**MODUL 4**

**ABSTRACT CLASS DAN INTERFACE**

**PEMROGRAMAN BERORIENTASI OBJECT**

Seluruh file pada praktikum ini tersedia pada: <https://github.com/afrzl/Pemrograman-Berorientasi-Objek/tree/main/Week%204/Praktikum>

1. **ABSTRACT CLASS**
2. Class Orang

*/\*\**

*\* Orang*

*\*/*

import java.time.LocalDate;

abstract class Orang {

  String nama;

  LocalDate tanggalLahir;

  public **Orang**(String *nama*) {

    this.nama = *nama*;

  }

  public **Orang**(String *nama*, LocalDate *tanggalLahir*) {

    this.nama = *nama*;

    this.tanggalLahir = *tanggalLahir*;

  }

  public String **getNama**() {

    return nama;

  }

  public void **setNama**(String *nama*) {

    this.nama = *nama*;

  }

  public LocalDate **getTanggalLahir**() {

    return tanggalLahir;

  }

  public void **setTanggalLahir**(LocalDate *tanggalLahir*) {

    this.tanggalLahir = *tanggalLahir*;

  }

  public abstract String **getAlamat**();

  public abstract void **setAlamat**(String *alamat*);

}

1. Class Pegawai

*/\*\**

*\* Pegawai*

*\*/*

import java.time.LocalDate;

public class Pegawai extends {

  private String NIP;

  private String namaKantor;

  private String unitKerja;

  private String alamat;

**Pegawai**(String *nama*, String *NIP*, String *namaKantor*, String *unitKerja*) {

    super(*nama*);

    this.NIP = *nama*;

    this.namaKantor = *namaKantor*;

    this.unitKerja = *unitKerja*;

  }

**Pegawai**(String *nama*, LocalDate *tanggalLahir*, String *NIP*, String *namaKantor*, String *unitKerja*) {

    super(*nama*, *tanggalLahir*);

    this.NIP = *nama*;

    this.namaKantor = *namaKantor*;

    this.unitKerja = *unitKerja*;

  }

  public String **getNIP**() {

    return NIP;

  }

  public void **setNIP**(String *nIP*) {

    NIP = *nIP*;

  }

  public String **getNamaKantor**() {

    return namaKantor;

  }

  public void **setNamaKantor**(String *namaKantor*) {

    this.namaKantor = *namaKantor*;

  }

  public String **getUnitKerja**() {

    return unitKerja;

  }

  public void **setUnitKerja**(String *unitKerja*) {

    this.unitKerja = *unitKerja*;

  }

  public void **getGaji**() {

    System.out.**println**("7 juta");

  }

  @Override

  public String **getAlamat**() {

    return alamat;

  }

  @Override

  public void **setAlamat**(String *alamat*) {

    this.alamat = *alamat*;

  }

  @Override

  public String **toString**() {

    return ("Pegawai[" + super.**toString**() + ", NIP=" + NIP + ", NamaKantor=" + namaKantor + ", unitKerja=" + unitKerja + "]" );

  }

}

1. Class Test

*/\*\**

*\* OrangTest*

*\*/*

public class OrangTest {

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

*//Orang o = new Orang(); //error karena orang hanya abstract class, tidak bisa dibuat object*

    Pegawai lutfi = new **Pegawai**("Lutfi", "1111", "STIS", "IT");

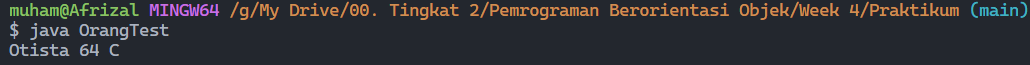
    lutfi.**setAlamat**("Otista 64 C");

    System.out.**println**(lutfi.**getAlamat**());

  }

}

**Output:**

****

1. **INTERFACE**
2. Interface Dosen

*/\*\**

*\* Dosen*

*\*/*

interface Dosen {

  public String **getNIDN**();

  public void **setNIDN**(String *NIDN*);

  public String **getKelompokKeahlian**();

  public void **setKelompokKeahlian**(String *kelompokKeahlian*);

}

1. Abstract Class Orang

*/\*\**

*\* Orang*

*\*/*

import java.time.LocalDate;

abstract class Orang {

  String nama;

