16TIN2054 – Teknik Pemrograman Praktek

Week 7

Dikerjakan oleh:

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1AD4 Jurusan Teknik Komputer dan Informatika

Tugas ini dikumpulkan untuk memenuhi sebagian persyaratan kelulusan mata kuliah Teknik Pemrograman Praktek

Program Studi D4 Teknik Informatika

Jurusan Teknik Komputer dan Informatika

Politeknik Negeri Bandung

2020/2021

Latihan 7.1

Animal.java

```java
package Latihan7_1;

public class Animal {
	public void sound() {
		System.out.println("Animal is making a sound");
	}
}
```

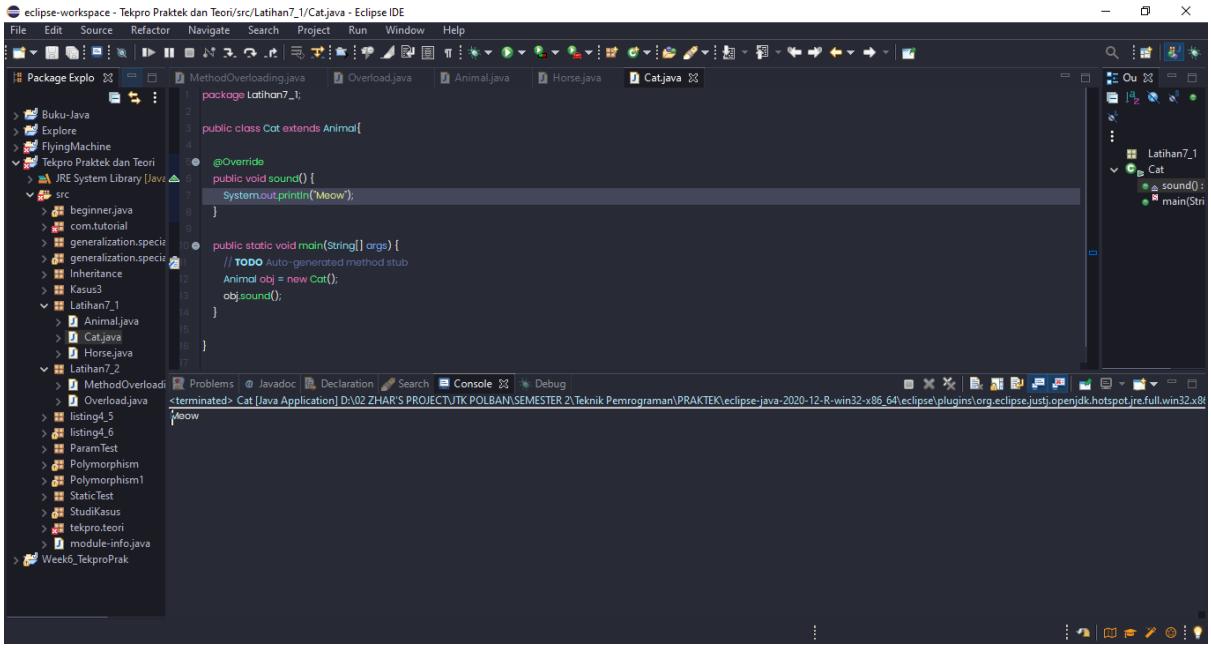
Cat.java

```java
package Latihan7_1;

public class Cat extends Animal{

	@Override
	public void sound() {
		System.out.println("Meow");
	}

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		Animal obj = new Cat();
		obj.sound();
	}

}
```

Horse.java

```java
package Latihan7_1;

public class Horse extends Animal{

	@Override
	public void sound() {
		System.out.println("Neigh");
	}

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		Animal obj = new Horse();
		obj.sound();
	}

}
```

