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Kelas : 1D

Absen : 17

Percobaan 1

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";

        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
    }
}
```

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>  & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-XX:+ShowC
odeDetailsInExceptionMessages' '-cp' 'C:\Users\Windows\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f6b7c3d0b18f0
32\redhat.java\jdt_ws\joobsheet10_be844ae7\bin' 'Bioskop17'
Amin    Bena
Candra  Dela
Eka     Farhan
Gisel   null
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

Pertanyaan:

1.Pengisian array tidak harus dimulai dari index 0 , karena array memiliki sifat random akses memory .

2.Karena penonton [3][1] tidak ada dalam daftar penonton(kosong)

3.

```java
 1  public class Bioskop17 {
 2
        Run | Debug
 3      public static void main(String[] args) {
 4          String[][] penonton = new String[4][2];
 5          penonton[0][0] = "Amin";
 6          penonton[0][1] = "Bena";
 7          penonton[1][0] = "Candra";
 8          penonton[1][1] = "Dela";
 9          penonton[2][0] = "Eka";
10          penonton[2][1] = "Farhan";
11          penonton[3][0] = "Gisel";
12          penonton[3][1] = "Hana";
13          System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
14          System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
15          System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
16          System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
17      }
18  }
```

4.

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println(penonton.length);
        System.out.println(penonton[0].length);
        System.out.println(penonton[1].length);
        System.out.println(penonton[2].length);
        System.out.println(penonton[3].length);

    }
}
```

Fungsi penonton.length adalah Menunjukkan jumlah baris.

Fungsi penonton[0].length adalah Menunjukkan jumlah elemen dalam baris tertentu.

Tergantung kepada penontong yang diinisialisasikan,jika penonton Panjang barisnya sama maka penonton[0].length, penonton[1].length, penonton[2].length, dan penonton[3].length akan memiliki nilai yang sama.

5.

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println("Jumlah baris: " + penonton.length);
        for (int i = 0; i < penonton.length; i++) {
            System.out.println("Panjang baris ke-" + (i + 1) + ": " + penonton[i].length);
        }

    }
}
```

```
ws\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f6b7c3d0b18f032\redhat.java\jdt_ws\joobsheet10_be
skop17'
Amin       Bena
Candra     Dela
Eka        Farhan
Gisel      Hana
Jumlah baris: 4
Panjang baris ke-1: 2
Panjang baris ke-2: 2
Panjang baris ke-3: 2
Panjang baris ke-4: 2
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

6.

```
kop17.java > ↳ Bioskop17 > ⦿ main(String[])
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println("Jumlah baris: " + penonton.length);
        for (String[] barisPenonton : penonton) {
            System.out.println("Panjang baris: " + barisPenonton.length);
        }
    }
}
```

```
t 10\joobsheet10'; & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessa
ws\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f6b7c3d0b18f032\redhat.java\jdt_ws\joob
skop17'
Amin     Bena
Candra   Dela
Eka      Farhan
Gisel    Hana
Jumlah baris: 4
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

7.

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println("Jumlah baris: " + penonton.length);
        for (String[] barisPenonton : penonton) {
            System.out.println("Panjang baris: " + barisPenonton.length);
        }
        System.out.println(x:"Penonton pada baris ke-3:");
        for (int i = 0; i < penonton[2].length; i++) {
            System.out.println(penonton[2][i]);
        }
    }
}
```

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> c:; cd 'C:\Users\Windows\One
\Java\jdk-22\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Windows\AppData
32\redhat.java\jdt_ws\joobsheet10_be844ae7\bin' 'Bioskop17'
Amin     Bena
Candra   Dela
Eka      Farhan
Gisel    Hana
Jumlah baris: 4
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
Penonton pada baris ke-3:
Eka
Farhan
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

8.

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println("Jumlah baris: " + penonton.length);
        for (String[] barisPenonton : penonton) {
            System.out.println("Panjang baris: " + barisPenonton.length);
        }
        System.out.println(x:"Penonton pada baris ke-3:");
        for (String i : penonton[2]) {
            System.out.println(i);
        }
    }
}
```

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>  & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-XX:+ShowCodeDetailsIn
C:\Users\Windows\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f6b7c3d0b18f032\redhat.java\jdt_ws\joobsheet10_be844ae7\bin' 'B
Amin     Bena
Candra   Dela
Eka      Farhan
Gisel    Hana
Jumlah baris: 4
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
Panjang baris: 2
Penonton pada baris ke-3:
Eka
Farhan
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

9.

