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Kelas: 1B

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## Praktikum 1.1

```
1  import java.util.Scanner;
2
3  public class Praktikum11 {
4      Run | Debug
5      public static void main(String[] args) {
6          Scanner input = new Scanner(System.in);
7
8          System.out.println("Program Menghitung Nilai Akhir");
9          System.out.println("=====");
10
11         System.out.print("Masukkan nilai Tugas\t: ");
12         double tugas = input.nextDouble();
13
14         System.out.print("Masukkan nilai Kuis\t: ");
15         double kuis = input.nextDouble();
16
17         System.out.print("Masukkan nilai UTS\t: ");
18         double uts = input.nextDouble();
19
20         System.out.print("Masukkan nilai UAS\t: ");
21         double uas = input.nextDouble();
22
23         if (tugas < 0 || tugas > 100 || kuis < 0 || kuis > 100 || uts < 0 || uts > 100 || uas < 0 || uas > 100) {
24             System.out.println("=====");
25             System.out.println("=====");
26             System.out.println("Nilai tidak valid");
27             System.out.println("=====");
28             System.out.println("=====");
29         } else {
30             double nilaiAkhir = (0.2 * tugas) + (0.2 * kuis) + (0.3 * uts) + (0.3 * uas);
31
32             String nilaiHuruf;
```

```
33         if (nilaiAkhir > 80 && nilaiAkhir <= 100) {
34             nilaiHuruf = "A";
35         } else if (nilaiAkhir > 73 && nilaiAkhir <= 80) {
36             nilaiHuruf = "A+";
37         } else if (nilaiAkhir > 65 && nilaiAkhir <= 73) {
38             nilaiHuruf = "B";
39         } else if (nilaiAkhir > 60 && nilaiAkhir <= 65) {
40             nilaiHuruf = "C+";
41         } else if (nilaiAkhir > 50 && nilaiAkhir <= 60) {
42             nilaiHuruf = "C";
43         } else if (nilaiAkhir > 39 && nilaiAkhir <= 50) {
44             nilaiHuruf = "D";
45         } else {
46             nilaiHuruf = "E";
47         }
48
49         String statusLulus = (nilaiHuruf.equals(anObject:"A") || nilaiHuruf.equals(anObject:"B+")) || nilaiHuruf
50             ? "LULUS" : "TIDAK LULUS";
51
52         System.out.println("=====");
53         System.out.println("=====");
54         System.out.println("Nilai Akhir\t: " + nilaiAkhir);
55         System.out.println("Nilai Huruf\t: " + nilaiHuruf);
56         System.out.println("=====");
57         System.out.println("=====");
58         System.out.println("SELAMAT ANDA " + statusLulus);
59     }
60 }
```

```
Program Menghitung Nilai Akhir
=====
Masukkan nilai Tugas   : 90
Masukkan nilai Kuis    : 90
Masukkan nilai UTS     : 60
Masukkan nilai UAS     : 70
=====
Nilai Akhir           : 75.0
Nilai Huruf           : B+
=====
SELAMAT ANDA LULUS
PS D:\Project\Kuliah\SM2\Praktikum-ASD\Jobsheet1>
```