Screenshoot Program


eclipse-workspace - Tekpro Praktek dan Teori/src/Latihan7_1/Cat.java - Eclipse IDE
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Horse.java
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package Latihan7_1;
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public void sound() {
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Animal obj = new Cat();
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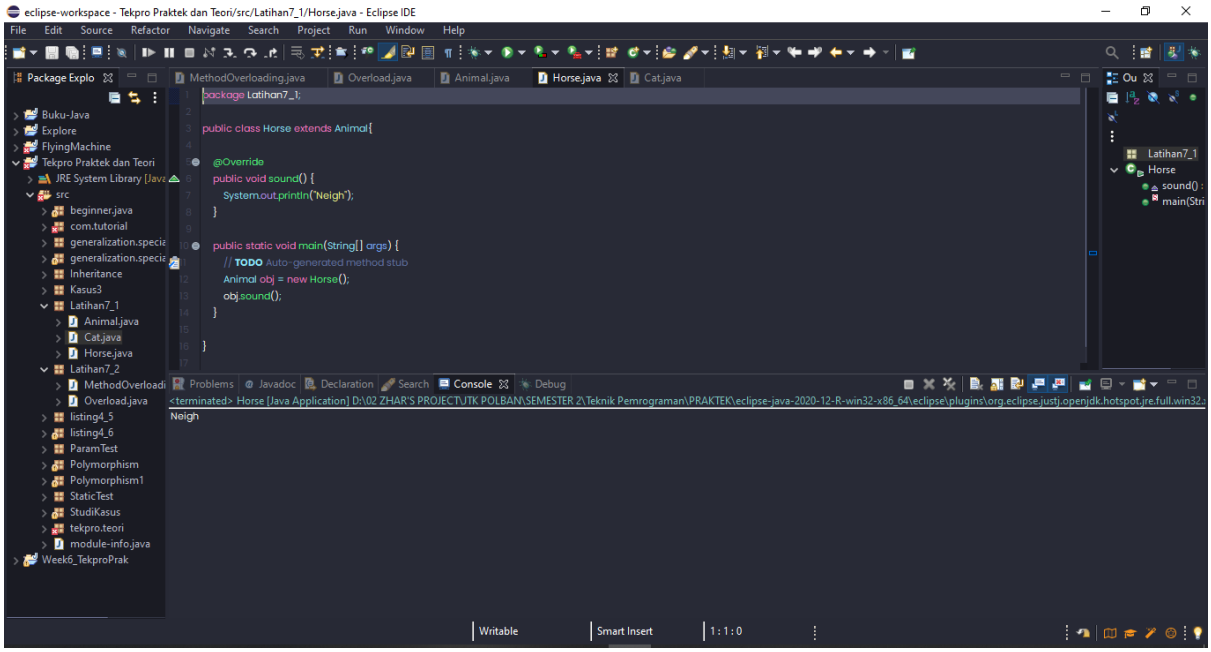
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@Override
public void sound() {
System.out.println("Neigh");
}
public static void main(String[] args) {
// TODO Auto-generated method stub
Animal obj = new Horse();
obj.sound();
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Latihan 7.2

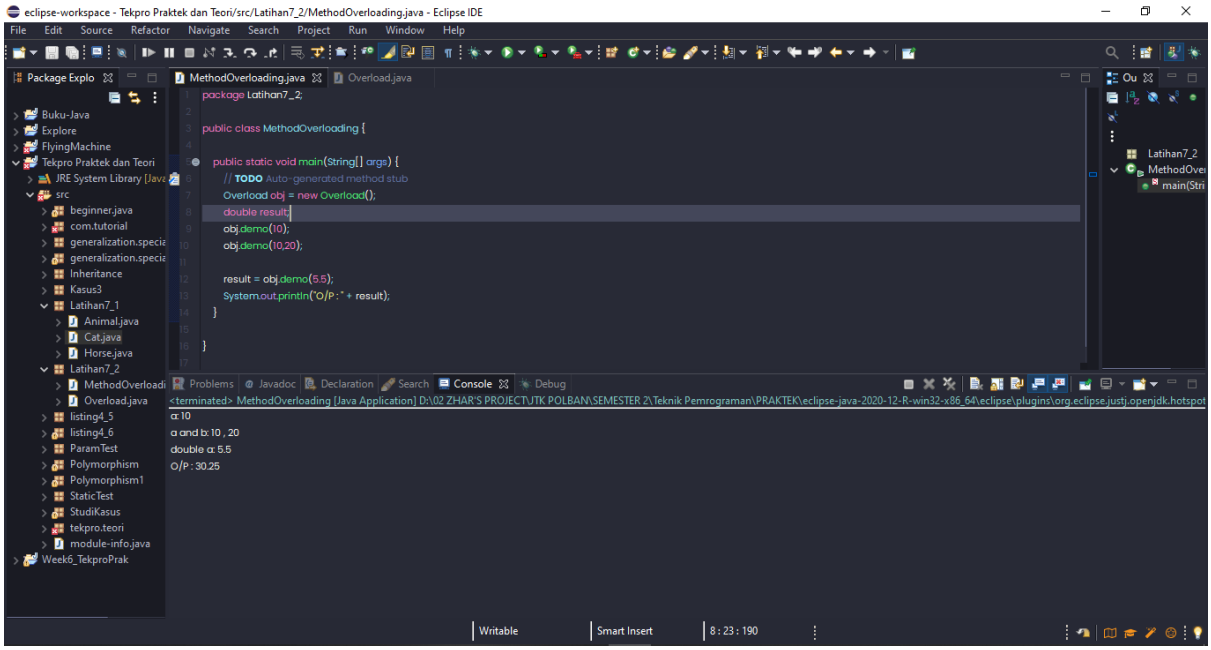
Overload.java

```
package Latihan7_2;

public class Overload {
	void demo(int a) {
		System.out.println("a: " + a);
	}

	void demo(int a, int b) {
		System.out.println("a and b: " + a + " , " + b);
	}

	double demo(double a) {
		System.out.println("double a: " + a);
		return a*a;
	}
}
```