```java
public class Bioskop17 {

    Run | Debug
    public static void main(String[] args) {
        String[][] penonton = new String[4][2];
        penonton[0][0] = "Amin";
        penonton[0][1] = "Bena";
        penonton[1][0] = "Candra";
        penonton[1][1] = "Dela";
        penonton[2][0] = "Eka";
        penonton[2][1] = "Farhan";
        penonton[3][0] = "Gisel";
        penonton[3][1] = "Hana";
        System.out.printf(format:"%s \t %s\n", penonton[0][0], penonton[0][1]);
        System.out.printf(format:"%s \t %s\n", penonton[1][0], penonton[1][1]);
        System.out.printf(format:"%s \t %s\n", penonton[2][0], penonton[2][1]);
        System.out.printf(format:"%s \t %s\n", penonton[3][0], penonton[3][1]);
        System.out.println("Jumlah baris: " + penonton.length);
        for (int i = 0; i < penonton.length; i++) {
            System.out.println("Penonton pada baris ke-" + (i + 1) + ": " + String.join(delimiter:", ", penonton[i]));
        }

        System.out.println(x:"Penonton pada baris ke-3:");
        for (String i : penonton[2]) {
            System.out.println(i);
        }
    }

}
}
```

```
C:\Users\Windows\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f
Amin        Bena
Candra      Dela
Eka         Farhan
Gisel       Hana
Jumlah baris: 4
Penonton pada baris ke-1: Amin, Bena
Penonton pada baris ke-2: Candra, Dela
Penonton pada baris ke-3: Eka, Farhan
Penonton pada baris ke-4: Gisel, Hana
Penonton pada baris ke-3:
Eka
Farhan
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

10. Kelebihan for-each loop:

-Sederhana

-Mengurangi risiko kesalahan indeks

Kekurangan for-each loop:

-Tidak bisa mengakses indeks secara langsung

- Tidak bisa memodifikasi struktur data

11.sampai indeks 3

12.sampai indeks 1

13. Fungsi String.join() adalah untuk menggabungkan elemen-elemen menjadi sebuah String deliminter

14.

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git add .
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git commit -m "first commit"
[main (root-commit) d81358d] first commit
 1 file changed, 30 insertions(+)
 create mode 100644 Bioskop17.java
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 568 bytes | 142.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/muhammadhasbiashiddiqi/joobsheet10.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

Percoban 2

```java
import java.util.Scanner;

public class BioskopWithScanner17 {

    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String[][] penonton = new String[4][2];
        String nama,next;
        int baris,kolom;
        while (true) {
            System.out.print(s:"Masukkan nama: ");
            nama = sc.nextLine();
            System.out.print(s:"Masukkan baris: ");
            baris = sc.nextInt();
            System.out.print(s:"Masukkan kolom: ");
            kolom = sc.nextInt();
            sc.nextLine();
            penonton[baris - 1][kolom - 1] = nama;
            System.out.print(s:"Input penonton lainnya? (y/n): ");
            next = sc.nextLine();
            if (next.equalsIgnoreCase(anotherString:"n")) {
                break;
            }
        }
    }
}
```

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-XX:+ShowCodeDetailsInExcep
Messages' '-cp' 'C:\Users\Windows\AppData\Roaming\Code\User\workspaceStorage\323257e840b71ec58f6b7c3d0b18f032\redhat.java\jdt_ws\joobsheet10_be84
\bin' 'BioskopWithScanner17'
Masukkan nama: agus
Masukkan baris: 1
Masukkan kolom: 2
Input penonton lainnya? (y/n): y
Masukkan nama: indah
Masukkan baris: 2
Masukkan kolom: 1
Input penonton lainnya? (y/n): y
Masukkan nama: sonya
Masukkan baris: 3
Masukkan kolom: 1
Input penonton lainnya? (y/n): y
Masukkan nama: fuadi
Masukkan baris: 3
Masukkan kolom: 2
Input penonton lainnya? (y/n): n
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git add .
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git commit -m "first commit"
[main 79ffc8a] first commit
 1 file changed, 27 insertions(+)
 create mode 100644 BioskopWithScanner17.java
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

Pertanyaan:

1. tidak, setiap elemen dapat diakses dan dimodifikasi secara langsung melalui indeksnya.

