LAPORAN HASIL PRAKTIKUM ALGORITMA DAN STRUKTUR DASAR JOBSHEET 1



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Program Studi Teknik Informatika Jurusan Teknologi Informasi Praktikum

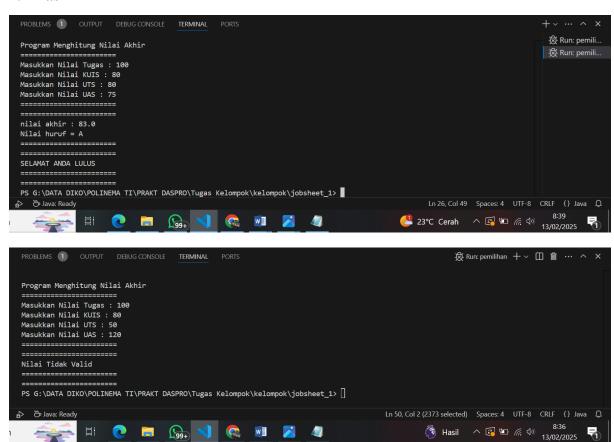
2025

Pemilihan

1.1 Code

```
import java.util.Scanner;
public class pemilihan {
   public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Program Menghitung Nilai Akhir");
        System.out.println("========");
        System.out.print("Masukkan Nilai Tugas : ");
       byte tugas = sc.nextByte();
        System.out.print("Masukkan Nilai KUIS : ");
       byte kuis = sc.nextByte();
        System.out.print("Masukkan Nilai UTS : ");
       byte uts = sc.nextByte();
        System.out.print("Masukkan Nilai UAS : ");
       byte uas = sc.nextByte();
        System.out.println("========");
        System.out.println("=======");
        if (tugas > 100 || kuis > 100 || uts > 100 || uas > 100) {
           System.out.println("Nilai Tidak Valid");
        } else {
           double nilaiAkhir = (tugas + kuis + uts + uas)/4;
           System.out.println("nilai akhir: " + nilaiAkhir);
           if ((nilaiAkhir > 80) && (nilaiAkhir <= 100)) {
               System.out.println("Nilai huruf = A");
           } else if ((nilaiAkhir > 73) && (nilaiAkhir <= 80)) {</pre>
               System.out.println("Nilai huruf = B+");
            } else if ((nilaiAkhir > 65) && (nilaiAkhir <= 73)) {</pre>
               System.out.println("Nilai huruf = B");
            } else if ((nilaiAkhir > 60) && (nilaiAkhir <= 65)) {</pre>
               System.out.println("Nilai huruf = C+");
            } else if ((nilaiAkhir > 50) && (nilaiAkhir <= 60)) {</pre>
               System.out.println("Nilai huruf = C");
            } else if ((nilaiAkhir > 39) && (nilaiAkhir <= 50)) {</pre>
               System.out.println("Nilai huruf = D");
           } else if ((nilaiAkhir > 0) && (nilaiAkhir <= 39)) {</pre>
               System.out.println("Nilai huruf = E");
           System.out.println("========");
           System.out.println("========");
           if (nilaiAkhir > 49 && nilaiAkhir <= 100) {</pre>
               System.out.println("SELAMAT ANDA LULUS");
           } else {
               System.out.println("ANDA TIDAK LULUS");
        System.out.println("========");
        System.out.println("========");
    }
```

1.2 Hasil



(§ Hasil ∧ (§ 13/02/2025) 8:36 13/02/2025

Perulangan

2.1 Code

```
import java.util.Scanner;
public class perulangan {
   public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Masukkan NIM : ");
        long nim = sc.nextLong();
        System.out.println("========");
       byte n = (byte) (nim % 100);
        System.out.println("n : " + n);
        for (int i = 1; i <= n; i++) {
            if (i == 6 || i == 10) {
               continue;
            if (i % 2 != 0) {
               System.out.print("* ");
            } else {
               System.out.print(i + " ");
        }
    }
```