MethodOverloading.java

```
package Latihan7_2;

public class MethodOverloading {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		Overload obj = new Overload();
		double result;
		obj.demo(10);
		obj.demo(10,20);

		result = obj.demo(5.5);
		System.out.println("O/P : " + result);
	}

}
```

Screenshoot Program



Latihan 7.3

Commission.java

```
package Polymorphism;

public class Commission extends Hourly{
	private double totalSales;
	private double commissionRate;

	public Commission(String eName, String eAddress, String ePhone, String socSecNumber, double rate,
double commssionRate) {
		super(eName,eAddress,ePhone,socSecNumber,rate);
		this.commissionRate = commissionRate;
	}

	public void addSales(double totalSales) {
		this.totalSales = totalSales;
	}

	public double pay() {
		double payment = super.pay() + totalSales*commissionRate;

		totalSales = 0;

		return payment;
	}

	public String toString() {
		String result = super.toString();

		result += "\nTotal Sales:" + totalSales;
```

```
                return result;
        }
}
```

Employee.java

```
package Polymorphism;

public class Employee extends StaffMember{
        protected String socialSecurityNumber;
        protected double payRate;

        public Employee(String eName, String eAddress, String ePhone,
                        String socSecNumber, double rate) {
                super(eName, eAddress, ePhone);

                socialSecurityNumber = socSecNumber;
                payRate = rate;
        }

        public String toString() {
                String result = super.toString();

                result += "\nSocial Security Number: " + socialSecurityNumber;

                return result;
        }

        public double pay() {
                return payRate;
        }
}
```

Executive.java

```
package Polymorphism;

public class Executive extends Employee{
        private double bonus;

        public Executive(String eName, String eAddress, String ePhone,
                        String socSecNumber, double rate) {
                super(eName, eAddress, ePhone, socSecNumber, rate);

                bonus = 0;
        }

        public void awardBonus(double execBonus) {
                bonus = execBonus;
        }

        public double pay() {
                double payment = super.pay() + bonus;
                bonus = 0;

                return payment;
```

```
        }
}
```

Hourly.java

```
package Polymorphism;

public class Hourly extends Employee{
        private int hoursWorked;

        public Hourly(String eName, String eAddress, String ePhone,
                        String socSecNumber, double rate) {
                super(eName, eAddress, ePhone, socSecNumber, rate);

                hoursWorked = 0;
        }

        public void addHours(int moreHours) {
                hoursWorked += moreHours;
        }

        public double pay() {
                double payment = payRate * hoursWorked;
                hoursWorked = 0;

                return payment;
        }

        public String toString() {
                String result = super.toString();
                result += "\nCurrent hours: " + hoursWorked;

                return result;
        }
}
```

