Composition

The composition is a design technique in java to implement a **has-a** relationship.

If an object contains the other object and the contained object cannot exist without the existence of that object, then it is called composition

Advantages:

1. Composition allows the reuse of code.
2. Java doesn’t support multiple inheritance but by using composition we can achieve it.
3. Composition offers better test-ability of a class.
4. By using composition, we are flexible enough to replace the implementation of a composed class with a better and improved version.
5. By using composition, we can also change the member objects at run time, to dynamically change the behavior of your program.

\*\*\*\*\*\*\*\*\*\*\*\* first class \*\*\*\*\*\*\*\*\*\*\*\*\*\*

**package** com.techno.composition;

**public** **class** Com12 {

**private** String name;

**private** **int** empid;

**public** Com12(String name, **int** empid) {

**this**.name = name;

**this**.empid = empid;

}

**public** String getName() {

**return** name;

}

**public** **int** getEmpid() {

**return** empid;

}

@Override

**public** String toString() {

**return** "[name=" + name + ", empid=" + empid + "]";

}

}

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* second class \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**package** com.techno.composition;

**public** **class** Com13 {

**private** **double** sal;

**public** Com13(**double** sal) {

**this**.sal = sal;

}

**public** **double** getSal() {

**return** sal;

}

@Override

**public** String toString() {

**return** "Com13 [sal=" + sal + "]";

}

}

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* composition class \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**public** **class** NewCom {

**private** Com12 pr;

**private** Com13 pr1;

**public** NewCom(Com12 pr, Com13 pr1) {

**this**.pr = pr;

**this**.pr1 = pr1;

}

**public** Com12 getPr() {

**return** pr;

}

**public** Com13 getPr1() {

**return** pr1;

}

}

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* main class \*\*\*\*\*\*\*\*\*\*\*\*\*

**public** **class** MainCom {

**public** **static** **void** main(String[] args) {

Com12 n1 = **new** Com12("prudhvi", 123);

Com13 n2 = **new** Com13(999999.99);

NewCom nm = **new** NewCom(n1, n2);

System.***out***.println(nm.getPr().toString());

}

}