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Percobaan 1

1. Masing masing memiliki attribute dan method
2. 5 -> judul, pengarang, halaman, stok, harga
3. 4 -> tampilInformasi, terjual, restock, gantiHarga
4.

```
void terjual(int jmlh) {
    if (this.stok <= 0) {
        return;
    }

    this.stok -= jmlh;
}
```

5. Karena yg direstock adalah attribute stock, stok = jumlah

Percobaan 2

1.

```
Buku17 buku1 = new Buku17();
```

2. Memakai (.) contoh buku2.judul
3. Karena attribute diganti dengan menggunakan method yg ada di class Buku

Percobaan 3

1.

```
public Buku17(String jdl, String pg, int hal, int stok, int har) {
    this.judul = jdl;
    this.pengarang = pg;
    this.halaman = hal;
    this.stok = stok;
    this.harga = har;

}
```

2. Memanggil object baru dengan mengisi attribute di konstruktor
3. Error, karena di file BukuMain object buku2 memanggil konstruktor berparameter
4. Tidak, karena bisa diakses tidak berurutan

```
Buku17 bukuMahasiswa = new Buku17(jdl:"The C Programing Language", pg:"someone", hal:0, stok:0, har:0);
```

5.

Tugas 1

```java
package practicum;

public class Main {
    public static void main(String[] args) {
        Buku17 buku1 = new Buku17("Foo", "John Doe", 10, 100, 10_000);
        buku1.terjual(2);
        buku1.hitungHargaTotal();
        buku1.hitungDiskon();
        buku1.tampilInformasi();

    }
}
```

```java
package practicum;

/**
 * Percobaan1
 */
public class Buku17 {
    String judul;
    String pengarang;
    int halaman;
    int stok;
    int harga;
    int terjual;
    int hargaTotal;
    int hargaDiskon;
    int hargaAfterDiskon;
    boolean isDiskon = false;

    public Buku17(String judul, String pengarang, int halaman, int stok, int harga) {
        this.judul = judul;
        this.pengarang = pengarang;
        this.halaman = halaman;
        this.stok = stok;
        this.harga = harga;
    }

    void tampilInformasi() {
        System.out.println("Judul : " + this.judul);
        System.out.println("Pengarang : " + this.pengarang);
        System.out.println("halaman : " + this.halaman);
        System.out.println("Stok : " + this.stok);
        System.out.println("Harga : " + this.harga);
        System.out.println("Total Harga : " + this.hargaTotal);

        if (this.isDiskon) {
            System.out.println("Diskon : " + this.hargaDiskon);
            System.out.println("Harga setelah diskon : " + this.hargaAfterDiskon);
        }

    }

    void terjual(int jmlh) {
        if (this.stok <= 0) {
            return;
        }
        this.terjual = jmlh;
        this.stok -= jmlh;
    }

    void restock(int jmlh) {
        this.stok += jmlh;
    }

    void gantiHarga(int harga) {
        this.harga = harga;
    }

    void hitungHargaTotal() {
        this.hargaTotal = this.terjual * this.harga;
    }

    void hitungDiskon() {
        if (this.hargaTotal > 150_000) {
            this.isDiskon = true;
            this.hargaDiskon = (this.hargaTotal * 12) / 100;
            this.hargaAfterDiskon = this.hargaTotal - this.hargaDiskon;
            return;
        }

        if (this.hargaTotal >= 75_000 && this.hargaTotal <= 150_000) {
            this.isDiskon = true;
            this.hargaDiskon = (this.hargaTotal * 5) / 100;
            this.hargaAfterDiskon = this.hargaTotal - this.hargaDiskon;
            return;
        }
    }
}
```

Tugas 2

```java
package dragon;

import java.util.*;

class Main {
    static Dragon dragon = new Dragon(5, 5);
    static Scanner sc = new Scanner(System.in);

    public static void main(String[] args) {

        while (true) {
            System.out.println();
            System.out.printf("width : %d\nheight : %d\n", dragon.width, dragon.height);
            System.out.println();
            System.out.println("1. Move left");
            System.out.println("2. Move right");
            System.out.println("3. Move up");
            System.out.println("4. Move bottom");
            System.out.println("5. print position");
            System.out.println();
            System.out.print("enter value? (0 : exit) : ");
            int input = sc.nextInt();
            System.out.println();

            switch (input) {
                case 0:
                    return;
                case 1:
                    dragon.moveLeft();
                    break;

                case 2:
                    dragon.moveRight();
                    break;

                case 3:
                    dragon.moveUp();
                    break;

                case 4:
                    dragon.moveBottom();
                    break;

                case 5:
                    dragon.printPosition();
                    break;

                default:
                    System.out.println("Input not valid");
                    break;
            }
        }
    }
}
```

```java
package dragon;

public class Dragon {
    int x = 0;
    int y = 0;
    int width;
    int height;

    public Dragon(int width, int height) {
        this.width = width;
        this.height = height;
    }

    void moveRight() {
        this.x++;
        System.out.println("Dragon moved to right");

        boolean isCollided = detectCollision(this.x, this.y);

        if (!isCollided) {
            return;
        }

        System.out.println("Collided : " + isCollided);
        this.x--;
    }

    void moveLeft() {
        this.x--;
        System.out.println("Dragon moved to left");

        boolean isCollided = detectCollision(this.x, this.y);

        if (!isCollided) {
            return;
        }

        System.out.println("Collided : " + isCollided);
        this.x++;
    }

    void moveUp() {
        this.y++;
        System.out.println("Dragon moved to up");

        boolean isCollided = detectCollision(this.x, this.y);

        if (!isCollided) {
            return;
        }

        System.out.println("Collided : " + isCollided);
        this.y--;
    }

    void moveBottom() {
        this.y--;
        System.out.println("Dragon moved to bottom");

        boolean isCollided = detectCollision(this.x, this.y);

        if (!isCollided) {
            return;
        }
        System.out.println("Collided : " + isCollided);
        this.y++;
    }

    void printPosition() {
        System.out.printf("position\nx : %d\ny : %d\n", this.x, this.y);
    }

    boolean detectCollision(int x, int y) {
        return x < 0 || x > this.width || y < 0 || y > this.height;
    }
}
```