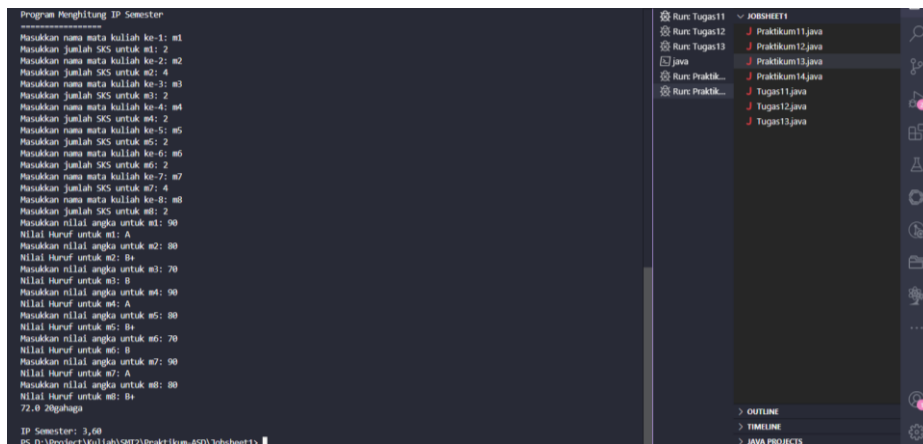
## Praktikum 1.2

```
1 import java.util.Scanner;
2
3 public class Praktikum12 {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.print("Masukkan NIM: ");
8         String nim = scanner.nextLine();
9
10        System.out.println("=====");
11
12        int n;
13        if (nim.length() >= 2) {
14            n = Integer.parseInt(nim.substring(nim.length() - 2));
15        } else {
16            System.out.println("NIM tidak valid.");
17            scanner.close();
18            return;
19        }
20
21        System.out.println("n : " + n);
22
23        for (int i = 1; i <= n; i++) {
24            if (i % 6 == 0 || i % 10 == 0) {
25                continue;
26            }
27            if (i % 2 == 1) {
28                System.out.print(i + " ");
29            } else {
30                System.out.print(i + " ");
31            }
32        }
33    }
34 }
```

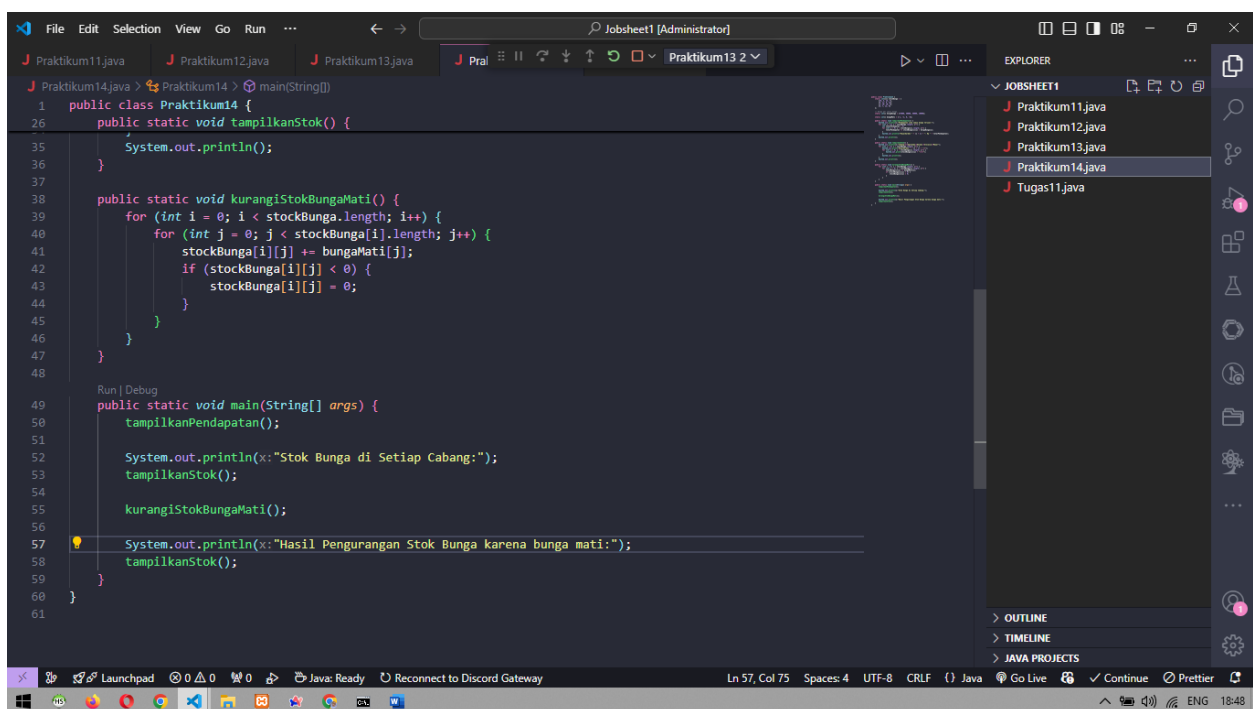
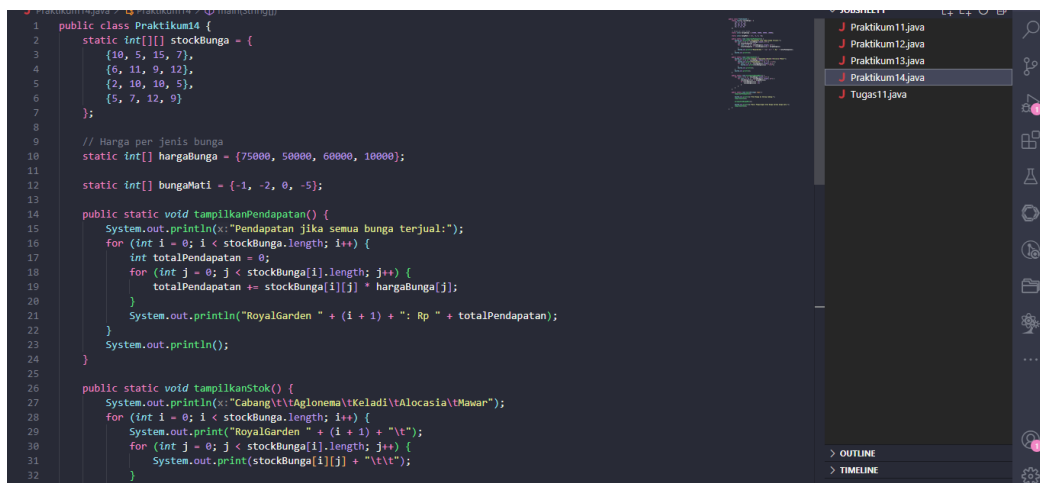
Masukkan NIM: 244187020156  
=====  
n : 56  
2 \* 4 \* 8 \* 12 \* 16 \* 20 \* 24 \* 28 \* 32 \* 36 \* 40 \* 44 \* 48 \* 50 \* 5  
2 \* 54 \* 56  
PS D:\Project\Kuliah\SEM2\Praktikum ASD\Jobsheet1>

