

OMD – Övning 2

Lösningar

Lösningarna presenteras bara med implementeringar även i de fall där uppgiften efterfrågar diagram. På tentamen är det ej tillåtet att göra sådana avvikelser.

```
4 public abstract class ItemList extends ArrayList {
    abstract String item(int no);
    public String toString() {
        StringBuilder builder = new StringBuilder();
        for (int i = 0; i < size(); i++) {
            builder.append(item(i + 1));
            builder.append(get(i));
            builder.append('\n');
        }
        return builder.toString();
    }
}

public class BulletList extends ItemList {
    String item(int no) {
        return "* ";
    }
}

public class EnumList extends ItemList {
    String item(int no) {
        return no + ". ";
    }
}

5 public interface Person {
    public void printAncestors();
}

public class Known implements Person {
    private String name;
    private Person father, mother;
    public void printAncestors() {
        System.out.println(name);
        father.printAncestors();
        mother.printAncestors();
    }
}

public class Unknown implements Person {
    public void printAncestors() {
    }
}
```

```

6 public interface Drink {
    public int cost();

    public String toString();
}
public class Coffee implements Drink {
    public int cost() {
        return 5;
    }

    public String toString() {
        return "kaffe";
    }

    public static void main(String[] args) {
        Drink drink = new Sugar(new Milk(new Milk(new Coffee())));
        System.out.println(drink);
        System.out.println(drink.cost());
    }
}
public abstract class Extra implements Drink {
    private Drink drink;

    protected Extra(Drink drink) {
        this.drink = drink;
    }

    public int cost() {
        return drink.cost();
    }

    public String toString() {
        return drink.toString();
    }
}
public class Milk extends Extra {
    public Milk(Drink drink) {
        super(drink);
    }

    public int cost() {
        return super.cost() + 1;
    }

    public String toString() {
        return super.toString() + " mjolk";
    }
}
public class Sugar extends Extra {
    public Sugar(Drink drink) {
        super(drink);
    }

    public String toString() {
        return super.toString() + " socker";
    }
}

```