Staff.java

```
package Polymorphism;

public class Staff {
        private StaffMember[] staffList;

        public Staff() {
                staffList = new StaffMember[8];

                staffList[0] = new Executive("Sam","123 Main Line","555-0469",
                                "123-45-6789",2423.07);

                staffList[1] = new Employee("Carla","456 Off Line","555-0101",
                                "987-65-4321",1246.15);

                staffList[2] = new Employee("Woody","789 Off Rocker","555-0000",
                                "010-20-3040",1169.23);

                staffList[3] = new Hourly("Diane","678 Fifth Ave.","555-0690",
                                "958-47-3625",10.55);
```

```
                staffList[4] = new Volunteer("Norm","987 Suds Blvd.","555-8374");

                staffList[5] = new Volunteer("Cliff","321 Duds Lane","555-7282");

                staffList[6] = new Commission("Azhar","456 JurangStreet","555-423","33-111-444",6.25, .2);

                staffList[7] = new Commission("Azizan","456 JurangStreet","222-4445","459-222-33",9.75, .15);

                ((Executive) staffList[0]).awardBonus(500.00);

                ((Hourly)staffList[3]).addHours(40);

                ((Commission)staffList[6]).addHours(45);
                ((Commission)staffList[6]).addSales(400);

                ((Commission)staffList[7]).addHours(40);
                ((Commission)staffList[7]).addSales(950);
        }

        public void payday() {
                double amount;

                for(int count = 0; count < staffList.length; count++) {
                        System.out.println(staffList[count]);;
                        amount = staffList[count].pay();

                        if(amount == 0.0)
                                System.out.println("Thanks!");
                        else
                                System.out.println("Paid: " + amount);

                        System.out.println("-------------------");
                }
        }
}
```

StaffMember.java

```
package Polymorphism;

abstract public class StaffMember {
        protected String name;
        protected String address;
        protected String phone;

        public StaffMember(String eName, String eAddress, String ePhone) {
                name = eName;
                address = eAddress;
                phone = ePhone;
        }

        public String toString() {
                String result = "Name: " + name + "\n";

                result += "Address: " + address + "\n";
                result += "Phone : " + phone;
```

```
                return result;
        }

        public abstract double pay();
}
```

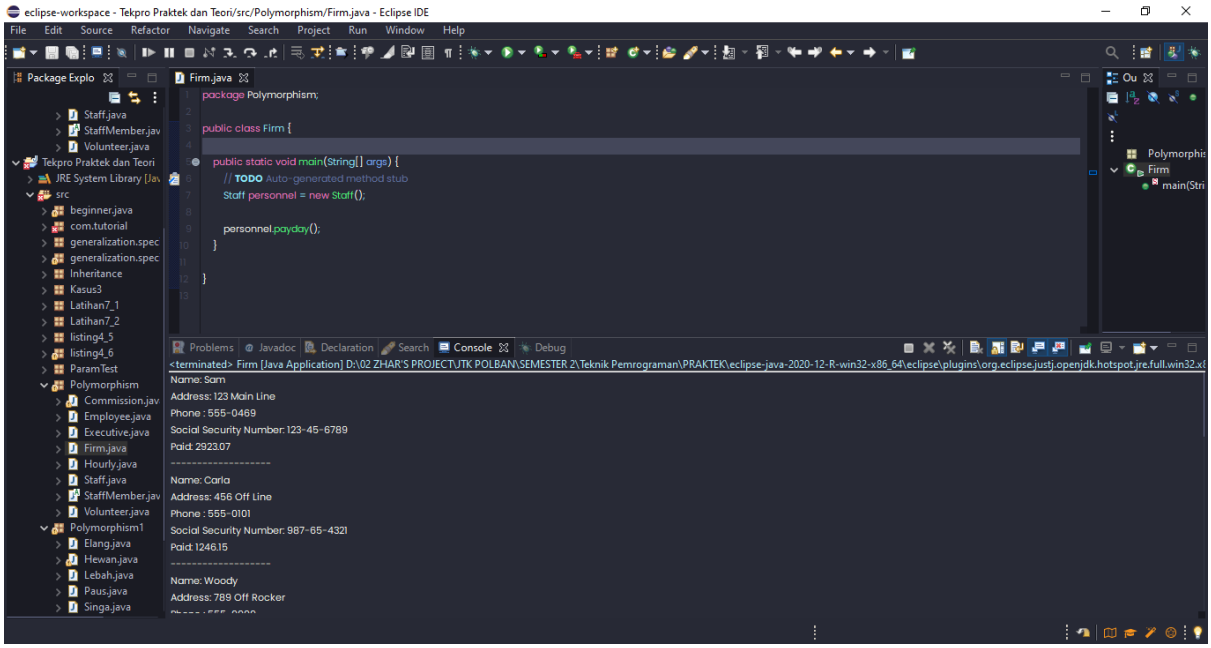
Volunteer.java

```
package Polymorphism;

public class Volunteer extends StaffMember{
        public Volunteer(String eName, String eAddress, String ePhone) {
                super(eName, eAddress, ePhone);
        }

        public double pay() {
                return 0.0;
        }
}
```

