

Sample programmes OOP May 2014

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1 Program Constructors

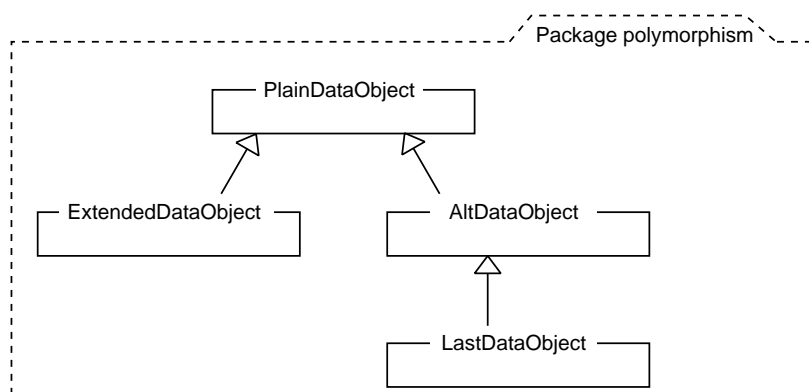
The following classes belong to the package polymorphism.

```
1 public abstract class PlainDataObject {
2     public int idNumber = 99;
3     public String dataName = "No name";
4
5     public PlainDataObject() {
6     }
7     public PlainDataObject(int id, String name) {
8         idNumber = id;
9         dataName = name;
10    }
11    public void print() {
12        System.out.printf("DataObject: id: %3d ", idNumber);
13        System.out.print(", name: " + dataName);
14        return;
15    }
16 }

```

```
1 public class ExtendedDataObject extends PlainDataObject {
2     public int value;
3
4     public ExtendedDataObject() {
5         super(33, "extendedDO");
6         value = 44;
7     }
8     public ExtendedDataObject(int num, String name) {
9         dataName = name;
10        value = num;
11    }
12    public void print() {
13        super.print();
14        System.out.print(", value: " + value);
15    }
16 }

```



```
1 public class AltDataObject extends PlainDataObject {
2     protected int value = 10;
3
4     AltDataObject(){}
5     AltDataObject(String name){
6         dataName = name;
7         value = 333;
8     }
9     public void print() {
10        super.print();
11        int tmp = value + idNumber;
12        System.out.print(" , tmp: " + tmp);
13    }
14 }

1 public class LastDataObject extends AltDataObject {
2     private String dataMsg;
3     protected LastDataObject() {}
4
5     LastDataObject(String msg) {
6         super("Anne");
7         dataMsg = msg;
8     }
9     public void print() {
10        super.print();
11        System.out.print(" LastDataObject " + dataMsg);
12    }
13 }
```

The main()-Method:

```
1 public static void main(String[] args) {
2     PlainDataObject myObject = new AltDataObject();
3     myObject.print();
4     System.out.println();
5     myObject = new ExtendedDataObject();
6     myObject.print();
7     System.out.println();
8     myObject = new ExtendedDataObject(99, "Bob");
9     myObject.print();
10    System.out.println();
11    AltDataObject ado = new LastDataObject("bye bye . . .");
12    ado.print();
13    System.out.println();
14 }
```