2.

```java
import java.util.Scanner;

public class BioskopWithScanner17 {

    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String[][] penonton = new String[4][2];
        String next;
        int pilihan;
        do {
            System.out.println(x:"\n=== Menu ===");
            System.out.println(x:"Menu 1: Input data penonton");
            System.out.println(x:"Menu 2: Tampilkan daftar penonton");
            System.out.println(x:"Menu 3: Exit");
            System.out.print(s:"Pilih menu: ");
            pilihan = sc.nextInt();
            sc.nextLine();
            switch (pilihan) {
                case 1:
                    System.out.print(s:"Masukkan nama: ");
                    String nama = sc.nextLine();
                    System.out.print(s:"Masukkan baris: ");
                    int baris = sc.nextInt();
                    System.out.print(s:"Masukkan kolom: ");
                    int kolom = sc.nextInt();
                    sc.nextLine();
                    if (baris > 0 && baris <= penonton.length && kolom > 0 && kolom <= penonton[0].length) {
                        penonton[baris - 1][kolom - 1] = nama;
                        System.out.println(x:"Data penonton berhasil dimasukkan.");
                    } else {
                        System.out.println(x:"Baris atau kolom tidak valid!");
                    }
                    break;
                case 2:
                    System.out.println(x:"\n=== Daftar Penonton ===");
                    for (int i = 0; i < penonton.length; i++) {
                        for (int j = 0; j < penonton[i].length; j++) {
                            if (penonton[i][j] != null) {
                                System.out.println("Baris " + (i + 1) + ", Kolom " + (j + 1) + ": " + penonton[i][j]);
                            }
                        }
                    }
                    break;
                case 3:
                    // Exit
                    System.out.println(x:"Keluar dari program.");
                    break;

                default:
                    System.out.println(x:"Pilihan tidak valid! Silakan pilih menu yang tersedia.");
                    break;
            }
        } while (pilihan != 3);

        sc.close();

    }
}
```

3.

```
case 1:
    boolean validInput = false;
    while (!validInput) {
        System.out.print(s:"Masukkan nama: ");
        String nama = sc.nextLine();
        System.out.print(s:"Masukkan baris: ");
        int baris = sc.nextInt();
        System.out.print(s:"Masukkan kolom: ");
        int kolom = sc.nextInt();
        sc.nextLine();
        if (baris > 0 && baris <= penonton.length && kolom > 0 && kolom <= penonton[0].length) {
            if (penonton[baris - 1][kolom - 1] == null) {
                penonton[baris - 1][kolom - 1] = nama;
                System.out.println(x:"Data penonton berhasil dimasukkan.");
                validInput = true;
            } else {
                System.out.println(x:"Kursi sudah terisi! Silakan pilih kursi lain.");
            }
        } else {
            System.out.println(x:"Baris atau kolom tidak valid! Silakan coba lagi.");
        }
    }
    break;
```

4.

```java
import java.util.Scanner;
public class BioskopWithScanner17 {

    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String[][] penonton = new String[4][2];
        String next;
        int pilihan;
        do {
            System.out.println(x:"\n=== Menu ===");
            System.out.println(x:"Menu 1: Input data penonton");
            System.out.println(x:"Menu 2: Tampilkan daftar penonton");
            System.out.println(x:"Menu 3: Exit");
            System.out.print(s:"Pilih menu: ");
            pilihan = sc.nextInt();
            sc.nextLine();
            switch (pilihan) {
                case 1:
                    boolean validInput = false;
                    while (!validInput) {
                        System.out.print(s:"Masukkan nama: ");
                        String nama = sc.nextLine();
                        System.out.print(s:"Masukkan baris: ");
                        int baris = sc.nextInt();
                        System.out.print(s:"Masukkan kolom: ");
                        int kolom = sc.nextInt();
                        sc.nextLine();
                        if (baris > 0 && baris <= penonton.length && kolom > 0 && kolom <= penonton[0].length) {
                            if (penonton[baris - 1][kolom - 1] == null) {
                                penonton[baris - 1][kolom - 1] = nama;
                                System.out.println(x:"Data penonton berhasil dimasukkan.");
                                validInput = true;
                            } else {
                                System.out.println(x:"Kursi sudah terisi! Silakan pilih kursi lain.");
                            }
                        } else {
                            System.out.println(x:"Baris atau kolom tidak valid! Silakan coba lagi.");
                        }
                    }
                    break;
                case 2:
                    System.out.println(x:"\n=== Daftar Penonton ===");
                    for (int i = 0; i < penonton.length; i++) {
                        for (int j = 0; j < penonton[i].length; j++) {
                            if (penonton[i][j] != null) {
                                System.out.println("Baris " + (i + 1) + ", Kolom " + (j + 1) + ": " + penonton[i][j]);
                            }
                        }
                    }
                    break;
                case 3:
                    // Exit
                    System.out.println(x:"Keluar dari program.");
                    break;

                default:
                    System.out.println(x:"Pilihan tidak valid! Silakan pilih menu yang tersedia.");
                    break;
            }
        } while (pilihan != 3);

        sc.close();

    }
}
```

