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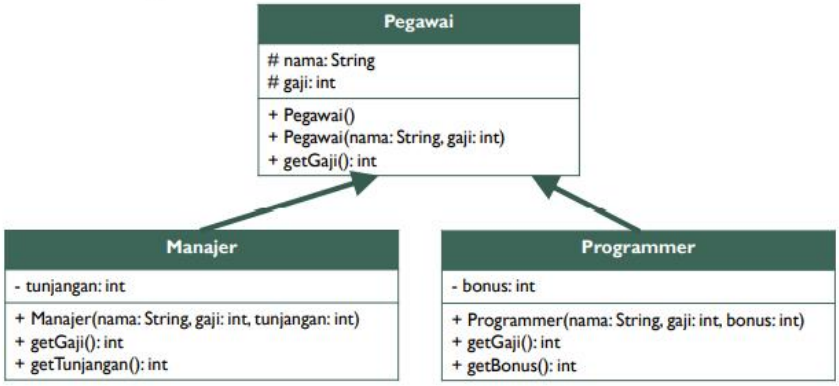
MATERI : Polimorfisme TEORI

Exercise 1

EXERCISE 1

- Buatlah program dari class diagram dibawah:



Class Pegawai

```
5   package exercisel;
6
7   /**
8    *
9    * @author LENOVO
10   */
11  public class Pegawai {
12      protected String nama;
13      protected int gaji;
14
15      public Pegawai(){
16
17      }
18
19      public Pegawai(String nama, int gaji) {
20          this.nama = nama;
21          this.gaji = gaji;
22      }
23
24      public int getGaji() {
25          return gaji;
26      }
27
28  }
29
```

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Class Manajer

```
10   */
11  public class Manajer extends Pegawai{
        private int tunjangan;
13
        public Manajer(String nama, int tunjangan, int gaji) {
15          super(nama, gaji);
16          this.tunjangan = tunjangan;
17      }
18
19      @Override
        public int getGaji() {
21          return gaji;
22      }
23
24
25      public int getTunjangan() {
26          return tunjangan;
27      }
28  }
29
```

Class Programmer

```
10   */
11  public class Programmer extends Pegawai{
        private int bonus;
13
        public Programmer(String nama, int gaji, int bonus) {
15          super(nama, gaji);
16          this.bonus = bonus;
17      }
18
19      public int getBonus() {
20          return bonus;
21      }
22
23      @Override
        public int getGaji() {
25          return gaji;
26      }
27
28
29  }
30
```

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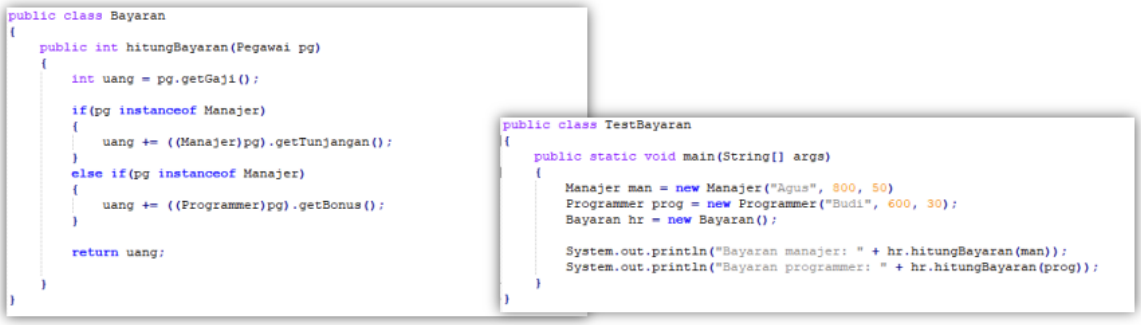
EXERCISE 1

- Kemudian buat class **Bayaran** dan **TestBayaran** dibawah ini untuk pengetesan:



```
public class Bayaran
{
    public int hitungBayaran(Pegawai pg)
    {
        int uang = pg.getGaji();

        if(pg instanceof Manajer)
        {
            uang += ((Manajer)pg).getTunjangan();
        }
        else if(pg instanceof Manajer)
        {
            uang += ((Programmer)pg).getBonus();
        }

        return uang;
    }
}
```

```
public class TestBayaran
{
    public static void main(String[] args)
    {
        Manajer man = new Manajer("Agus", 800, 50)
        Programmer prog = new Programmer("Budi", 600, 30);
        Bayaran hr = new Bayaran();

        System.out.println("Bayaran manajer: " + hr.hitungBayaran(man));
        System.out.println("Bayaran programmer: " + hr.hitungBayaran(prog));
    }
}
```

