PEMROGRAMAN BERORIENTASI OBYEK
(RELASI ANTAR KELAS)

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Soal 1:

Kelas Mahasiswa:

```
public class Mahasiswa {
    private String nim;
    private String nama;

    // constructor
    public Mahasiswa(String nim, String nama) {
        this.nim = nim;
        this.nama = nama;
    }

    // getter
    public String getNim() {
        return nim;
    }

    public String getNama() {
        return nama;
    }
}
```

Kelas Jurusan:

```
import java.util.ArrayList;

public class Jurusan {
    private String kode;
    private String nama;
    private ArrayList<Mahasiswa> listMahasiswa;

    // constructor
    public Jurusan(String kode, String nama) {
        this.kode = kode;
        this.nama = nama;
        listMahasiswa = new ArrayList<>();
    }

    public void addMahasiswa(Mahasiswa m) {
        listMahasiswa.add(m);
    }

    // setter and getter
    public String getKode() {
        return kode;
    }

    public String getNama() {
```

```
        return nama;
    }

    public ArrayList<Mahasiswa> getMahasiswa() {
        return listMahasiswa;
    }
}
```

Kelas Main:

```
import java.util.ArrayList;

public class MainMahasiswa {
    public static void main(String[] args) {

        Jurusan j1 = new Jurusan("D3IF", "Diploma 3 Rekayasa
Perangkat Lunak Aplikasi");

        Mahasiswa m1 = new Mahasiswa("6701", "Rendi");
        Mahasiswa m2 = new Mahasiswa("6702", "Chaca");
        Mahasiswa m3 = new Mahasiswa("6703", "Agus");

        j1.addMahasiswa(m1);
        j1.addMahasiswa(m2);
        j1.addMahasiswa(m3);


        Jurusan j2 = new Jurusan("D3SI", "Diploma 3 Sistem
Informasi");

        Mahasiswa m4 = new Mahasiswa("6301", "Ridwan");
        Mahasiswa m5 = new Mahasiswa("6302", "Siska");
        Mahasiswa m6 = new Mahasiswa("6303", "Zayn");
        Mahasiswa m7 = new Mahasiswa("6304", "Rahmat");

        j2.addMahasiswa(m4);
        j2.addMahasiswa(m5);
        j2.addMahasiswa(m6);
        j2.addMahasiswa(m7);

        ArrayList<Mahasiswa> list1 = j1.getMahasiswa();

        ArrayList<Mahasiswa> list2 = j2.getMahasiswa();

        displayMahasiswa(j1, list1);
        displayMahasiswa(j2, list2);


    }
```

```
    private static void displayMahasiswa(Jurusan j,
ArrayList<Mahasiswa> list) {
        System.out.println("\nKode: " + j.getKode() + "\nNama: " +
j.getNama() + "\nDaftar mahasiswa: " + "\n" );
        for (Mahasiswa m : list) {
            System.out.println("- " + m.getNim() + " - " +
m.getNama());
        }
    }
}
```

```
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PBO EHK Pemrograman Berorientasi Objek\Jurnal 4 Relasi
ceptionMessages' '-cp' 'C:\Users\dzikr\AppData\Roaming
 4 Relasi Antar Kelas_c23ff9f8\bin' 'MainMahasiswa'

Kode: D3IF
Nama: Diploma 3 Rekayasa Perangkat Lunak Aplikasi
Daftar mahasiswa:

- 6701 - Rendi
- 6702 - Chaca
- 6703 - Agus

Kode: D3SI
Nama: Diploma 3 Sistem Informasi
Daftar mahasiswa:

- 6301 - Ridwan
- 6302 - Siska
- 6303 - Zayn
- 6304 - Rahmat
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```

Soal 2:

Kelas Nurse:

```
public class Nurse {
    private String name;
    private int id;

    public Nurse(String name, int id) {
        this.name = name;
        this.id = id;
    }

    public String getName() {
        return name;
    }
```

```
    public void setName(String name) {
        this.name = name;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }
}
```

Kelas Hospital:

```
public class Hospital {
    private String name;
    private int id;
    private Nurse[] nurses;

    public Hospital(String name, int id, Nurse[] nurses) {
        this.name = name;
        this.id = id;
        this.nurses = nurses;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public Nurse[] getNurses() {
        return nurses;
    }

    public void setNurses(Nurse nurse) {
        int size = nurses.length;
```

```
        this.nurses[size] =  nurse;
    }

}
```

Kelas Main:

```
public class MainHospital {
    public static void main(String[] args) {

        Nurse n1 = new Nurse("Budi", 2);
        Hospital h1 = new Hospital("Health Hospital", 1001, new
Nurse[]{new Nurse("Bakrie", 0), n1});

        Nurse[] list1 = h1.getNurses();


        Nurse n2 = new Nurse("Andi", 20);
        Hospital h2 = new Hospital("Brave Hospital", 1002, new
Nurse[]{new Nurse("Yakup", 20), n2});

        Nurse[] list2 = h2.getNurses();


        displayNurses(h1, list1);
        displayNurses(h2, list2);

    }

    private static void displayNurses(Hospital h, Nurse[] list) {
        System.out.println("\nNama RS: " + h.getName() + "\nKode
RS: " + h.getId() + "\n");
        for (Nurse n : list) {
            if (n != null) {
                System.out.println("Nama perawat: " +
n.getName());
                System.out.println("Kode perawat: " + n.getId());
                System.out.println();
            }
        }

    }
}
```

```
Nama RS: Health Hospital
Kode RS: 1001

Nama perawat: Bakrie
Kode perawat: 0

Nama perawat: Budi
Kode perawat: 2


Nama RS: Brave Hospital
Kode RS: 1002

Nama perawat: Yakup
Kode perawat: 20

Nama perawat: Andi
Kode perawat: 20

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```