2.2 Hasil

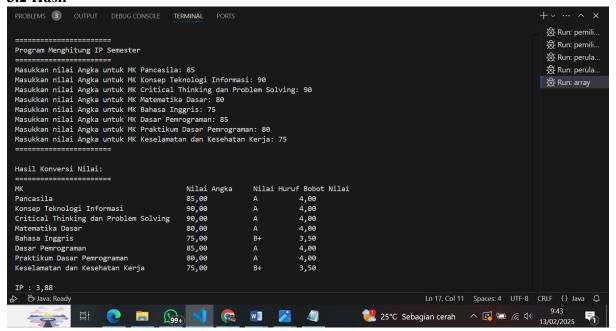


Array

3.1 Code

```
import java.util.Scanner;
public class array {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String[] matakuliah = {
            "Pancasila",
            "Konsep Teknologi Informasi",
            "Critical Thinking dan Problem Solving",
            "Matematika Dasar",
            "Bahasa Inggris",
            "Dasar Pemrograman",
            "Praktikum Dasar Pemrograman",
            "Keselamatan dan Kesehatan Kerja"
        };
        double[] nilaiAngka = new double[8];
        String[] nilaiHuruf = new String[8];
        double[] bobotNilai = new double[8];
        double totalBobot = 0;
        System.out.println("========");
        System.out.println("Program Menghitung IP Semester");
        System.out.println("========");
        for (int i = 0; i < matakuliah.length; i++) {</pre>
            System.out.print("Masukkan nilai Angka untuk MK " + matakuliah[i] +
": ");
            nilaiAngka[i] = input.nextDouble();
            if (nilaiAngka[i] >= 80 \&\& nilaiAngka[i] <= 100) {
                nilaiHuruf[i] = "A";
                bobotNilai[i] = 4.0;
            } else if (nilaiAngka[i] > 73 && nilaiAngka[i] <= 80) {</pre>
                nilaiHuruf[i] = "B+";
                bobotNilai[i] = 3.50;
            } else if (nilaiAngka[i] > 65 && nilaiAngka[i] <= 73) {</pre>
                nilaiHuruf[i] = "B";
                bobotNilai[i] = 3.00;
            } else if (nilaiAngka[i] > 60 \&\& nilaiAngka[i] <= 65) {
                nilaiHuruf[i] = "C+";
                bobotNilai[i] = 2.50;
            } else if (nilaiAngka[i] > 50 && nilaiAngka[i] <= 60) {</pre>
                nilaiHuruf[i] = "C";
                bobotNilai[i] = 2.00;
            } else if (nilaiAngka[i] > 39 && nilaiAngka[i] <= 50) {</pre>
                nilaiHuruf[i] = "D";
                bobotNilai[i] = 1.00;
            } else if (nilaiAngka[i] >= 0 && nilaiAngka[i] <= 39) {</pre>
                nilaiHuruf[i] = "E";
                bobotNilai[i] = 0.00;
            totalBobot += bobotNilai[i];
        }
```

