id: 21, type: Volleyball, LockerNum: Locker 6, Needs Replacement: false, Needs Air: true
Ball, id: 31, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: false
Ball, id: 32, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: false
Ball, id: 33, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: true
Ball, id: 34, type: Basketball, LockerNum: Locker 7, Needs Replacement: true, Needs Air: false
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        MENU
--------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
2

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    NEEDS MORE AIR
--------------------
Ball, id: 12, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 15, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 14, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 2, type: Handball, LockerNum: Locker 3, Needs Replacement: false, Needs Air: true
Ball, id: 3, type: Football, LockerNum: Locker 1, Needs Replacement: false, Needs Air: true
Ball, id: 5, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Ball, id: 6, type: Football, LockerNum: Locker 4, Needs Replacement: false, Needs Air: true
Ball, id: 21, type: Volleyball, LockerNum: Locker 6, Needs Replacement: false, Needs Air: true
Ball, id: 33, type: Basketball, LockerNum: Locker 7, Needs Replacement: false, Needs Air: true
```

```
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        MENU
---------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
3
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  NEEDS REPLACEMENT
---------------------
Ball, id: 15, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Ball, id: 14, type: Handball, LockerNum: Locker 2, Needs Replacement: true, Needs Air: true
Table Tennis Racket, id: 17, LockerNum: Locker 5, Needs Replacement: true, Needs Rubber Change: false
Ball, id: 34, type: Basketball, LockerNum: Locker 7, Needs Replacement: true, Needs Air: false
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        MENU
---------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
4
---------------------
    NEEDS NEW PAD
---------------------
Table Tennis Racket, id: 18, LockerNum: Locker 5, Needs Replacement: false, Needs Rubber Change: true
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        MENU
---------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
hgd
Please enter a valid NUMBER
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        MENU
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1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
8
Please enter valid number
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        MENU
---------------------
1. Show all equipment
2. Show Balls that needs more air
3. Show Equipment that needs replacement
4. Show Table Tennis Rackets that needs new pads
5. Quit
5
ENDING SESSION

Process finished with exit code 0
```