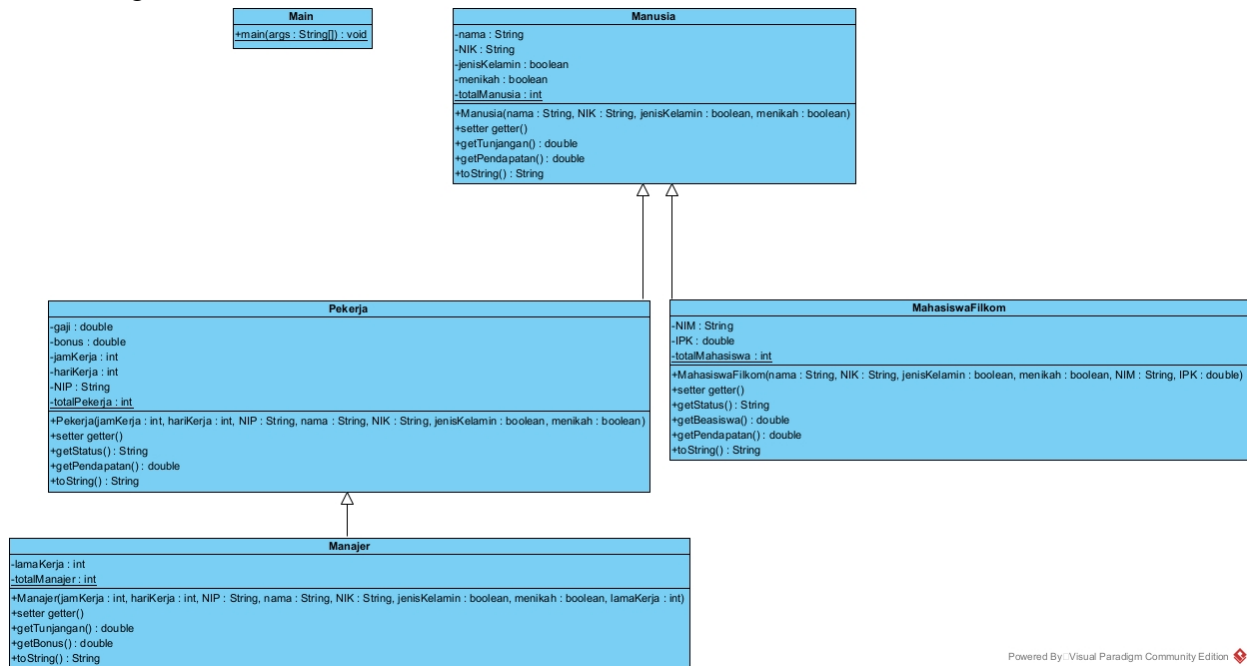


Nama : Taufik Hidayat
NIM : 215150600111009
Kelas : PTI - A

1. Class Diagram



2. Source Code

a) Class Manusia

```

package com.company;

public class Manusia {
    private String nama;
    private String NIK;
    private boolean jenisKelamin;
    private boolean menikah;
    private static int totalManusia;

    public Manusia(String nama, String NIK, boolean jenisKelamin, boolean
menikah) {
        setName(nama);
        setNIK(NIK);
        setJenisKelamin(jenisKelamin);
        setMenikah(menikah);
        totalManusia++;
    }

    public String getName() {
        return nama;
    }

    public String getNIK() {
        return NIK;
    }
}

```

```
}

public boolean isJenisKelamin() {
    return jenisKelamin;
}

public boolean isMenikah() {
    return menikah;
}

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

public void setNIK(String NIK) {
    this.NIK = NIK;
}

public void setJenisKelamin(boolean jenisKelamin) {
    this.jenisKelamin = jenisKelamin;
}

public void setMenikah(boolean menikah) {
    this.menikah = menikah;
}

public double getTunjangan() {
    if (isMenikah() && isJenisKelamin())
        return 25;
    else if (isMenikah() && !isJenisKelamin())
        return 20;
    else
        return 15;
}

public double getPendapatan() {
    return getTunjangan();
}

public int getTotalManusia() {
    return totalManusia;
}

public String toString() {
    return "Nama\t\t\t\t\t: " + getName() + "\nNIK\t\t\t\t\t: " + getNIK() +
        "\nJenis Kelamin\t\t: " + (isJenisKelamin()?"Laki-
Laki":"Perempuan") +
        "\nPendapatan\t\t\t: " + getPendapatan() + "$";
}
}
```