3.2 Hasil



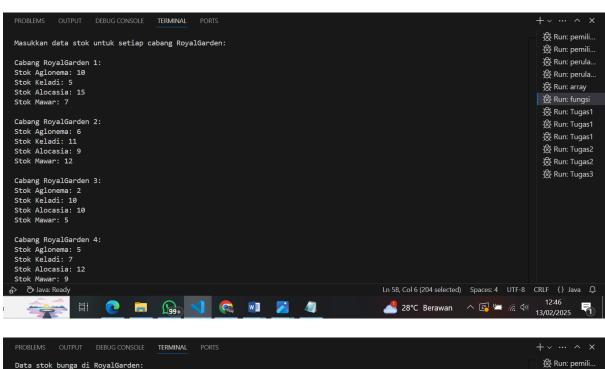
Fungsi

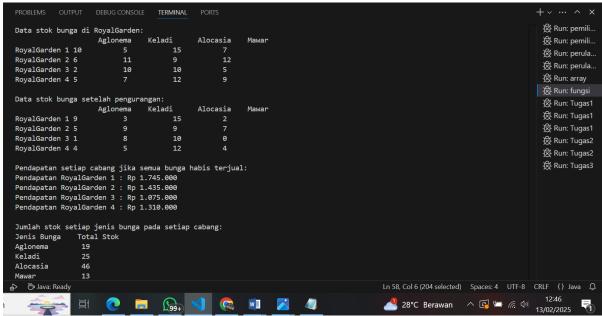
4.1 Code

```
import java.util.Scanner;
public class fungsi {
    static final int AGLOMENA PRICE = 75000;
    static final int KELADI PRICE = 50000;
    static final int ALOCASIA PRICE = 60000;
    static final int MAWAR PRICE = 10000;
   static String[] plantTypes = {"Aglonema", "Keladi", "Alocasia", "Mawar"};
   public static void main(String[] args) {
        int cabang = 4;
        int plantCount = plantTypes.length;
        int[][] stokBunga = new int[cabang][plantCount];
        Scanner scanner = new Scanner(System.in);
        System.out.println("Masukkan data stok untuk setiap cabang
RoyalGarden:");
        for (int i = 0; i < cabang; i++) {
            System.out.println("\nCabang RoyalGarden " + (i + 1) + ":");
            for (int j = 0; j < plantCount; j++) {</pre>
                System.out.print("Stok " + plantTypes[j] + ": ");
                stokBunga[i][j] = scanner.nextInt();
        System.out.println("\nData stok bunga di RoyalGarden:");
        displayStokBunga(stokBunga, cabang, plantCount);
        int[] penguranganStok = \{-1, -2, 0, -5\};
        reduceStokBunga(stokBunga, cabang, penguranganStok);
        System.out.println("\nData stok bunga setelah pengurangan:");
        displayStokBunga(stokBunga, cabang, plantCount);
        System.out.println("\nPendapatan setiap cabang jika semua bunga habis
terjual:");
        displayPendapatan(stokBunga, cabang);
        System.out.println("\nJumlah stok setiap jenis bunga pada setiap
cabang:");
        displayJumlahStokPerJenis(stokBunga, cabang);
        scanner.close();
    }
```

```
public static void displayStokBunga(int[][] stokBunga, int cabang, int
plantCount) {
        System.out.printf("%-20s", "");
        for (String plant : plantTypes) {
            System.out.printf("%-12s", plant);
        System.out.println();
        for (int i = 0; i < cabang; i++) {
            System.out.printf("RoyalGarden %-2d", i + 1);
            for (int j = 0; j < plantCount; j++) {</pre>
                System.out.printf("%-12d", stokBunga[i][j]);
            System.out.println();
    public static void reduceStokBunga(int[][] stokBunga, int cabang, int[]
penguranganStok) {
        for (int i = 0; i < cabang; i++) {
            for (int j = 0; j < penguranganStok.length; j++) {</pre>
                stokBunga[i][j] += penguranganStok[j];
                if (stokBunga[i][j] < 0) {</pre>
                    stokBunga[i][j] = 0;
            }
        }
    public static void displayPendapatan(int[][] stokBunga, int cabang) {
        for (int i = 0; i < cabang; i++) {
            int totalPendapatan = 0;
            for (int j = 0; j < plantTypes.length; j++) {</pre>
                int harga = 0;
                switch (j) {
                    case 0: harga = AGLOMENA PRICE; break;
                    case 1: harga = KELADI PRICE; break;
                    case 2: harga = ALOCASIA PRICE; break;
                    case 3: harga = MAWAR PRICE; break;
                totalPendapatan += stokBunga[i][j] * harga;
            System.out.printf("Pendapatan RoyalGarden %-2d: Rp %,d%n", i + 1,
totalPendapatan);
        }
    public static void displayJumlahStokPerJenis(int[][] stokBunga, int cabang)
{
        System.out.printf("%-15s", "Jenis Bunga");
        System.out.printf("%-15s%n", "Total Stok");
        for (int j = 0; j < plantTypes.length; j++) {</pre>
            int totalStok = 0;
            for (int i = 0; i < cabang; i++) {
                totalStok += stokBunga[i][j];
            System.out.printf("%-15s %-15d%n", plantTypes[j], totalStok);
        }
    }
}
```