## Praktikum 1.3

```
1 import java.util.Scanner;
2
3 public class Praktikum13 {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.println("Program Menghitung IP Semester");
8         System.out.println("=====");
9
10        int jumlahMatakuliah = 0;
11
12        String[] matakuliah = new String[jumlahMatakuliah];
13        int[] sksMatakuliah = new int[jumlahMatakuliah];
14        double[] nilaiAngkaMatakuliah = new double[jumlahMatakuliah];
15
16        for (int i = 0; i < jumlahMatakuliah; i++) {
17            System.out.print("Masukkan nama mata kuliah ke- " + (i + 1) + ": ");
18            matakuliah[i] = scanner.nextLine();
19
20            System.out.print("Masukkan jumlah SKS untuk " + matakuliah[i] + ": ");
21            sksMatakuliah[i] = scanner.nextInt();
22            scanner.nextLine();
23        }
24
25        double[] batasNilai = {80, 73, 65, 50, 39, 0};
26        String[] nilaiHuruf = {"A", "B+", "B", "C", "D", "E"};
27        double[] bobotNilai = {4.0, 3.5, 3.0, 2.5, 2.0, 1.0};
28
29        int totalSKS = 0;
30        double totalBobot = 0;
31
32        for (int i = 0; i < jumlahMatakuliah; i++) {
33            System.out.print("Masukkan nilai angka untuk " + matakuliah[i] + ": ");
34            nilaiAngkaMatakuliah[i] = scanner.nextDouble();
35
36            String huruf = "E";
37            double bobot = 0.0;
38
39            for (int j = 0; j < batasNilai.length; j++) {
40                if (nilaiAngkaMatakuliah[i] > batasNilai[j]) {
41                    huruf = nilaiHuruf[j];
42                    bobot = bobotNilai[j];
43                    break;
44                }
45            }
46
47            System.out.println("Nilai Huruf untuk " + matakuliah[i] + ": " + huruf);
48
49            totalSKS += sksMatakuliah[i];
50            totalBobot += bobot * sksMatakuliah[i];
51        }
52
53        System.out.println("Total Bobot : " + totalBobot + "gahaga");
54        double ipSemester = totalBobot / totalSKS;
55
56        System.out.printf("IP Semester: %.2f\n", ipSemester);
57        scanner.close();
58    }
59 }
```