5.

```java
public class BioskopWithScanner17 {
    public static void main(String[] args) {
public class BioskopWithScanner17 {

    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String[][] penonton = new String[4][2];
        String next;
        int pilihan;
        do {
            System.out.println(x:"\n=== Menu ===");
            System.out.println(x:"Menu 1: Input data penonton");
            System.out.println(x:"Menu 2: Tampilkan daftar penonton");
            System.out.println(x:"Menu 3: Exit");
            System.out.print(s:"Pilih menu: ");
            pilihan = sc.nextInt();
            sc.nextLine();
            switch (pilihan) {
                case 1:
                    boolean validInput = false;
                    while (!validInput) {
                        System.out.print(s:"Masukkan nama: ");
                        String nama = sc.nextLine();
                        System.out.print(s:"Masukkan baris: ");
                        int baris = sc.nextInt();
                        System.out.print(s:"Masukkan kolom: ");
                        int kolom = sc.nextInt();
                        sc.nextLine();
                        if (baris > 0 && baris <= penonton.length && kolom > 0 && kolom <= penonton[0].length) {
                            if (penonton[baris - 1][kolom - 1] == null) {
                                penonton[baris - 1][kolom - 1] = nama;
                                System.out.println(x:"Data penonton berhasil dimasukkan.");
                                validInput = true;
                            } else {
                                System.out.println(x:"Kursi sudah terisi! Silakan pilih kursi lain.");
                            }
                        } else {
                            System.out.println(x:"Baris atau kolom tidak valid! Silakan coba lagi.");
                        }
                    }
                    break;
                case 2:
                    System.out.println("\n=== Daftar Penonton ===");
                    for (int i = 0; i < penonton.length; i++) {
                        for (int j = 0; j < penonton[i].length; j++) {
                            if (penonton[i][j] == null) {
                                System.out.println("Baris " + (i + 1) + ", Kolom " + (j + 1) + ": *** (Kosong)");
                            } else {
                                System.out.println("Baris " + (i + 1) + ", Kolom " + (j + 1) + ": " + penonton[i][j]);
                            }
                        }
                    }
                    break;
                case 3:
                    // Exit
                    System.out.println(x:"Keluar dari program.");
                    break;

                default:
                    System.out.println(x:"Pilihan tidak valid! Silakan pilih menu yang tersedia.");
                    break;
            }
        } while (pilihan != 3);

        sc.close();

    }
}
```

6.

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git add .
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git commit -m "first commit"
[main 0ce9669] first commit
 1 file changed, 58 insertions(+), 17 deletions(-)
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git push -u origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.44 KiB | 245.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), done.
To https://github.com/muhammadhasbiashiddiqi/joobsheet10.git
   d81358d..0ce9669  main -> main
branch 'main' set up to track 'origin/main'.
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```

Percobaan 3

```
Numbers17.java > Numbers17 > main(String[])
    public class Numbers17 {

        Run | Debug
        public static void main(String[] args) {
            int[][] mynumbers = new int[3][];
            mynumbers[0] = new int[5];
            mynumbers[1] = new int[3];
            mynumbers[2] = new int[1];
        }
    }
```

Pertanyaan:

1.

```java
import java.lang.reflect.Array;
import java.util.Arrays;

public class Numbers17 {

    Run | Debug
    public static void main(String[] args) {
        int[][] mynumbers = new int[3][];
        mynumbers[0] = new int[5];
        mynumbers[1] = new int[3];
        mynumbers[2] = new int[1];
        for (int i=0 < mynumbers.length;i++) {
            System.out.println(Arrays.toString(mynumbers[i]));
        }
    }
}
```

2. untuk mengonversi array menjadi representasi string (teks).