b) Class MahasiswaFilkom

```
package com.company;

public class MahasiswaFilkom extends Manusia {
```

```
private String NIM;
private double IPK;
private static int totalMahasiswa;

public MahasiswaFilkom(String nama, String NIK, boolean jenisKelamin,
boolean menikah, String NIM, double IPK) {
    super(nama, NIK, jenisKelamin, menikah);
    setNIM(NIM);
    setIPK(IPK);
    totalMahasiswa++;
}

public String getNIM() {
    return NIM;
}

public double getIPK() {
    return IPK;
}

public void setNIM(String NIM) {
    this.NIM = NIM;
}

public void setIPK(double IPK) {
    this.IPK = IPK;
}

public String getStatus() {
    String angkatan = "20" +NIM.substring(0,2);
    String prodi = NIM.substring(6, 7);
    switch (prodi) {
        case "2" -> prodi = "Teknik Meniup Gelembung";
        case "3" -> prodi = "Teknik Berburu Ubur Ubur";
        case "4" -> prodi = "Sistem Perhamburgeran";
        case "6" -> prodi = "Pendidikan Chum Bucket";
        case "7" -> prodi = "Teknologi Telepon Kerang";
    }
    return prodi+ ", " +angkatan;
}

public double getBeasiswa() {
    if (IPK >= 3.0 && IPK < 3.5)
        return 50;
    else if (IPK >= 3.5 && IPK <= 4.0)
        return 75;
    else
        return 0;
}

@Override
public double getPendapatan() {
    return super.getPendapatan()+getBeasiswa();
}

public int getTotalMahasiswa() {
    return totalMahasiswa;
}
```

c) Class Pekerja

```
package com.company;

public class Pekerja extends Manusia {
    private double gaji;
    private double bonus;
    private int jamKerja;
    private int hariKerja;
    private String NIP;
    private static int totalPekerja;

    public Pekerja(int jamKerja, int hariKerja, String NIP, String nama,
String NIK, boolean jenisKelamin, boolean menikah) {
        super(nama, NIK, jenisKelamin, menikah);
        setJamKerja(jamKerja);
        setHariKerja(hariKerja);
        setNIP(NIP);
        totalPekerja++;
    }

    public double getGaji() {
        gaji = getHariKerja() * getJamKerja() * 15;
        return gaji;
    }

    public double getBonus() {
        double bonusLembur = ((getHariKerja() / 7) * 5) + getHariKerja() %
7) * (getJamKerja() - 7) * 7;
        double bonusLibur = ((getHariKerja() / 7) * 2) * (getJamKerja()) *
20;

        if (getJamKerja() > 7) {
            bonus = bonusLembur + bonusLibur;
        } else {
            bonus = bonusLibur;
        }
        return bonus;
    }

    public int getJamKerja() {
        return jamKerja;
    }

    public int getHariKerja() {
        return hariKerja;
    }
}
```

```
public String getNIP() {
    return NIP;
}

public void setJamKerja(int jamKerja) {
    this.jamKerja = jamKerja;
}

public void setHariKerja(int hariKerja) {
    this.hariKerja = hariKerja;
}

public void setNIP(String NIP) {
    this.NIP = NIP;
}

public String getStatus() {
    String departemen = NIP.substring(6,7);
    String kantor = NIP.substring(0,1);
    String cabang = " cabang ke-" +NIP.charAt(2);
    switch (departemen) {
        case "1" -> departemen = "Pemasaran";
        case "2" -> departemen = "Humas";
        case "3" -> departemen = "Riset";
        case "4" -> departemen = "Teknologi";
        case "5" -> departemen = "Personalia";
        case "6" -> departemen = "Akademik";
        case "7" -> departemen = "Administrasi";
        case "8" -> departemen = "Operasional";
        case "9" -> departemen = "Pembangunan";
    }
    switch (kantor) {
        case "1" -> kantor = "Mondstadt";
        case "2" -> kantor = "Liyue";
        case "3" -> kantor = "Inazuma";
        case "4" -> kantor = "Sumeru";
        case "5" -> kantor = "Fontaine";
        case "6" -> kantor = "Natlan";
        case "7" -> kantor = "Snezhnaya";
    }
    return departemen+ ", " +kantor+ " " +cabang;
}

@Override
public double getPendapatan() {
    return super.getPendapatan()+getGaji()+getBonus();
}

public int getTotalPekerja() {
    return totalPekerja;
}

@Override
public String toString() {
    return super.toString()+ "\nBonus\t\t\t\t : " +getBonus()+"$"+
"\nGaji\t\t\t\t : " +getGaji()+"$"+
"\nNIP\t\t\t\t\t : " +getNIP()+ "\nStatus\t\t\t\t : "
```

```
+getStatus();  
}  
  
}
```