## Praktikum 1.4



The screenshot shows a terminal window in an IDE. The terminal output is as follows:

```
PS D:\Project\Kuliah\SM12\Praktikum-ASD\Jobsheet1> & 'C:\Program Files\Java\jdk-22\bin\java.exe' ^-XX:+ShowCodeDetails
InExceptionHandlerMessages' ^-cp' 'C:\Users\Administrator\AppData\Roaming\Code\User\workspaceStorage\4f91df1bf5bbcc2c7e201676d
523fe67\redhat_java\jdt_ws\Jobsheet1_b7826a62\bin' 'Praktikum14'
Pendapatan jika semua bunga terjual:
RoyalGarden 1: Rp 1970000
RoyalGarden 2: Rp 1660000
RoyalGarden 3: Rp 1300000
RoyalGarden 4: Rp 1535000

Stok Bunga di Setiap Cabang:
Cabang    Aglonema    Keladi    Alocasia    Mawar
RoyalGarden 1    10         5         15         7
RoyalGarden 2    6         11         9         12
RoyalGarden 3    2         10        10         5
RoyalGarden 4    5         7         12         9

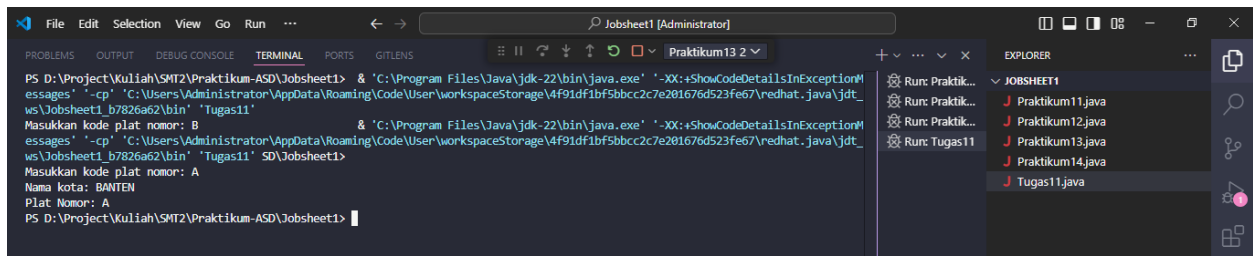
Hasil Pengurangan Stok Bunga karena bunga mati:
Cabang    Aglonema    Keladi    Alocasia    Mawar
RoyalGarden 1    9         3         15         2
RoyalGarden 2    5         9         9         7
RoyalGarden 3    1         8         10         0
RoyalGarden 4    4         5         12         4

PS D:\Project\Kuliah\SM12\Praktikum-ASD\Jobsheet1>
```