4.2 Hasil





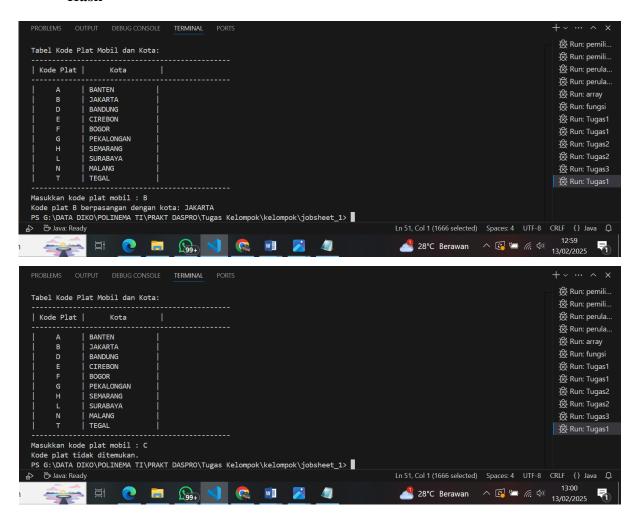
TUGAS

Tugas 1

• Code:

```
import java.util.Scanner;
public class Tugas1 {
   public static void main(String[] args) {
       char[] KODE = {'A', 'B', 'D', 'E', 'F', 'G', 'H', 'L', 'N', 'T'};
       String[] KOTA = {
          "BANTEN",
          "JAKARTA",
          "BANDUNG",
          "CIREBON",
          "BOGOR",
          "PEKALONGAN",
          "SEMARANG",
          "SURABAYA",
          "MALANG",
          "TEGAL"
       } ;
       System.out.println("Tabel Kode Plat Mobil dan Kota:");
       System.out.println("----");
       System.out.println("| Kode Plat | Kota |");
       System.out.println("----");
       for (int i = 0; i < KODE.length; i++) {
          System.out.printf("| %c | %-15s |\n", KODE[i], KOTA[i]);
       System.out.println("-----");
       Scanner scanner = new Scanner(System.in);
       System.out.print("Masukkan kode plat mobil : ");
       char inputKode = scanner.next().charAt(0);
       boolean ditemukan = false;
       for (int i = 0; i < KODE.length; i++) {
          if (Character.toUpperCase(inputKode) == KODE[i]) {
              System.out.println("Kode plat " + inputKode + " berpasangan
dengan kota: " + KOTA[i]);
             ditemukan = true;
              break;
          }
       if (!ditemukan) {
          System.out.println("Kode plat tidak ditemukan.");
       scanner.close();
   }
}
```