d) Class Manajer

```
package com.company;  
  
public class Manajer extends Pekerja{  
    private int lamaKerja;  
    private static int totalManajer;  
  
    public Manajer(int jamKerja, int hariKerja, String NIP, String nama,  
String NIK, boolean jenisKelamin, boolean menikah, int lamaKerja) {  
        super(jamKerja, hariKerja, NIP, nama, NIK, jenisKelamin, menikah);  
        setLamaKerja(lamaKerja);  
        totalManajer++;  
    }  
  
    public int getLamaKerja() {  
        return lamaKerja;  
    }  
  
    public void setLamaKerja(int lamaKerja) {  
        this.lamaKerja = lamaKerja;  
    }  
  
    @Override  
    public double getTunjangan() {  
        return super.getTunjangan() + (super.getTunjangan() * 15/100);  
    }  
  
    @Override  
    public double getBonus() {  
        return super.getBonus() + (super.getBonus() * 30/100);  
    }  
  
    public int getTotalManajer() {  
        return totalManajer;  
    }  
  
    @Override  
    public String toString() {  
        return super.toString()+ "\nLama Kerja\t\t : " +getLamaKerja()+ "  
tahun";  
    }  
  
}
```

e) Class Main

```
package com.company;  
  
public class Main {  
  
    public static void main(String[] args) {
```

```
System.out.println("=====");
    System.out.println("                DATA MANUSIA");

System.out.println("=====");
    Manusia man1 = new Manusia("Andi Maulana", "3576440504910003", true,
true);
    System.out.println(man1.toString());

System.out.println("=====");
    Manusia man2 = new Manusia("Rizky Noviandi", "3175031406020003",
true, false);
    System.out.println(man2.toString());

System.out.println("=====");
    Manusia man3 = new Manusia("Intan Sari", "3202081508960003", false,
true);
    System.out.println(man3.toString());

System.out.println("=====");

    System.out.println();

System.out.println("=====");
    System.out.println("                DATA MAHASISWA");

System.out.println("=====");
    MahasiswaFilkom mhs1 = new MahasiswaFilkom("Putri Salsabila",
"3528070109020004",false, false,"215150300111002", 4.0);
    System.out.println(mhs1.toString());

System.out.println("=====");
    MahasiswaFilkom mhs2 = new MahasiswaFilkom("Angga Putra",
"31730504012010005",true, false,"205150600111009", 2.8);
    System.out.println(mhs2.toString());

System.out.println("=====");
    MahasiswaFilkom mhs3 = new MahasiswaFilkom("Annisa Permata",
"3404071202000003",false, true,"185150200111016", 3.4);
    System.out.println(mhs3.toString());

System.out.println("=====");

    System.out.println();

System.out.println("=====");
    System.out.println("                DATA PEKERJA");

System.out.println("=====");
    Pekerja pkj1 = new Pekerja(9,26,"204777100016","Widodo Saputra",
"3302212806900001", true, true);
    System.out.println(pkj1.toString());

System.out.println("=====");
    Pekerja pkj2 = new Pekerja(6,24,"103777600007","Lidya Rahmatunnisa",
"3304092402960002", false, true);
    System.out.println(pkj2.toString());
```

```
System.out.println("=====");
    Pekerja pkj3 = new Pekerja(10,28,"602777700022","Ahmad Fauzan",
"3321071411980003", true, false);
    System.out.println(pkj3.toString());

System.out.println("=====");

    System.out.println();

System.out.println("=====");
    System.out.println("                DATA MANAJER");

System.out.println("=====");
    Manajer mnj1 = new Manajer(8,25,"501777300002","Pratama Herdiansyah",
"3203182204930003", true, true, 5);
    System.out.println(mnj1.toString());

System.out.println("=====");
    Manajer mnj2 = new Manajer(9,27,"302777100006","Gilang Widya",
"3512081202970006", true, false, 2);
    System.out.println(mnj2.toString());

System.out.println("=====");
    Manajer mnj3 = new Manajer(7,22,"203777100012","Melinda Putri",
"3273270803950004", false, true, 3);
    System.out.println(mnj3.toString());

System.out.println("=====");

    System.out.println();

System.out.println("=====");
    System.out.println("                TOTAL YANG TERDAFTAR");

System.out.println("=====");
    System.out.println("Manusia\t\t\t : " + (man1.getTotalManusia() -
mhs1.getTotalMahasiswa() - pkj1.getTotalPekerja()) + " Orang");
    System.out.println("Mahasiswa\t\t : " + mhs1.getTotalMahasiswa() + "
Orang");
    System.out.println("Pekerja\t\t\t : " + (pkj1.getTotalPekerja() -
mnj1.getTotalManajer()) + " Orang");
    System.out.println("Manajer\t\t\t : " + mnj1.getTotalManajer() + "
Orang");

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


3. Screenshot Output