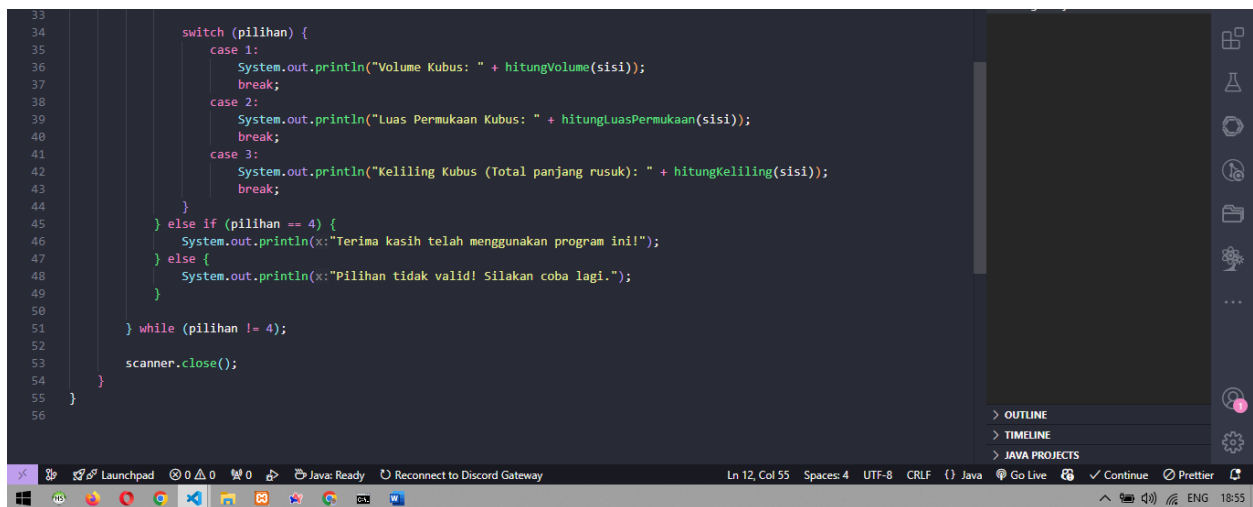
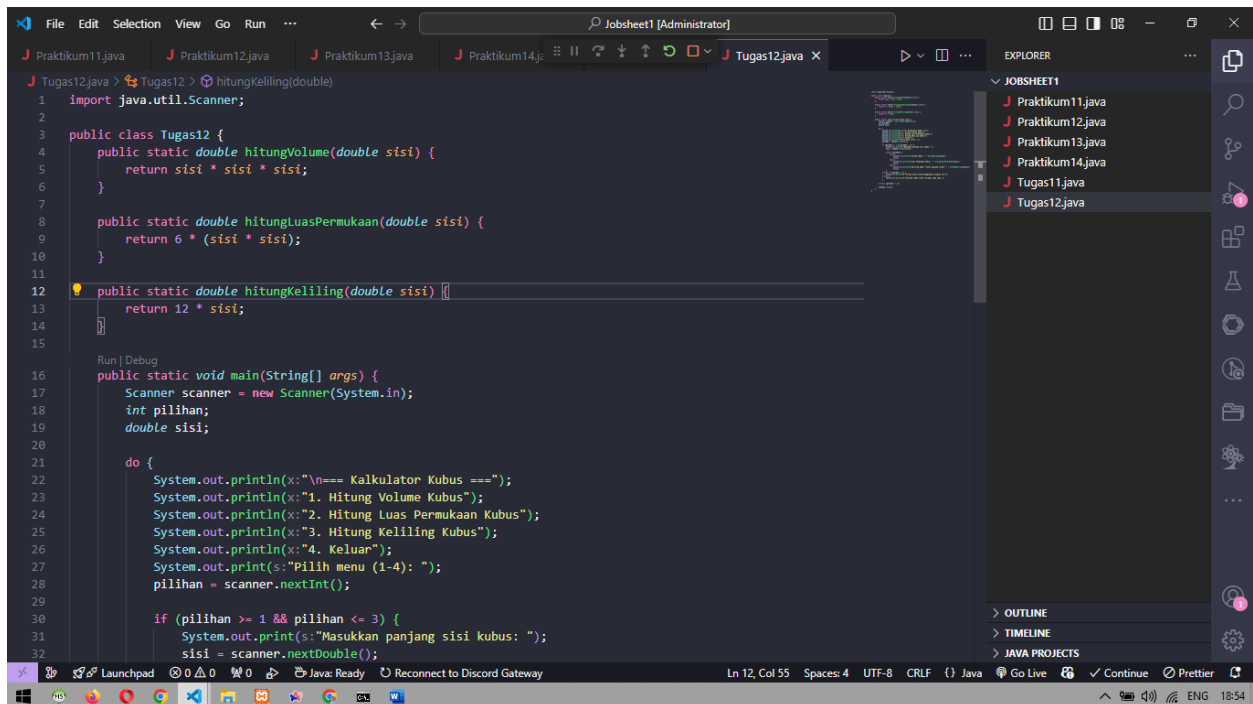
## Tugas 1.1