Firm.java

```
package Polymorphism;

public class Firm {

        public static void main(String[] args) {
                // TODO Auto-generated method stub
                Staff personnel = new Staff();

                personnel.payday();
        }

}
```

Screenshoot Program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package Polymorphism;
public class Firm {
public static void main(String[] args) {
// TODO Auto-generated method stub
Staff personnel = new Staff();
personnel.payday();
}
}
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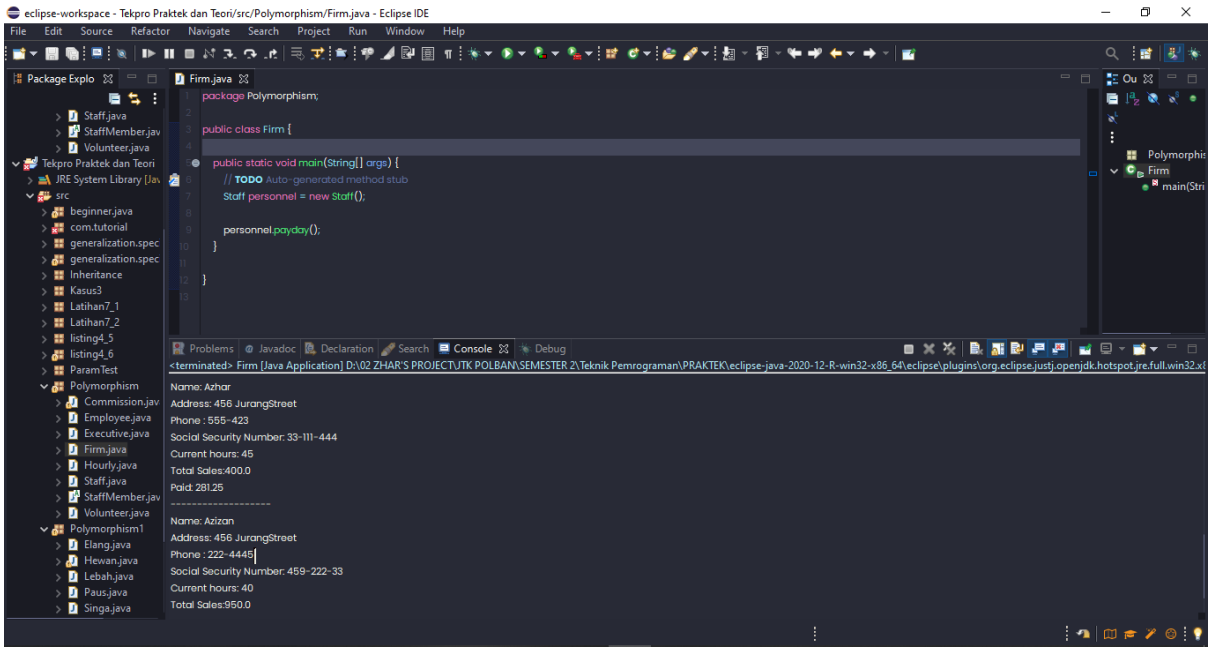
Name: Sam
Address: 123 Main Line
Phone : 555-0469
Social Security Number: 123-45-6789
Paid: 2923.07

Name: Carla
Address: 456 Off Line
Phone : 555-0101
Social Security Number: 987-65-4321
Paid: 1246.15

Name: Woody
Address: 789 Off Rocker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package Polymorphism;
public class Firm {
public static void main(String[] args) {
// TODO Auto-generated method stub
Staff personnel = new Staff();
personnel.payday();
}
}
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Name: Azhar
Address: 456 JurangStreet
Phone : 555-423
Social Security Number: 33-111-444
Current hours: 45
Total Sales:400.0
Paid: 281.25

Name: Azizan
Address: 456 JurangStreet
Phone : 222-4445
Social Security Number: 459-222-33
Current hours: 40
Total Sales:950.0