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LAPORAN JOBSHEET 1

1. Pemilihan
   Kode Program:

```java
package Jobsheet1;
import java.util.Scanner;
public class Pemilihan07 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        double nilaiTgs, nilaiKuis, nilaiUTS, nilaiUAS, nilaiAkhir;
        String nilaiAngka, status, nilaiHuruf = "";

        System.out.println("=== PROGRAM MENGHITUNG NILAI AKHIR ===");
        System.out.println("=====================================");
        System.out.print("Masukkan Nilai Tugas: ");
        nilaiTgs = sc.nextInt();
        System.out.print("Masukkan Nilai Kuis: ");
        nilaiKuis = sc.nextInt();
        System.out.print("Masukkan Nilai UTS: ");
        nilaiUTS = sc.nextInt();
        System.out.print("Masukkan Nilai UAS: ");
        nilaiUAS = sc.nextInt();
        System.out.println("=====================================");
        System.out.println("=====================================");

        if (nilaiTgs < 0 || nilaiTgs > 100 || nilaiKuis < 0 || nilaiKuis >
100 || nilaiUTS < 0 || nilaiUTS > 100 || nilaiUAS < 0 || nilaiUAS > 100){
            System.out.println("Nilai Tidak Valid");
            System.out.println("=====================================");
            System.out.println("=====================================");
            return;
        }
```

```java
        nilaiAkhir = (nilaiTgs * 0.2) + (nilaiKuis * 0.2) + (nilaiUTS *
0.3) + (nilaiUAS * 0.3);

        if (nilaiAkhir > 80 && nilaiAkhir <= 100) {
            nilaiHuruf = "A";
        } else if (nilaiAkhir > 73 && nilaiAkhir <= 80) {
            nilaiHuruf = "B+";
        } else if (nilaiAkhir > 65 && nilaiAkhir <= 73) {
            nilaiHuruf = "B";
        } else if (nilaiAkhir > 60 && nilaiAkhir <= 65) {
            nilaiHuruf = "C+";
        } else if (nilaiAkhir > 50 && nilaiAkhir <= 60) {
            nilaiHuruf = "C";
        } else if (nilaiAkhir > 39 && nilaiAkhir <= 50) {
            nilaiHuruf = "D";
        } else if (nilaiAkhir >= 0 && nilaiAkhir <= 39) {
            nilaiHuruf = "E";
        } else{
            nilaiHuruf = "Nilai Tidak Valid";
        }

        System.out.println("Nilai Akhir: " + nilaiAkhir);
        System.out.println("Nilai Huruf: " + nilaiHuruf);

         if (nilaiAkhir >= 51) {
            status = "LULUS";
        } else {
            status = "TIDAK LULUS";
        }

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

Hasil Running

```
=== PROGRAM MENGHITUNG NILAI AKHIR ===
====================================
Masukkan Nilai Tugas: 85
Masukkan Nilai Kuis: 90
Masukkan Nilai UTS: 120
Masukkan Nilai UAS: 70
====================================
====================================
Nilai Tidak Valid
====================================
====================================
```

```
=== PROGRAM MENGHITUNG NILAI AKHIR ===
====================================
Masukkan Nilai Tugas: 90
Masukkan Nilai Kuis: 40
Masukkan Nilai UTS: 75
Masukkan Nilai UAS: 85
====================================
====================================
Nilai Akhir: 74.0
Nilai Huruf: B+
====================================
====================================
LULUS
```

2. Perulangan
   Kode Program

```java
package Jobsheet1;
import java.util.Scanner;
public class Perulangan07 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        String NIM;
        int n;

        System.out.print("Masukkan NIM: ");
        NIM = sc.nextLine();

        n = Integer.parseInt(NIM.substring(NIM.length() - 2));

        if (n < 10) {
            n += 10;
        }

        System.out.println("n = " + n);
        System.out.print("Output: ");
```

```java
        for (int i = 1; i <=n; i++) {
            if (i == 10 || i == 15) {
                continue;
            }

            if (i % 3 == 0) {
                System.out.print("# ");
            }
            else if (i % 2 == 0) {
                System.out.print(i + " ");
            }
            else {
                System.out.print("* ");
            }
        }
        sc.close();
    }
}
```

Hasil Running

```
Masukkan NIM: 2541720202
n = 12
Output: * 2 # 4 * # * 8 # * #
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data> ^C
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data>
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data>  c:; cd 'c:\Users\elif\Pictures\Algoritma dan Struk
tur Data'; & 'C:\Program Files\Java\jdk-24\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' '
C:\Users\elif\AppData\Roaming\Code\User\workspaceStorage\9b2710f7f000a7df9e7ad97397cc9216\redhat.java\jdt_
ws\Algoritma dan Struktur Data_7513a321\bin' 'Jobsheet1.Perulangan07'
Masukkan NIM: 2541720220
n = 20
Output: * 2 # 4 * # * 8 # * # * 14 16 * # * 20
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data>
```

3. Array
   Kode Program

```java
package Jobsheet1;
import java.util.Scanner;
public class Array07 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.println("===============================");
        System.out.println("Program Menghitung IP Semester");
        System.out.println("===============================");

        System.out.print("Masukkan jumlah mata kuliah: ");
```

```java
        int jumlahMK = sc.nextInt();
        sc.nextLine();

        String[] mk = new String[jumlahMK];
        double[] nilaiAngka = new double[jumlahMK];
        String[] nilaiHuruf = new String[jumlahMK];
        double[] bobotNilai = new double[jumlahMK];
        int[] sks = new int[jumlahMK];

        double totalNilai = 0;
        int totalSKS = 0;

        for (int i = 0; i < jumlahMK; i++) {
            System.out.println("\nMata Kuliah ke-" + (i + 1));

            System.out.print("Nama MK   : ");
            mk[i] = sc.nextLine();

            System.out.print("Jumlah SKS: ");
            sks[i] = sc.nextInt();

            System.out.print("Nilai Angka: ");
            nilaiAngka[i] = sc.nextDouble();
            sc.nextLine();

            if (nilaiAngka[i] >= 80) {
                nilaiHuruf[i] = "A";
                bobotNilai[i] = 4.0;
            } else if (nilaiAngka[i] >= 75) {
                nilaiHuruf[i] = "B+";
                bobotNilai[i] = 3.5;
            } else if (nilaiAngka[i] >= 70) {
                nilaiHuruf[i] = "B";
                bobotNilai[i] = 3.0;
            } else if (nilaiAngka[i] >= 65) {
                nilaiHuruf[i] = "C+";
                bobotNilai[i] = 2.5;
            } else if (nilaiAngka[i] >= 60) {
                nilaiHuruf[i] = "C";
                bobotNilai[i] = 2.0;
            } else if (nilaiAngka[i] >= 50) {
                nilaiHuruf[i] = "D";
                bobotNilai[i] = 1.0;
            } else {
                nilaiHuruf[i] = "E";
```

```java
                bobotNilai[i] = 0.0;
            }

            totalNilai += bobotNilai[i] * sks[i];
            totalSKS += sks[i];
        }

        double ip = totalNilai / totalSKS;

        System.out.println("\n==============================");
        System.out.println("Hasil Konversi Nilai");
        System.out.println("==============================");

        System.out.printf("%-25s %-10s %-12s %-12s %-10s\n",
                "MK", "SKS", "Nilai Angka", "Nilai Huruf", "Bobot");

        for (int i = 0; i < jumlahMK; i++) {
            System.out.printf("%-25s %-10d %-12.2f %-12s %-10.2f\n",
                    mk[i], sks[i], nilaiAngka[i], nilaiHuruf[i],
bobotNilai[i]);
        }

        System.out.println("==============================");
        System.out.printf("Total SKS : %d\n", totalSKS);
        System.out.printf("IP        : %.2f\n", ip);
    }
}
```

Hasil Running

```
==============================
Program Menghitung IP Semester
==============================
Masukkan jumlah mata kuliah: 2

Mata Kuliah ke-1
Nama MK   : Pancasila
Jumlah SKS: 2
Nilai Angka: 87

Mata Kuliah ke-2
Nama MK     : Matematika Dasar
Jumlah SKS: 3
Nilai Angka: 82


==============================
Hasil Konversi Nilai
==============================
MK                       SKS       Nilai Angka  Nilai Huruf  Bobot
Pancasila                2         87.00        A            4.00
Matematika Dasar         3         82.00        A            4.00
==============================
Total SKS : 5
IP        : 4.00
```

4. Fungsi
   Kode Program

```java
package Jobsheet1;
import java.util.Scanner;
public class Fungsi07 {

    static int[] harga = {75000, 50000, 60000, 10000};
    static String[] namaBunga = {"Aglonema", "Keladi", "Alocasia",
"Mawar"};
    static String[] cabang = {
            "RoyalGarden 1",
            "RoyalGarden 2",
            "RoyalGarden 3",
            "RoyalGarden 4"
    };

    static int[][] stok = {
            {10, 5, 15, 7},
            {6, 11, 9, 12},
            {2, 10, 10, 5},
            {5, 7, 12, 9}
    };

    static int hitungPendapatan(int indexCabang) {
        int total = 0;

        for (int i = 0; i < harga.length; i++) {
            total += stok[indexCabang][i] * harga[i];
        }
        return total;
    }

    public static void main(String[] args) {

        System.out.println("===== PENDAPATAN SETIAP CABANG ROYALGARDEN
=====\n");

        for (int i = 0; i < cabang.length; i++) {

            int pendapatan = hitungPendapatan(i);

            System.out.println(cabang[i]);
            System.out.println("Pendapatan : Rp " + pendapatan);
```

```java
            if (pendapatan > 1500000)
                System.out.println("Status     : Sangat Baik");
            else
                System.out.println("Status     : Perlu Evaluasi");

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

Hasil Running

```
===== PENDAPATAN SETIAP CABANG ROYALGARDEN =====

RoyalGarden 1
Pendapatan : Rp 1970000
Status     : Sangat Baik
-------------------------------------
RoyalGarden 2
Pendapatan : Rp 1660000
Status     : Sangat Baik
-------------------------------------
RoyalGarden 3
Pendapatan : Rp 1300000
Status     : Perlu Evaluasi
-------------------------------------
RoyalGarden 4
Pendapatan : Rp 1535000
Status     : Sangat Baik
-------------------------------------
```

5. Tugas 1
   Kode Program

```java
package Jobsheet1;
import java.util.Scanner;
public class Tugas1 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        char[] KODE = {'A','B','D','E','F','G','H','L','N','T'};

        char[][] KOTA = {
                {'B','A','N','T','E','N'},
                {'J','A','K','A','R','T','A'},
                {'B','A','N','D','U','N','G'},
                {'C','I','R','E','B','O','N'},
                {'B','O','G','O','R'},
                {'P','E','K','A','L','O','N','G','A','N'},
                {'S','E','M','A','R','A','N','G'},
```

```java
                {'S','U','R','A','B','A','Y','A'},
                {'M','A','L','A','N','G'},
                {'T','E','G','A','L'}
        };

        System.out.print("Masukkan kode plat: ");
        char input = sc.next().toUpperCase().charAt(0);

        boolean ditemukan = false;

        for (int i = 0; i < KODE.length; i++) {
            if (input == KODE[i]) {
                ditemukan = true;
                System.out.print("Kota : ");

                for (int j = 0; j < KOTA[i].length; j++) {
                    System.out.print(KOTA[i][j]);
                }
                System.out.println();
                break;

            }
        }

        if (!ditemukan) {
            System.out.println("Kode plat tidak ditemukan!");
        }

        sc.close();
    }
}
```

Hasil Running

```
Masukkan kode plat: E
Kota : CIREBON
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data> ^C
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data>
PS C:\Users\elif\Pictures\Algoritma dan Struktur Data>  c:; cd 'c:\Users\elif\Pictures\Algoritma dan Struk
tur Data'; & 'C:\Program Files\Java\jdk-24\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' '
C:\Users\elif\AppData\Roaming\Code\User\workspaceStorage\9b2710f7f000a7df9e7ad97397cc9216\redhat.java\jdt_
ws\Algoritma dan Struktur Data_7513a321\bin' 'Jobsheet1.Tugas1'
Masukkan kode plat: N
Kota : MALANG
```