The screenshot shows a Java file named `Tugas11.java` in an IDE. The code is as follows:

```
1  import java.util.Scanner;
2
3  public class Tugas11 {
4      public static void main(String[] args) {
5          char[] KODE = {'A', 'B', 'D', 'E', 'F', 'G', 'H', 'I', 'L', 'N', 'T'};
6
7          String[] KOTA = {
8              "BANTEN",
9              "JAKARTA",
10             "BANDUNG",
11             "CIREBON",
12             "BOGOR",
13             "PEKALONGAN",
14             "SEMARANG",
15             "SURABAYA",
16             "MALANG",
17             "TEGAL"
18         };
19     }
20
21     Scanner scanner = new Scanner(System.in);
22     System.out.print(s:"Masukkan kode plat nomor: ");
23     char input = scanner.next().toUpperCase().charAt(index:0);
24
25     boolean found = false;
26     for (int i = 0; i < KODE.length; i++) {
27         if (KODE[i] == input) {
28             System.out.println("Nama kota: " + KOTA[i]);
29             System.out.println("Plat Nomor: " + input);
30             found = true;
31             break;
32         }
33     }
34
35     if (!found) {
36         System.out.println(x:"Kode plat tidak ditemukan.");
37     }
38
39     scanner.close();
40 }
```



## Tugas 1.2



```
=== Kalkulator Kubus ===
1. Hitung Volume Kubus
2. Hitung Luas Permukaan Kubus
3. Hitung Keliling Kubus
4. Keluar
Pilih menu (1-4): 1
Masukkan panjang sisi kubus: 2
Volume Kubus: 8.0

=== Kalkulator Kubus ===
1. Hitung Volume Kubus
2. Hitung Luas Permukaan Kubus
3. Hitung Keliling Kubus
4. Keluar
Pilih menu (1-4): 2
Masukkan panjang sisi kubus: 2
Luas Permukaan Kubus: 24.0

=== Kalkulator Kubus ===
1. Hitung Volume Kubus
2. Hitung Luas Permukaan Kubus
3. Hitung Keliling Kubus
4. Keluar
Pilih menu (1-4): 2
Masukkan panjang sisi kubus: 2
Luas Permukaan Kubus: 24.0

=== Kalkulator Kubus ===
1. Hitung Volume Kubus
2. Hitung Luas Permukaan Kubus
3. Hitung Keliling Kubus
4. Keluar
Pilih menu (1-4): 2
Masukkan panjang sisi kubus: 2
Luas Permukaan Kubus: 24.0

=== Kalkulator Kubus ===
1. Hitung Volume Kubus
2. Hitung Luas Permukaan Kubus
3. Hitung Keliling Kubus
4. Keluar
Pilih menu (1-4): 1
```

J Praktikum13.java  
J Praktikum14.java  
J Tugas11.java  
J Tugas12.java

> OUTLINE  
> TIMELINE  
> JAVA PROJECTS

## Tugas 1.3

```
You, 4 minutes ago | 1 author (You)
1 import java.util.Scanner;
2
You, 4 minutes ago | 1 author (You)
3 public class Tugas13 {
4
5     static Scanner scanner = new Scanner(System.in);
6
7     static void tampilkanJadwal(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah) {
8         for (int i = 0; i < namaMatkul.length; i++) {
9             System.out.println(namaMatkul[i] + " | SKS: " + sks[i] + " | Semester: " + semester[i] + " | Hari: "
10                + hariKuliah[i]);
11         }
12     }
13
14     static void tampilkanJadwalByHari(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah,
15 String hari) {
16         boolean ditemukan = false;
17         for (int i = 0; i < namaMatkul.length; i++) {
18             if (hariKuliah[i].equalsIgnoreCase(hari)) {
19                 System.out.println(namaMatkul[i] + " | SKS: " + sks[i] + " | Semester: " + semester[i]);
20                 ditemukan = true;
21             }
22         }
23         if (!ditemukan) {
24             System.out.println("Tidak ada mata kuliah pada hari " + hari);
25         }
26     }
27
28     static void tampilkanJadwalBySemester(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah,
29 int sem) {
30
31     if (semester[i] == sem) {
32         System.out.println(namaMatkul[i] + " | SKS: " + sks[i] + " | Hari: " + hariKuliah[i]);
33         ditemukan = true;
34     }
35     if (!ditemukan) {
36         System.out.println("Tidak ada mata kuliah pada semester " + sem);
37     }
38 }
39
40 static void cariMataKuliah(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah, String
41 cariMatkul) {
42     boolean ditemukan = false;
43     for (int i = 0; i < namaMatkul.length; i++) {
44         if (namaMatkul[i].equalsIgnoreCase(cariMatkul)) {
45             System.out.println("Mata Kuliah: " + namaMatkul[i] + " | SKS: " + sks[i] + " | Semester: " +
46 semester[i] + " | Hari: " + hariKuliah[i]);
47             ditemukan = true;
48         }
49     }
50     if (!ditemukan) {
51         System.out.println("Mata kuliah \"" + cariMatkul + "\" tidak ditemukan.");
52     }
53 }
54
55 static void tambahMataKuliah(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah, int n) {
56     for (int i = 0; i < n; i++) {
57         System.out.println("\nMasukkan data mata kuliah ke-" + (i + 1));
58         System.out.print("Nama Mata Kuliah: ");
59     }
60 }
```

J Praktikum11.java  
J Praktikum12.java  
J Praktikum13.java  
J Praktikum14.java  
J Tugas11.java  
J Tugas12.java  
J Tugas13.java

> OUTLINE

```
29     if (semester[i] == sem) {
30         System.out.println(namaMatkul[i] + " | SKS: " + sks[i] + " | Hari: " + hariKuliah[i]);
31         ditemukan = true;
32     }
33     if (!ditemukan) {
34         System.out.println("Tidak ada mata kuliah pada semester " + sem);
35     }
36 }
37
38 }
39
40 static void cariMataKuliah(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah, String
41 cariMatkul) {
42     boolean ditemukan = false;
43     for (int i = 0; i < namaMatkul.length; i++) {
44         if (namaMatkul[i].equalsIgnoreCase(cariMatkul)) {
45             System.out.println("Mata Kuliah: " + namaMatkul[i] + " | SKS: " + sks[i] + " | Semester: " +
46 semester[i] + " | Hari: " + hariKuliah[i]);
47             ditemukan = true;
48         }
49     }
50     if (!ditemukan) {
51         System.out.println("Mata kuliah \"" + cariMatkul + "\" tidak ditemukan.");
52     }
53 }
54
55 static void tambahMataKuliah(String[] namaMatkul, int[] sks, int[] semester, String[] hariKuliah, int n) {
56     for (int i = 0; i < n; i++) {
57         System.out.println("\nMasukkan data mata kuliah ke-" + (i + 1));
58         System.out.print("Nama Mata Kuliah: ");
59     }
60 }
```