Class Bayaran

```
10  */
11  public class Bayaran {
12      public int hitungBayaran(Pegawai pg){
13          int uang = pg.getGaji();
14
15          if(pg instanceof Manajer){
16              uang += ((Manajer)pg).getTunjangan();
17          }
18          else if(pg instanceof Manajer){
19              uang +=((Programmer)pg).getBonus();
20          }
21          return uang;
22      }
23  }
24
```

Main

```
10  */
11  public class Main {
12      public static void main(String[]args){
13          Manajer m = new Manajer("Rony", 800, 50);
14          Programmer pro = new Programmer("Dul", 600, 30);
15          Bayaran b = new Bayaran();
16
17          System.out.println("Bayaran Manajer : "+ b.hitungBayaran(m));
18          System.out.println("Bayaran Programmer : "+ b.hitungBayaran(pro));
19      }
20  }
21
```

Hasil

```
Output - tugasPBO01 (run)
run:
Bayaran Manajer : 850
Bayaran Programmer : 600
BUILD SUCCESSFUL (total time: 0 seconds)
```

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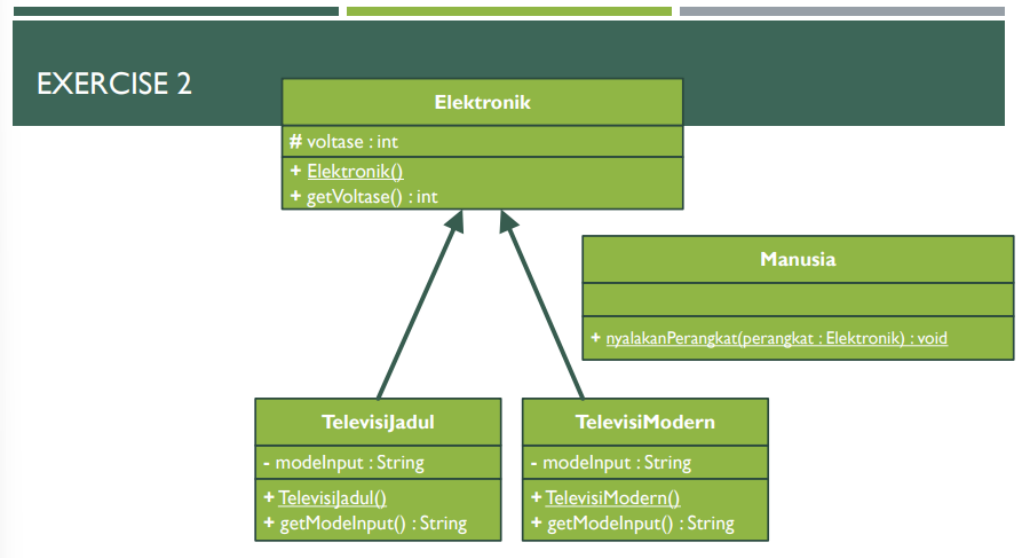
Exercise 2



Class Elektronik

```
 *
 * @author LENOVO
 */
public abstract class Elektronik {
    protected int vorltase = 220;

    public Elektronik(){

    }

    public int getVorltase() {
        System.out.print("Voltase televisi : ");
        return vorltase;
    }

    public abstract String getModelInput();
}
```

Class Televisi Jadul

```
 *
 * @author LENOVO
 */
public class TelevisiJadul extends Elektronik{
    private String modelInput = "DVI";

    public TelevisiJadul() {

    }

    public String getModelInput() {
        System.out.println("Nyalakan televisi jadul dengan input : "+modelInput);
        System.out.println(super.getVorltase());
        return null;
    }
}
```

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Class Televisi Modern

```
 * @author LENOVO
 */
public class TelevisiModern extends Elektronik{
    private String modelInput = "HDMI";

    public TelevisiModern() {

    }

    @Override
    public String getModelInput() {
        System.out.println("Nyalakan televisi jadul dengan input : "+modelInput);
        System.out.println(super.getVorltase());
        return null;
    }

}
```

Class Manusia

```
 *
 * @author LENOVO
 */
public class Manusia {
    public void nyalakanPerangkat(Elektronik perangkat){
        perangkat.getModelInput();
    }
}
```

Main

```
 * @author LENOVO
 */
public class Main {
    public static void main(String[]args){
        Manusia rony = new Manusia();
        TelevisiJadul jadul = new TelevisiJadul();
        TelevisiModern modern = new TelevisiModern();

        rony.nyalakanPerangkat(jadul);
        rony.nyalakanPerangkat(modern);
    }
}
```

Hasil

```
Output - tugasPBO01 (run)
run:
Nyalakan televisi jadul dengan input : DVI
Voltase televisi : 220
Nyalakan televisi jadul dengan input : HDMI
Voltase televisi : 220
BUILD SUCCESSFUL (total time: 0 seconds)
```