Name of the Course : LEARNING JAVA 9 – MODULAR PROGRAMMING

Level : Easy

Tool Stack : Java 9

Problem Statement : Composition is an association represents a part of a whole relationship where a part cannot exist without a whole.If a whole is deleted then all parts are deleted. It has a stronger relationship.

With the composition we would also like to check how we can nested class and how to instanciate nested class

Write a program to solve the above task.

Step 2 : Create a class Person in which we will declare a variable called firstName, lastName and use job of class type Job as field and declare Job class itself into Person to achieve composition relationship using nested class

**Code:**

**package** com.iiht.java9.assign2;

**public** **class** Person {

**private** String firstName;

**private** String lastName;

//composition has-a relationship

**private** Job job;

**public** String getFirstName() {

**return** firstName;

}

**public** **void** setFirstName(String firstName) {

**this**.firstName = firstName;

}

**public** String getLastName() {

**return** lastName;

}

**public** **void** setLastName(String lastName) {

**this**.lastName = lastName;

}

**public** Job getJob() {

**return** job;

}

**public** **void** setJob(Job job) {

**this**.job = job;

}

**public** Person(){

**this**.firstName="unknown";

**this**.lastName="unknown";

**this**.job=**new** Job();

job.setSalary(1000L);

}

**public** **long** getSalary() {

**return** job.getSalary();

}

**public** **class** Job {

**private** String role;

**private** **long** salary;

**private** **int** id;

**public** String getRole() {

**return** role;

}

**public** **void** setRole(String role) {

**this**.role = role;

}

**public** **long** getSalary() {

**return** salary;

}

**public** **void** setSalary(**long** salary) {

**this**.salary = salary;

}

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

}

}

Step 3 : Create a main class where we will be creating and object of both Job as well as Person and set Job as a object of Person class and print details of Job as well as Person

**Code:**

**package** com.iiht.java9.assign2;

**public** **class** TestPerson {

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

Person person = **new** Person();

**long** salary = person.getSalary();

Person.Job job=person.getJob();

System.***out***.println("Person Details"+person);

System.***out***.println("Job Details"+job);

System.***out***.println("Salary Details "+salary);

}

}

Learning outcome: Participant could able to learn how to use class composition using Nested Class relationship using Java 9.