J Praktikum14.java  
J Tugas11.java  
J Tugas12.java  
J Tugas13.java

> OUTLINE  
> TIMELINE  
> JAVA PROJECTS

```
56         namaMatkul[i] = scanner.nextLine();
57         System.out.print(s:"Jumlah SKS: ");
58         sks[i] = scanner.nextInt();
59         System.out.print(s:"Semester: ");
60         semester[i] = scanner.nextInt();
61         scanner.nextLine();
62         System.out.print(s:"Hari Kuliah: ");
63         hariKuliah[i] = scanner.nextLine();
64     }
65 }
66
67 Run | Debug
68 public static void main(String[] args) {
69     System.out.print(s:"Masukkan jumlah mata kuliah: ");
70     int n = scanner.nextInt();
71     scanner.nextLine();
72
73     String[] namaMatkul = new String[n];
74     int[] sks = new int[n];
75     int[] semester = new int[n];
76     String[] hariKuliah = new String[n];
77
78     tambahMataKuliah(namaMatkul, sks, semester, hariKuliah, n);
79
80     int pilihan;
81     do {
82         // Menampilkan menu
83         System.out.println(x:"\n=== Menu Jadwal Kuliah ===");
```

```
83         System.out.println(x:"\n=== Menu Jadwal Kuliah ===");
84         System.out.println(x:"1. Tampilkan seluruh jadwal kuliah");
85         System.out.println(x:"2. Tampilkan jadwal kuliah berdasarkan hari");
86         System.out.println(x:"3. Tampilkan jadwal kuliah berdasarkan semester");
87         System.out.println(x:"4. Cari mata kuliah berdasarkan nama");
88         System.out.println(x:"5. Keluar");
89         System.out.print(s:"Pilih menu (1-5): ");
90         pilihan = scanner.nextInt();
91         scanner.nextLine();
92
93         switch (pilihan) {
94             case 1:
95                 System.out.println(x:"\n=== Seluruh Jadwal Kuliah ===");
96                 tampilkanJadwal(namaMatkul, sks, semester, hariKuliah);
97                 break;
98             case 2:
99                 System.out.print(s:"\nMasukkan hari kuliah yang ingin ditampilkan: ");
100                 String hari = scanner.nextLine();
101                 System.out.println(x:"\n=== Jadwal Kuliah pada " + hari + " ===");
102                 tampilkanJadwalByHari(namaMatkul, sks, semester, hariKuliah, hari);
103                 break;
104             case 3:
105                 System.out.print(s:"\nMasukkan semester yang ingin ditampilkan: ");
106                 int sem = scanner.nextInt();
107                 System.out.println(x:"\n=== Jadwal Kuliah Semester " + sem + " ===");
108                 tampilkanJadwalBySemester(namaMatkul, sks, semester, hariKuliah, sem);
109                 break;
110             case 4:
111                 System.out.print(s:"\nMasukkan nama mata kuliah yang ingin dicari: ");
112                 String cariMatkul = scanner.nextLine();
```

```
113                 cariMataKuliah(namaMatkul, sks, semester, hariKuliah, cariMatkul);
114                 break;
115             case 5:
116                 System.out.println(x:"Terima kasih telah menggunakan program ini!");
117                 break;
118             default:
119                 System.out.println(x:"Pilihan tidak valid! Silakan coba lagi.");
120         }
121     } while (pilihan != 5);
122
123     scanner.close();
124 }
125 }
```

```

Semester 1 Praktikum11.java Praktikum12.java Praktikum13.java Praktikum14.java Tugas11.java Tugas12.java Tugas13.java
Masukkan jumlah mata kuliah: 3

Masukkan data mata kuliah ke-1
Nama Mata Kuliah: m1
Jumlah SKS: 1
Semester: 2
Hari Kuliah: Selasa

Masukkan data mata kuliah ke-2
Nama Mata Kuliah: m2
Jumlah SKS: 2
Semester: 2
Hari Kuliah: Senin

Masukkan data mata kuliah ke-3
Nama Mata Kuliah: m3
Jumlah SKS: 2
Semester: 1
Hari Kuliah: Senin

=== Menu Jadwal Kuliah ===
1. Tampilkan seluruh jadwal kuliah
2. Tampilkan jadwal kuliah berdasarkan hari
3. Tampilkan jadwal kuliah berdasarkan semester
4. Cari mata kuliah berdasarkan nama
5. Keluar
Pilih menu (1-5): 1

=== Seluruh Jadwal Kuliah ===
m1 | SKS: 1 | Semester: 2 | Hari: Selasa
m2 | SKS: 2 | Semester: 2 | Hari: Senin
m3 | SKS: 2 | Semester: 1 | Hari: Senin

```

```

2. Tampilkan jadwal kuliah berdasarkan hari
3. Tampilkan jadwal kuliah berdasarkan semester
4. Cari mata kuliah berdasarkan nama
5. Keluar
Pilih menu (1-5): 2

Masukkan hari kuliah yang ingin ditampilkan: Senin

=== Jadwal Kuliah pada Senin ===
m2 | SKS: 2 | Semester: 2
m3 | SKS: 2 | Semester: 1

=== Menu Jadwal Kuliah ===
1. Tampilkan seluruh jadwal kuliah
2. Tampilkan jadwal kuliah berdasarkan hari
3. Tampilkan jadwal kuliah berdasarkan semester
4. Cari mata kuliah berdasarkan nama
5. Keluar
Pilih menu (1-5): 3

Masukkan semester yang ingin ditampilkan: 2

=== Jadwal Kuliah Semester 2 ===
m1 | SKS: 1 | Hari: Selasa
m2 | SKS: 2 | Hari: Senin

=== Menu Jadwal Kuliah ===
1. Tampilkan seluruh jadwal kuliah
2. Tampilkan jadwal kuliah berdasarkan hari
3. Tampilkan jadwal kuliah berdasarkan semester
4. Cari mata kuliah berdasarkan nama
5. Keluar
Pilih menu (1-5): 4

Masukkan nama mata kuliah yang ingin dicari: m1
Mata Kuliah: m1 | SKS: 1 | Semester: 2 | Hari: Selasa

```