



ITS 66704 Advance Programming

Week-3 Tutorial

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EXERCISE : Modify **EmployeeThree** program with the following requirements 1. Add attribute YearBorn to Manager and Officer

The year born data are as follows :

a. Joyah=1965 b. Mat=1974
c. Minah = 1983

2. Display details showing age assuming current year is 2014.
3. Add class clerk. Clerks are not entitled to company car or petrol allowance but they may get Cost of Living allowance (COLA).
4. Add a clerk and show the details. Name “Selamat” , Salary RM800, Year Born 1978, COLA RM50.
5. Redraw the class diagram to reflect the modified program

1. Employee_3.java (SUPERCLASS)

```
package Week3_Assignment;

public class Employee_3 {

    private final String name;
    private double salary;
    private boolean status;

    Employee_3(String n, double s) {
        name = n;
        salary = s;
        status = true;
    }

    public double getSalary() {
        return salary;
    }

    public void setSalary(double s) {
        if (s < 25000)
            salary = s;
    }
}
```

```

public String getName() {
    return name;
}

public String getStatus() {
    return status ? "active" : "resigned";
}

public void resigned() {
    status = false;
}

public void displayDetail() {
    System.out.println("-----
");
    System.out.println("NAME : " + name);
    System.out.println("SALARY : " + salary);
    System.out.println("STATUS : " + getStatus());
}
}

```

2. Officer.java (SUBCLASS)

```

package Week3_Assignment;

public class Officer extends Employee_3{
    private final double petrol;
    private final int yearborn;

    public Officer(String n, double s, double p, int
y) {
        super(n, s);
        petrol = p;
        yearborn = y;
    }

    public double getPetrol() {
        return petrol;
    }
}

```

```

    }

    public int getAge() {
        return (2014 - yearborn);
    }

    public void displayDetail() {
        super.displayDetail();
        System.out.println("AGE : " + getAge());
        System.out.println("PETROL : " + petrol);
    }
}

```

3. Manager.java (SUBCLASS)

```

package Week3_Assignment;

public class Manager extends Employee_3{

    private final String car;
    private final int yearborn;

    public Manager(String n, double s, String c, int
y) {
        super(n, s);
        car = c;
        yearborn = y;
    }

    public String getCar() {
        return car;
    }

    public int getAge() {
        return (2014 - yearborn);
    }
}

```

```

@Override
public void displayDetail() {

    super.displayDetail();
    System.out.println("AGE : " + getAge());
    System.out.println("CAR : " + car);
}
}

```

4. Clerk.java (SUBCLASS)

```

package Week3_Assignment;
public class Clerk extends Employee_3{
    private final double cola;
    private final int yearborn;

    public Clerk(String n, double s, int y, double
c) {

        super(n,s);
        cola = c;
        yearborn = y;
    }

    public int getAge(){
        return (2014 - yearborn);
    }

    public void displayDetail(){
        super.displayDetail();
        System.out.println("AGE : " + getAge());
        System.out.println("COLA : " + cola);
    }

}

```

5. MyCompany_3.java (MAINCLASS)

```
package Week3_Assignment;

public class MyCompany_3 {

    public void init() {
        Officer staff1 = new Officer("Joyah", 3000,
300,1965);
        Officer staff2 = new Officer("Mat", 2000, 100,
1974);
        Manager staff3 = new Manager("Minah", 8000,"Honda
Accord", 1983);
        Clerk staff4 = new Clerk("Selamat", 800, 1978,
50);

        staff1.displayDetail();
        staff2.displayDetail();
        staff3.displayDetail();
        staff2.resigned();
        staff2.displayDetail();
        staff4.displayDetail();
    }

    public static void main(String[] args) {
        MyCompany_3 mct = new MyCompany_3();
        mct.init();
    }

}
```

OUTPUT:

NAME : Joyah
SALARY : 3000.0
STATUS : active
AGE : 49
PETROL : 300.0

NAME : Mat
SALARY : 2000.0
STATUS : active
AGE : 40
PETROL : 100.0

NAME : Minah
SALARY : 8000.0
STATUS : active
AGE : 31
CAR : Honda Accord

NAME : Mat
SALARY : 2000.0
STATUS : resigned
AGE : 40
PETROL : 100.0

NAME : Selamat
SALARY : 800.0
STATUS : active
AGE : 36
COLA : 50.0

Process finished with exit code 0

CLASS DIAGRAM:

