**PRAKTIKUM ALGORITMA DAN STRUKTUR DATA**

**JOBSHEET PERTEMUAN KE-1**

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**PROGRAM STUDI TEKNIK INFORMATIKA**

**JURUSAN TEKNOLOGI INFORMASI**

**POLITEKNIK NEGERI MALANG**

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**1.**

import java.util.Scanner;

public class menghitungNilai {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Masukkan nilai tugas: ");

int nilaiTugas = scanner.nextInt();

System.out.print("Masukkan nilai kuis: ");

int nilaiKuis = scanner.nextInt();

System.out.print("Masukkan nilai UTS: ");

int nilaiUTS = scanner.nextInt();

System.out.print("Masukkan nilai UAS: ");

int nilaiUAS = scanner.nextInt();

// tabel nilai

if (nilaiTugas < 0 || nilaiTugas > 100 ||

nilaiKuis < 0 || nilaiKuis > 100 ||

nilaiUTS < 0 || nilaiUTS > 100 ||

nilaiUAS < 0 || nilaiUAS > 100) {

System.out.println("Nilai tidak valid!");

System.exit(1);

}

// Menghitung nilai

double nilaiAkhir = (0.2 \* nilaiTugas) + (0.2 \* nilaiKuis) + (0.3 \* nilaiUTS) + (0.4 \* nilaiUAS);

String nilaiHuruf;

if (nilaiAkhir >= 80) {

nilaiHuruf = "A";

} else if (nilaiAkhir >= 73) {

nilaiHuruf = "B+";

} else if (nilaiAkhir >= 65) {

nilaiHuruf = "B";

} else if (nilaiAkhir >= 60) {

nilaiHuruf = "C+";

} else if (nilaiAkhir >= 50) {

nilaiHuruf = "C";

} else if (nilaiAkhir >= 39) {

nilaiHuruf = "D";

} else {

nilaiHuruf = "E";

}

// lulus/tidak lulus

String keterangan;

if (nilaiHuruf.equals("A") || nilaiHuruf.equals("B+") ||

nilaiHuruf.equals("B") || nilaiHuruf.equals("C+") ||

nilaiHuruf.equals("C")) {

keterangan = "LULUS";

} else {

keterangan = "TIDAK LULUS";

}

// hasil

System.out.println("Nilai akhir: " + nilaiAkhir);

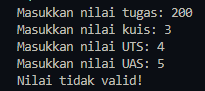
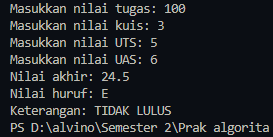
System.out.println("Nilai huruf: " + nilaiHuruf);

System.out.println("Keterangan: " + keterangan);

scanner.close();

}

}



**2.**

**import java.util.Scanner;**

**public class perulangan {**

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

**Scanner scanner = new Scanner(System.in);**

**long nim ;**

**System.out.println("Masukkan Nim :");**

**nim = scanner.nextLong();**

**long n = nim % 100;**

**if (n < 10) {**

**n += 10;**

**}**

**System.out.println("N: "+ n);**

**for (int i = 1; i <= n; i++) {**

**if (i == 6 || i == 10) {**

**continue;**

**} else if (i % 2 == 0) {**

**System.out.print(i + " ");**

**} else {**

**System.out.print("\* ");**

**}**

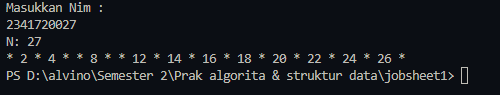
**}**

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

**scanner.close();**

**}**

**}**



**3.**

**import java.util.Scanner;**

**public class array {**

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

**Scanner sc = new Scanner(System.in);**

**String[] MK = {"Pancasila","Konsep Teknologi Informasi",**

**"Critical Thinking and 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];**

**int[] SKS = {2,2,2,3,2,2,3,2};**

**double totalNilai=0,IP;**

**for (int i = 1; i <=30; i++) {**

**System.out.print("=");**

**}**

**System.out.println("\nProgram Menghitung IP Semester");**

**for (int i = 1; i <=30; i++) {**

**System.out.print("=");**

**}**

**System.out.print("\nMasukkan nilai angka untuk MK Pancasila : ");**

**nilaiAngka[0] = sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Konsep Teknologi Informasi : ");**

**nilaiAngka[1]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Critical Thinking and Problem Solving : ");**

**nilaiAngka[2]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Matematika Dasar : ");**

**nilaiAngka[3]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Bahasa Inggris : ");**

**nilaiAngka[4]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Dasar Pemrograman : ");**

**nilaiAngka[5]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Praktikum Dasar Pemrograman : ");**

**nilaiAngka[6]= sc.nextDouble();**

**System.out.print("Masukkan nilai angka untuk MK Keselamatan dan Kesehatan Kerja : ");**

**nilaiAngka[7]= sc.nextDouble();**

**for (int i = 0; i < 8; i++) {**

**if (nilaiAngka[i] <= 100 && nilaiAngka[i] > 80) {**

**nilaiHuruf[i] = "A";**

**bobotNilai[i] = 4;**

**} else if (nilaiAngka[i] <= 80 && nilaiAngka[i] > 73) {**

**nilaiHuruf[i] = "B+";**

**bobotNilai[i] = 3.5;**

**} else if (nilaiAngka[i] <= 73 && nilaiAngka[i] > 65) {**

**nilaiHuruf[i] = "B";**

**bobotNilai[i] = 3;**

**} else if (nilaiAngka[i] <= 65 && nilaiAngka[i] > 60) {**

**nilaiHuruf[i] = "C+";**

**bobotNilai[i] = 2.5;**

**} else if (nilaiAngka[i] <= 60 && nilaiAngka[i] > 50) {**

**nilaiHuruf[i] = "C";**

**bobotNilai[i] = 2;**

**} else if (nilaiAngka[i] <= 50 && nilaiAngka[i] > 39) {**

**nilaiHuruf[i] = "D";**

**bobotNilai[i] = 1;**

**} else if (nilaiAngka[i] <= 39) {**

**nilaiHuruf[i] = "E";**

**bobotNilai[i] = 0;**

**}**

**}**

**for (int i = 1; i <=30; i++) {**

**System.out.print("=");**

**}**

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

**System.out.println("Hasil Konversi Nilai");**

**for (int i = 1; i <=30; i++) {**

**System.out.print("=");**

**}**

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

**System.out.printf("%-40s %-12s %-8s %-13s\n","MK", "Nilai Angka", "Nilai Huruf", "Bobot Nilai");**

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

**System.out.printf("%-43s %.2f %-12s %.2f\n",MK[i], nilaiAngka[i], nilaiHuruf[i], bobotNilai[i]);**

**}**

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

**for (int i = 1; i <=30; i++) {**

**System.out.print("=");**

**}**

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

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

**totalNilai += (bobotNilai[i]\*SKS[i]);**

**}**

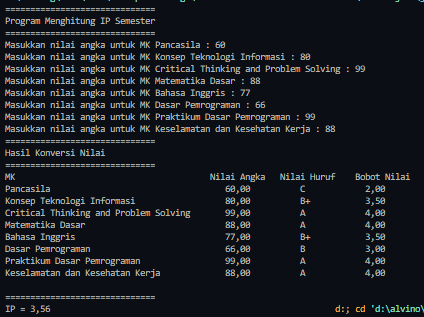
**IP = totalNilai / 18;**

**System.out.printf("IP = %.2f",IP);**

**sc.close();**

**}**

**}**



**4.**

**public class fugsi {**

**private static final double HARGA\_AGLONEMA = 75000;**

**private static final double HARGA\_KELADI = 50000;**

**private static final double HARGA\_ALOCASIA = 60000;**

**private static final double HARGA\_MAWAR = 10000;**

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

**String[] bunga = {"RoyalGarden1", "RoyalGarden2", "RoyalGarden3", "RoyalGarden4", "Aglonema", "Keladi", "Alocasia", "Mawar"};**

**int[][] stokRoyalGarden = {**

**{10, 5, 15, 7},**

**{6, 11, 9, 12},**

**{2, 10, 10, 5},**

**{5, 7, 12, 9}**

**};**

**System.out.println("1. Pendapatan setiap cabang jika semua bunga habis terjual :");**

**pendapatanPerCabang(bunga, stokRoyalGarden);**

**System.out.println("\n2. Stock setiap jenis bunga pada cabang RoyalGarden :");**

**stockPerJenisBunga(bunga, stokRoyalGarden);**

**System.out.println("\n3. Jumlah Stock setelah pengurangan karena bunga mati :");**

**int[] stokDikurangi = {-1, -2, 0, -5};**

**penguranganStokKarenaMati(bunga, stokRoyalGarden, stokDikurangi);**

**}**

**private static void pendapatanPerCabang(String[] bunga, int[][] stokRoyalGarden) {**

**double[] harga = {0, 0, 0, 0, HARGA\_AGLONEMA, HARGA\_KELADI, HARGA\_ALOCASIA, HARGA\_MAWAR};**

**for (int i = 0; i < 4; i++) {**

**double pendapatan = 0;**

**for (int j = 4; j < bunga.length; j++) {**

**pendapatan += harga[j] \* stokRoyalGarden[i][j - 4];**

**}**

**System.out.printf("%s: %.2f%n", bunga[i], pendapatan);**

**}**

**}**

**private static void stockPerJenisBunga(String[] bunga, int[][] stokRoyalGarden) {**

**for (int i = 4; i < bunga.length; i++) {**

**int totalStock = 0;**

**for (int[] royalGardenStock : stokRoyalGarden) {**

**totalStock += royalGardenStock[i - 4];**

**}**

**System.out.printf("%s: %d%n", bunga[i], totalStock);**

**}**

**}**

**private static void penguranganStokKarenaMati(String[] bunga, int[][] stokRoyalGarden, int[] stokDikurangi) {**

**for (int i = 0; i < bunga.length - 4; i++) {**

**for (int j = 0; j < stokRoyalGarden.length; j++) {**

**stokRoyalGarden[j][i] += stokDikurangi[i];**

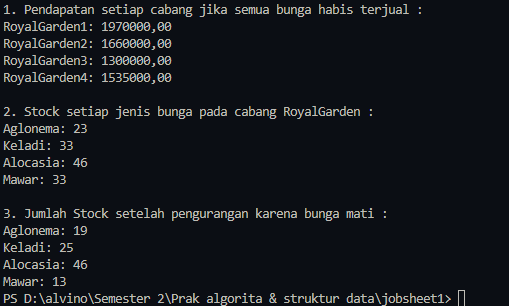
**}**

**}**

**stockPerJenisBunga(bunga, stokRoyalGarden);**

**}**

**}**



**5.1**

**import java.util.Scanner;**

**public class hitungPlat {**

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

**private static final String[][] KOTA = {**

**{"Banten"},**

**{"Jakarta"},**

**{"Bandung"},**

**{"Cirebon"},**

**{"Bogor"},**

**{"Pekalongan"},**

**{"Semarang"},**

**{"Surabaya"},**

**{"Malang"},**

**{"Tegal"}**

**};**

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

**Scanner scanner = new Scanner(System.in);**

**// Mendapatkan input kode plat nomor**

**System.out.print("Masukkan kode plat nomor: ");**

**char kodePlat = scanner.next().charAt(0);**

**// Mencari nama kota**

**int indexKota = -1;**

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

**if (KODE[i] == kodePlat) {**

**indexKota = i;**

**break;**

**}**

**}**

**// Menampilkan nama kota**

**if (indexKota >= 0) {**

**System.out.println("Nama kota: " + KOTA[indexKota][0]);**

**} else {**

**System.out.println("Kode plat nomor tidak valid!");**

**}**

**}**

**}**



**5.2**

**import java.util.Scanner;**

**public class kecepatan {**

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

**Scanner scanner = new Scanner(System.in);**

**// Menampilkan menu**

**System.out.println("Pilih rumus yang ingin dihitung:");**

**System.out.println("1. Kecepatan");**

**System.out.println("2. Jarak");**

**System.out.println("3. Waktu");**

**// Mendapatkan pilihan pengguna**

**int pilihan = scanner.nextInt();**

**// Menghitung hasil berdasarkan pilihan**

**switch (pilihan) {**

**case 1:**

**hitungKecepatan(scanner);**

**break;**

**case 2:**

**hitungJarak(scanner);**

**break;**

**case 3:**

**hitungWaktu(scanner);**

**break;**

**default:**

**System.out.println("Pilihan tidak valid!");**

**}**

**}**

**private static void hitungKecepatan(Scanner scanner) {**

**System.out.print("Masukkan jarak (m): ");**

**double jarak = scanner.nextDouble();**

**System.out.print("Masukkan waktu (s): ");**

**double waktu = scanner.nextDouble();**

**double kecepatan = jarak / waktu;**

**System.out.println("Kecepatan: " + kecepatan + " m/s");**

**}**

**private static void hitungJarak(Scanner scanner) {**

**System.out.print("Masukkan kecepatan (m/s): ");**

**double kecepatan = scanner.nextDouble();**

**System.out.print("Masukkan waktu (s): ");**

**double waktu = scanner.nextDouble();**

**double jarak = kecepatan \* waktu;**

**System.out.println("Jarak: " + jarak + " m");**

**}**

**private static void hitungWaktu(Scanner scanner) {**

**System.out.print("Masukkan kecepatan (m/s): ");**

**double kecepatan = scanner.nextDouble();**

**System.out.print("Masukkan jarak (m): ");**

**double jarak = scanner.nextDouble();**

**double waktu = jarak / kecepatan;**

**System.out.println("Waktu: " + waktu + " s");**

**}**

**}**