```
=====
                        DATA MANUSIA
=====
Nama           : Andi Maulana
NIK            : 3576440504910003
Jenis Kelamin  : Laki-Laki
Pendapatan     : 25.0$
=====
Nama           : Rizky Noviandi
NIK            : 3175031406020003
Jenis Kelamin  : Laki-Laki
Pendapatan     : 15.0$
=====
Nama           : Intan Sari
NIK            : 3202081508960003
Jenis Kelamin  : Perempuan
Pendapatan     : 20.0$
=====

=====
                        DATA MAHASISWA
=====
Nama           : Putri Salsabila
NIK            : 3528070109020004
Jenis Kelamin  : Perempuan
Pendapatan     : 90.0$
IPK            : 4.0
NIM            : 215150300111002
Status         : Teknik Berburu Ubur Ubur, 2021
=====
Nama           : Angga Putra
NIK            : 31730504012010005
Jenis Kelamin  : Laki-Laki
Pendapatan     : 15.0$
IPK            : 2.8
NIM            : 205150600111009
Status         : Pendidikan Chum Bucket, 2020
=====
Nama           : Annisa Permata
NIK            : 3404071202000003
Jenis Kelamin  : Perempuan
Pendapatan     : 70.0$
IPK            : 3.4
NIM            : 185150200111016
Status         : Teknik Meniup Gelembung, 2018
=====
```

=====	
DATA PEKERJA	
=====	
Nama	: Widodo Saputra
NIK	: 3302212806900001
Jenis Kelamin	: Laki-Laki
Pendapatan	: 4895.0\$
Bonus	: 1360.0\$
Gaji	: 3510.0\$
NIP	: 204777100016
Status	: Pemasaran, Liyue cabang ke-4
=====	
Nama	: Lidya Rahmatunnisa
NIK	: 3304092402960002
Jenis Kelamin	: Perempuan
Pendapatan	: 2900.0\$
Bonus	: 720.0\$
Gaji	: 2160.0\$
NIP	: 103777600007
Status	: Akademik, Mondstadt cabang ke-3
=====	
Nama	: Ahmad Fauzan
NIK	: 3321071411980003
Jenis Kelamin	: Laki-Laki
Pendapatan	: 6235.0\$
Bonus	: 2020.0\$
Gaji	: 4200.0\$
NIP	: 602777700022
Status	: Administrasi, Natlan cabang ke-2
=====	
DATA MANAJER	
=====	
Nama	: Pratama Herdiansyah
NIK	: 3203182204930003
Jenis Kelamin	: Laki-Laki
Pendapatan	: 4449.65\$
Bonus	: 1420.9\$
Gaji	: 3000.0\$
NIP	: 501777300002
Status	: Riset, Fontaine cabang ke-1
Lama Kerja	: 5 tahun
=====	

```
Nama          : Gilang Widya
NIK           : 3512081202970006
Jenis Kelamin : Laki-Laki
Pendapatan    : 5448.45$
Bonus         : 1786.2$
Gaji          : 3645.0$
NIP           : 302777100006
Status        : Pemasaran, Inazuma cabang ke-2
Lama Kerja    : 2 tahun
=====
Nama          : Melinda Putri
NIK           : 3273270803950004
Jenis Kelamin : Perempuan
Pendapatan    : 3425.0$
Bonus         : 1092.0$
Gaji          : 2310.0$
NIP           : 203777100012
Status        : Pemasaran, Liyue cabang ke-3
Lama Kerja    : 3 tahun
=====
=====
TOTAL YANG TERDAFTAR
=====
Manusia       : 3 Orang
Mahasiswa     : 3 Orang
Pekerja       : 3 Orang
Manajer       : 3 Orang
=====
```