3. 0

4.

```java
import java.lang.reflect.Array;
import java.util.Arrays;

public class Numbers17 {

    Run | Debug
    public static void main(String[] args) {
        int[][] mynumbers = new int[3][];
        mynumbers[0] = new int[5];
        mynumbers[1] = new int[3];
        mynumbers[2] = new int[1];
        for (int i=0 < mynumbers.length;i++) {
            System.out.println(Arrays.toString(mynumbers[i]));
        }
        for (int i=0 < mynumbers.length;i++) {
            System.out.println("panjang baris ke- " +(i+1)+": "+ mynumbers[i].length);
        }
    }
}
```

5. Ya, panjang array tidak dapat dimodifikasi setelah diinstansiasi

Percobaan 4

```java
import java.util.Scanner;

public class SIAKAD17 {

    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int [][] nilai = new int[4][3];
        for (int i = 0; i < nilai.length; i++) {
            System.out.println("Input nilai mahasiswa ke-" + (i + 1));
            for (int j = 0; j < nilai[i].length; j++) {
                System.out.print("Nilai mata kuliah " + (j + 1) + ": ");
                nilai[i][j] = sc.nextInt();
            }

        }
        for (int i = 0; i < nilai.length; i++) {
            System.out.println("Input nilai mahasiswa ke-" + (i + 1));
            double totalPerSiswa = 0;
            for (int j = 0; j < nilai[i].length; j++) {
                System.out.print("Nilai mata kuliah " + (j + 1) + ": ");
                nilai[i][j] = sc.nextInt();
                totalPerSiswa += nilai[i][j];
            }
            System.out.println("Nilai rata-rata: " + totalPerSiswa / 3);
        }
        System.out.println(x:"/n===========================");
        System.out.println(x:"rata rata nilai kuliah : ");
        for (int j = 0; j < 3; j++) {
            double totalmatkul = 0;
            for (int i = 0; i < 4; i++) {
                totalmatkul += nilai[i][j];
            }


            }
            System.out.println("mata kuliah " + (j+1) + ":" + totalmatkul/4);


        }
    }
}
```

Pertanyaan

1.

```java
import java.util.Scanner;

public class SIAKAD17 {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print(s:"Masukkan jumlah siswa: ");
        int jumlahSiswa = sc.nextInt();
        System.out.print(s:"Masukkan jumlah mata kuliah: ");
        int jumlahMataKuliah = sc.nextInt();
        int[][] nilai = new int[jumlahSiswa][jumlahMataKuliah];
        for (int i = 0; i < jumlahSiswa; i++) {
            System.out.println("Input nilai untuk mahasiswa ke-" + (i + 1));
            for (int j = 0; j < jumlahMataKuliah; j++) {
                System.out.print("Nilai mata kuliah " + (j + 1) + ": ");
                nilai[i][j] = sc.nextInt();
            }
        }
        System.out.println(x:"\n===========================");
        for (int i = 0; i < jumlahSiswa; i++) {
            double totalPerSiswa = 0;
            for (int j = 0; j < jumlahMataKuliah; j++) {
                totalPerSiswa += nilai[i][j];
            }
            System.out.println("Nilai rata-rata mahasiswa ke-" + (i + 1) + ": " + (totalPerSiswa / jumlahMataKuliah));
        }
        System.out.println(x:"\n===========================");
        System.out.println(x:"Rata-rata nilai per mata kuliah: ");
        for (int j = 0; j < jumlahMataKuliah; j++) {
            double totalMatkul = 0;
            for (int i = 0; i < jumlahSiswa; i++) {
                totalMatkul += nilai[i][j];
            }
            System.out.println("Mata kuliah " + (j + 1) + ": " + (totalMatkul / jumlahSiswa));
        }
    }
}
```

2.

```
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git add .

PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git commit -m "first commit"

[main 25b7beb] first commit
 1 file changed, 37 insertions(+)
 create mode 100644 SIAKAD17.java
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git push -u origin main
                        PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git push -u or
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10> git push -u origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.19 KiB | 243.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/muhammadhasbiashiddiqi/joobsheet10.git
   0ce9669..25b7beb  main -> main
branch 'main' set up to track 'origin/main'.
PS C:\Users\Windows\OneDrive\praktik_koding\joobsheet 10\joobsheet10>
```