  LocalDate tanggalLahir;

  public **Orang**(String *nama*) {

    this.nama = *nama*;

  }

  public **Orang**(String *nama*, LocalDate *tanggalLahir*) {

    this.nama = *nama*;

    this.tanggalLahir = *tanggalLahir*;

  }

  public String **getNama**() {

    return nama;

  }

  public void **setNama**(String *nama*) {

    this.nama = *nama*;

  }

  public LocalDate **getTanggalLahir**() {

    return tanggalLahir;

  }

  public void **setTanggalLahir**(LocalDate *tanggalLahir*) {

    this.tanggalLahir = *tanggalLahir*;

  }

  public abstract String **getAlamat**();

  public abstract void **setAlamat**(String *alamat*);

}

1. Class Pegawai

*/\*\**

*\* Pegawai*

*\*/*

import java.time.LocalDate;

public class Pegawai extends Orang implements Dosen {

  private String NIP;

  private String namaKantor;

  private String unitKerja;

  private String alamat;

  private String NIDN;

  private String keahlian;

**Pegawai**(String *nama*, String *NIP*, String *namaKantor*, String *unitKerja*) {

    super(*nama*);

    this.NIP = *nama*;

    this.namaKantor = *namaKantor*;

    this.unitKerja = *unitKerja*;

  }

**Pegawai**(String *nama*, LocalDate *tanggalLahir*, String *NIP*, String *namaKantor*, String *unitKerja*) {

    super(*nama*, *tanggalLahir*);

    this.NIP = *nama*;

    this.namaKantor = *namaKantor*;

    this.unitKerja = *unitKerja*;

  }

  public String **getNIP**() {

    return NIP;

  }

  public void **setNIP**(String *nIP*) {

    NIP = *nIP*;

  }

  public String **getNamaKantor**() {

    return namaKantor;

  }

  public void **setNamaKantor**(String *namaKantor*) {

    this.namaKantor = *namaKantor*;

  }

  public String **getUnitKerja**() {

    return unitKerja;

  }

  public void **setUnitKerja**(String *unitKerja*) {

    this.unitKerja = *unitKerja*;

  }

  public void **getGaji**() {

    System.out.**println**("7 juta");

  }

  @Override

  public String **getAlamat**() {

    return alamat;

  }

  @Override

  public void **setAlamat**(String *alamat*) {

    this.alamat = *alamat*;

  }

  @Override

  public String **getNIDN**() {

    return NIDN;

  }

  @Override

  public void **setNIDN**(String *NIDN*) {

    this.NIDN = *NIDN*;

  }

  @Override

  public String **getKelompokKeahlian**() {

    return keahlian;

  }

  @Override

  public void **setKelompokKeahlian**(String *kelompokKeahlian*) {

    this.keahlian = *kelompokKeahlian*;

  }

  @Override

  public String **toString**() {

    return ("Pegawai[" + super.**toString**() + ", NIP=" + NIP + ", NamaKantor=" + namaKantor + ", unitKerja=" + unitKerja + "]" );

  }

}

1. Class Test

*/\*\**

*\* OrangTest*

*\*/*

public class OrangTest {

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

*//Orang o = new Orang(); //error karena orang hanya abstract class, tidak bisa dibuat object*

    Pegawai lutfi = new **Pegawai**("Lutfi", "1111", "STIS", "IT");

    lutfi.**setAlamat**("Otista 64 C");

    System.out.**println**(lutfi.**getAlamat**());

    lutfi.**setNIDN**("12345678");

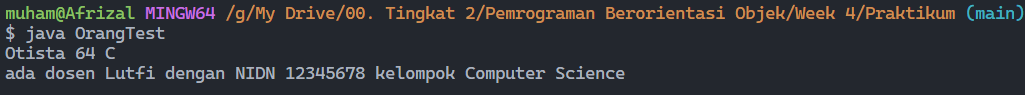
    lutfi.**setKelompokKeahlian**("Computer Science");

    System.out.**println**("ada dosen " + lutfi.**getNama**() + " dengan NIDN " + lutfi.**getNIDN**() + " kelompok " + lutfi.**getKelompokKeahlian**());

  }

}

**Output:**

****