• Hasil

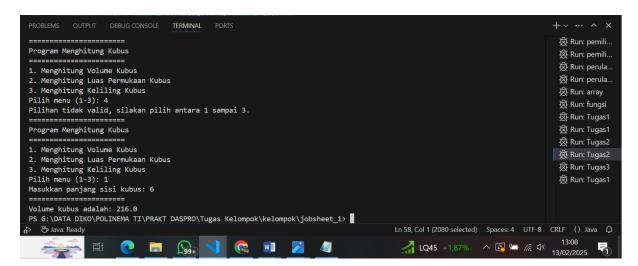


Tugas 2

Code

```
import java.util.Scanner;
public class Tugas3 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Masukkan jumlah mata kuliah: ");
        int n = scanner.nextInt();
        scanner.nextLine();
        String[] namaMataKuliah = new String[n];
        int[] SKS = new int[n];
        int[] semester = new int[n];
        String[] hariKuliah = new String[n];
        for (int i = 0; i < n; i++) {
            System.out.println("\nMata kuliah ke-" + (i + 1));
            System.out.print("Masukkan nama mata kuliah: ");
            namaMataKuliah[i] = scanner.nextLine();
            System.out.print("Masukkan jumlah SKS: ");
            SKS[i] = scanner.nextInt();
            System.out.print("Masukkan semester: ");
            semester[i] = scanner.nextInt();
            scanner.nextLine();
            System.out.print("Masukkan hari kuliah: ");
            hariKuliah[i] = scanner.nextLine();
        while (true) {
            System.out.println("\n==== MENU =====");
            System.out.println("1. Menampilkan seluruh jadwal kuliah");
            System.out.println("2. Menampilkan jadwal kuliah berdasarkan
hari");
            System.out.println("3. Menampilkan jadwal kuliah berdasarkan
semester");
            System.out.println("4. Mencari mata kuliah berdasarkan nama");
            System.out.println("5. Keluar");
            System.out.print("Pilih opsi: ");
            int opsi = scanner.nextInt();
            scanner.nextLine();
```

• Hasil



Tugas 3

• Code

```
import java.util.Scanner;
public class Tugas3 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Masukkan jumlah mata kuliah: ");
        int n = scanner.nextInt();
        scanner.nextLine();
        String[] namaMataKuliah = new String[n];
        int[] SKS = new int[n];
        int[] semester = new int[n];
        String[] hariKuliah = new String[n];
        for (int i = 0; i < n; i++) {
            System.out.println("\nMata kuliah ke-" + (i + 1));
            System.out.print("Masukkan nama mata kuliah: ");
            namaMataKuliah[i] = scanner.nextLine();
            System.out.print("Masukkan jumlah SKS: ");
            SKS[i] = scanner.nextInt();
            System.out.print("Masukkan semester: ");
            semester[i] = scanner.nextInt();
            scanner.nextLine();
            System.out.print("Masukkan hari kuliah: ");
            hariKuliah[i] = scanner.nextLine();
        while (true) {
            System.out.println("\n==== MENU =====");
            System.out.println("1. Menampilkan seluruh jadwal kuliah");
            System.out.println("2. Menampilkan jadwal kuliah berdasarkan
hari");
            System.out.println("3. Menampilkan jadwal kuliah berdasarkan
semester");
            System.out.println("4. Mencari mata kuliah berdasarkan nama");
            System.out.println("5. Keluar");
            System.out.print("Pilih opsi: ");
            int opsi = scanner.nextInt();
            scanner.nextLine();
```

```
switch (opsi) {
                case 1:
                    tampilkanSeluruhJadwal (namaMataKuliah, SKS, semester,
hariKuliah);
                    break;
                case 2:
                    System.out.print("Masukkan hari yang ingin ditampilkan
(Senin, Selasa, dst.): ");
                    String hari = scanner.nextLine();
                    tampilkanJadwalBerdasarkanHari(hari, namaMataKuliah, SKS,
semester, hariKuliah);
                    break;
                case 3:
                    System.out.print("Masukkan semester yang ingin ditampilkan:
");
                    int semesterInput = scanner.nextInt();
                    tampilkanJadwalBerdasarkanSemester(semesterInput,
namaMataKuliah, SKS, semester, hariKuliah);
                    break;
                case 4:
                    System.out.print("Masukkan nama mata kuliah yang ingin
dicari: ");
                    String namaCari = scanner.nextLine();
                    cariMataKuliah (namaCari, namaMataKuliah, SKS, semester,
hariKuliah);
                    break;
                case 5:
                    System.out.println("Terima kasih, program selesai.");
                    scanner.close();
                    return;
                default:
                    System.out.println("Pilihan tidak valid! Silakan pilih
lagi.");
            }
       }
    private static void tampilkanSeluruhJadwal(String[] namaMataKuliah, int[]
SKS, int[] semester, String[] hariKuliah) {
        System.out.println("\n===== Seluruh Jadwal Kuliah =====");
        for (int i = 0; i < namaMataKuliah.length; i++) {</pre>
            System.out.println("Mata Kuliah: " + namaMataKuliah[i]);
            System.out.println("SKS: " + SKS[i]);
            System.out.println("Semester: " + semester[i]);
            System.out.println("Hari: " + hariKuliah[i]);
            System.out.println("-----
        }
    }
```

```
private static void tampilkanJadwalBerdasarkanSemester(int semesterInput,
String[] namaMataKuliah, int[] SKS, int[] semester, String[] hariKuliah) {
       System.out.println("\n==== Jadwal Kuliah Semester " + semesterInput +
" =====");
       boolean ditemukan = false;
        for (int i = 0; i < namaMataKuliah.length; i++) {</pre>
            if (semester[i] == semesterInput) {
                System.out.println("Mata Kuliah: " + namaMataKuliah[i]);
                System.out.println("SKS: " + SKS[i]);
                System.out.println("Semester: " + semester[i]);
                System.out.println("Hari: " + hariKuliah[i]);
                System.out.println("-----
                ditemukan = true;
            }
        if (!ditemukan) {
            System.out.println("Tidak ada jadwal kuliah pada semester " +
semesterInput);
    }
    private static void cariMataKuliah(String namaCari, String[]
namaMataKuliah, int[] SKS, int[] semester, String[] hariKuliah) {
        System.out.println("\n===== Pencarian Mata Kuliah: " + namaCari + "
=====");
       boolean ditemukan = false;
        for (int i = 0; i < namaMataKuliah.length; i++) {</pre>
            if (namaMataKuliah[i].equalsIgnoreCase(namaCari)) {
                System.out.println("Mata Kuliah: " + namaMataKuliah[i]);
                System.out.println("SKS: " + SKS[i]);
                System.out.println("Semester: " + semester[i]);
                System.out.println("Hari: " + hariKuliah[i]);
                ditemukan = true;
            }
        if (!ditemukan) {
           System.out.println("Mata kuliah dengan nama " + namaCari + " tidak
ditemukan.");
       }
    }
}
```