6. Tugas 2
   Kode Program

```java
package Jobsheet1;
import java.util.Scanner;
```

```java
public class Tugas2 {
    static Scanner sc = new Scanner(System.in);

    static void inputJadwal(String[][] jadwal, int n) {
        for (int i = 0; i < n; i++) {
            System.out.println("\nJadwal ke-" + (i+1));

            System.out.print("Nama Mata Kuliah : ");
            jadwal[i][0] = sc.nextLine();

            System.out.print("Ruang            : ");
            jadwal[i][1] = sc.nextLine();

            System.out.print("Hari             : ");
            jadwal[i][2] = sc.nextLine();

            System.out.print("Jam              : ");
            jadwal[i][3] = sc.nextLine();
        }
    }

    static void tampilSemua(String[][] jadwal, int n) {
        System.out.println("\n================= JADWAL KULIAH
==================");
        System.out.printf("%-25s %-20s %-10s %-15s\n",
                "Mata Kuliah", "Ruang", "Hari", "Jam");

        for (int i = 0; i < n; i++) {
            System.out.printf("%-25s %-20s %-10s %-15s\n",
                    jadwal[i][0], jadwal[i][1], jadwal[i][2],
jadwal[i][3]);
        }
    }

    static void cariHari(String[][] jadwal, int n) {
        System.out.print("\nMasukkan hari yang dicari: ");
        String cari = sc.nextLine();
        boolean ketemu = false;

        for (int i = 0; i < n; i++) {
            if (jadwal[i][2].equalsIgnoreCase(cari)) {
                System.out.printf("%-25s %-20s %-10s %-15s\n",
                        jadwal[i][0], jadwal[i][1], jadwal[i][2],
jadwal[i][3]);
                ketemu = true;
```

```java
            }
        }

        if (!ketemu) System.out.println("Tidak ada jadwal di hari
tersebut.");
    }

    static void cariMK(String[][] jadwal, int n) {
        System.out.print("\nMasukkan mata kuliah: ");
        String cari = sc.nextLine();
        boolean ketemu = false;

        for (int i = 0; i < n; i++) {
            if (jadwal[i][0].equalsIgnoreCase(cari)) {
                System.out.printf("%-25s %-20s %-10s %-15s\n",
                        jadwal[i][0], jadwal[i][1], jadwal[i][2],
jadwal[i][3]);
                ketemu = true;
            }
        }

        if (!ketemu) System.out.println("Mata kuliah tidak ditemukan.");
    }

    public static void main(String[] args) {

        System.out.print("Jumlah jadwal kuliah: ");
        int n = sc.nextInt();
        sc.nextLine();

        String[][] jadwal = new String[n][4];

        inputJadwal(jadwal, n);

        int menu;
        do {
            System.out.println("\n===== MENU =====");
            System.out.println("1. Tampilkan Semua Jadwal");
            System.out.println("2. Cari Berdasarkan Hari");
            System.out.println("3. Cari Berdasarkan Mata Kuliah");
            System.out.println("4. Keluar");
            System.out.print("Pilih: ");
            menu = sc.nextInt();
            sc.nextLine();
```

```java
        switch (menu) {
            case 1: tampilSemua(jadwal, n); break;
            case 2: cariHari(jadwal, n); break;
            case 3: cariMK(jadwal, n); break;
        }

    } while (menu != 4);

    System.out.println("Program selesai.");
    }
}
```

Hasil Running

```
Jumlah jadwal kuliah: 1

Jadwal ke-1
Nama Mata Kuliah : Konsep Teknologi Informasi
Ruang            : LPY01
Hari             : Jumat
Jam              : 10.30-14.30

===== MENU =====
1. Tampilkan Semua Jadwal
2. Cari Berdasarkan Hari
3. Cari Berdasarkan Mata Kuliah
4. Keluar
Pilih: 1

================= JADWAL KULIAH =================
Mata Kuliah                  Ruang             Hari      Jam
Konsep Teknologi Informasi LPY01               Jumat     10.30-14.30

===== MENU =====
1. Tampilkan Semua Jadwal
2. Cari Berdasarkan Hari
3. Cari Berdasarkan Mata Kuliah
4. Keluar
Pilih: 2

Masukkan hari yang dicari: Jumat
Konsep Teknologi Informasi LPY01               Jumat     10.30-14.30

===== MENU =====
1. Tampilkan Semua Jadwal
2. Cari Berdasarkan Hari
3. Cari Berdasarkan Mata Kuliah
4. Keluar
Pilih: 3

Masukkan mata kuliah: Konsep Teknologi Informasi
Konsep Teknologi Informasi LPY01               Jumat     10.30-14.30

===== MENU =====
1. Tampilkan Semua Jadwal
2. Cari Berdasarkan Hari
3. Cari Berdasarkan Mata Kuliah
4. Keluar
Pilih: 4
Program selesai.
```