• Hasil

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS	+ ~ ··· ^ ×
Masukkan jumlah mata kuliah: 2	☆ Run: pemili
Mata kuliah ke-1	及 Run: pemili
Masukkan nama mata kuliah: Basis Data	
Masukkan jumlah SKS: 2	☆ Run: perula
Masukkan semester: 2	🕸 Run: array
Masukkan hari kuliah: Selasa	☆ Run: fungsi
Mata kuliah ke-2	袋 Run: Tugas1
Masukkan nama mata kuliah: Praktikum ASD	袋 Run: Tugas1
Masukkan jumlah SKS: 3	- Run: Tugas2
Masukkan semester: 2	- Run: Tugas2
Masukkan hari kuliah: Kamis	- XF Run: Tugas3
	∰ Run: pemili
==== MENU ====	⊗ Run: perula
1. Menampilkan seluruh jadwal kuliah 2. Menampilkan jadwal kuliah berdasarkan hari	Run: perula
2. Menampilkan jadwal kulian beruasarkan mari 3. Menampilkan jadwal kuliah berdasarkan semester	☆ Run: array
4. Mencari mata kuliah berdasarkan nama	
5. Keluar	
Pilih opsi: 1	袋 Run: Tugas1
==== Seluruh Jadwal Kuliah ====	- Run: Tugas1 Run: Tugas2
Seliu in Jauman kullain Mata Kullah: Basis Data	₩ Run: Tugas2
SKS: 2	
Semester: 2	Ø Run: Tugas3
Hari: Selasa	Run: Tugas1
SKS: 3	
Semester: 2	
Hari: Kamis	
	χχ Kun. array
==== MENU ====	
1. Menampilkan seluruh jadwal kuliah 2. Menampilkan jadwal kuliah berdasarkan hari	袋 Run: Tugas1
2. menampilkan jadwal kuliah berdasarkan semester	☆ Run: Tugas1
4. Mencari mata kuliah berdasarkan nama	- Run: Tugas2
5. Keluar	-
Pilih opsi: 2	袋 Run: Tugas3
Masukkan hari yang ingin ditampilkan (Senin, Selasa, dst.): Kamis	⊗ Run: Tugas1
==== Jadwal Kuliah Hari Kamis ====	M Kull. Tugasi
Mata Kuliah: Praktikum ASD	
SKS: 3	
Semester: 2	
Hari: Kamis	

