Tugas Evaluasi III   Makassar, 21 April 2021

PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK

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PROGRAM STUDI TEKNIK INFORMATIKA

FAKULTAS ILMU KOMPUTER

UNIVERSITAS MUSLIM INDONESIA

MAKASSAR

2021

A. Modul 6

1. Buatlah sebuah program dengan tema yang berbeda setiap praktikan. Program yang mengimplementasikan konsep polimerfisme.

Jawab:

Superclass Content:

```java
public class Content {
    public void List() {
        System.out.println("List of Fahmi's Content: ");
    }
}
```

Subclass BusinessStuff:

```java
public class BusinessStuff {
    public void List() {
        System.out.println(" - linktr.ee/fahmihimself");
    }
}
```
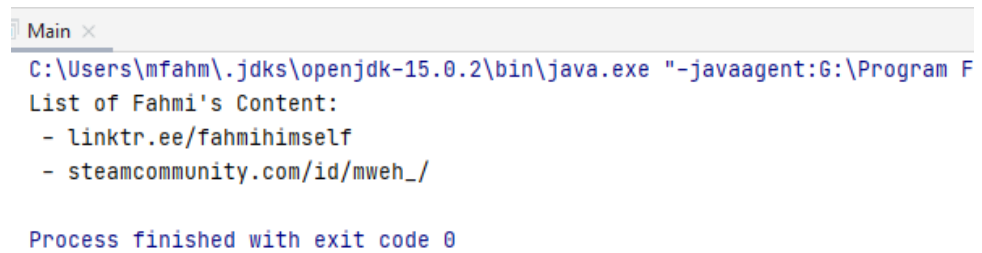
Subclass GamingStuff

```java
public class GamingStuff {
    public void List() {
        System.out.println(" -
steamcommunity.com/id/mweh_/");
    }
}
```

Polymorphism, Class Main:

```java
public class Main {
    public static void main(String[] args) {
        Content c = new Content();
        BusinessStuff b = new BusinessStuff();
        GamingStuff g = new GamingStuff();

        c.List();
        b.List();
        g.List();
    }
}
```
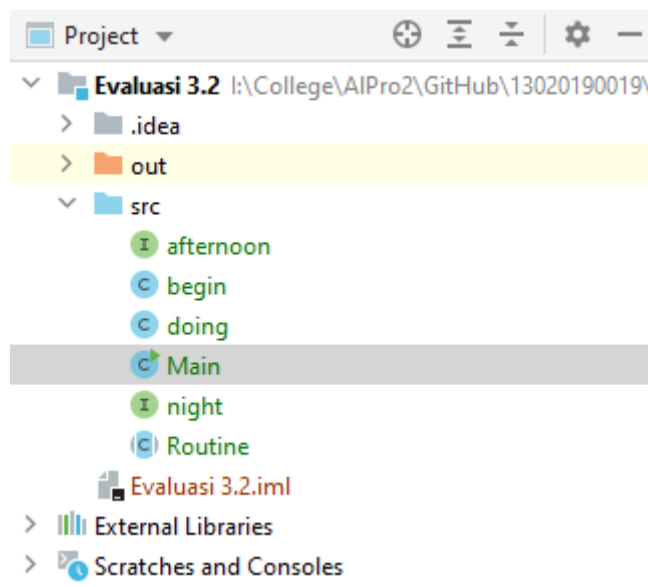
Output:

B. Modul 7

1. Buatlah contoh program yang berbeda setiap praktikan. Program yang mengimplementasikan 2 interface dan 1 abstract class atau lebih, dilengkapi dengan penginputan user dan proses aritmatika, tambahkan validasi dalam penginputan angka..

Jawab:

Project Fahmi's Routine dan perkalian aritmatika dengan Scanner:

Interface Afternoon:

```
interface afternoon {
    public void meditation();
}
```

Interface Night:

```
interface night {
    public void sleep();
}
```

Doing implements interface afternoon, night:

```
class doing implements afternoon, night {

    @Override
    public void meditation() {
        System.out.println("Meditation during
Afternoon");
    }

    @Override
    public void sleep() {
        System.out.println("Sleep at night");
        System.out.println("");
    }
}
```

Abstract class Routine:

```
abstract class Routine {
    public abstract void morning();

    public void Todo() {
        System.out.println("Fahmi's Routine: ");
    }
}
```

Subclass begin inherit Routine

```
class begin extends Routine{
    public void morning() {
        System.out.println("Coffee time in the morning");
    }
}
```

Class Main:

```java
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        begin r = new begin();
        doing m = new doing();
        int a, b, c;

        r.Todo();r.morning();m.meditation();m.sleep();
        System.out.println("Input Nilai a: ");
        a = sc.nextInt();
        System.out.println("Input Nilai b: ");
        b = sc.nextInt();
        c = a*b;
        System.out.println("Nilai a x b adalah " + c);
    }
}
```

Output pada IntelliJ:

```
Main ×
C:\Users\mfahm\.jdks\openjdk-15.0.2\bin\java.exe "-javaagent:G:\Program Files\In
Fahmi's Routine:
Coffee time in the morning
Meditation during Afternoon
Sleep at night

Input Nilai a:
5
Input Nilai b:
7
Nilai a x b adalah 35

Process finished with exit code 0
```

C. Modul 8

1. Buatlah contoh program yang mengimplementasikan HashMap dengan meggunakan penginputan.

Class Main, list of GPU:

```java
package a;

import java.util.Scanner;
import java.util.HashMap;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        HashMap<Integer, String> gpu = new
HashMap<Integer, String>();
        String gpu1, gpu2;
        System.out.print("1st Graphic Card: ");
        gpu1 = sc.nextLine();
        System.out.print("2nd Graphic Card: ");
        gpu2 = sc.nextLine();
        gpu.put(1, gpu1);
        gpu.put(2, gpu2);
        System.out.println("List of Fahmi's GPU: " +
gpu);
    }
}
```

Output:

```
Main ×
C:\Users\mfahm\.jdks\openjdk-15.0.2\bin\java.exe "-javaagent:G:\Progr
1st Graphic Card: RTX 3090
2nd Graphic Card: RX 6900 XT
List of Fahmi's GPU: {1=RTX 3090, 2=RX 6900 XT}

Process finished with exit code 0
```

2. Buatlah contoh program array list bertipe data class yang merupakan class model. Class model adalah class yang didalamnya terdapat pendeklarasian variable bertipe private dilengkapi dengan setter dan getter.

Class GPU:

```java
package b;

public class GPU {
    private String gpu1, gpu2;

    public String getGpu1() {
        return gpu1;
    }

    public void setGpu1(String gpu1) {
        this.gpu1 = gpu1;
    }

    public String getGpu2() {
        return gpu2;
    }

    public void setGpu2(String gpu2) {
        this.gpu2 = gpu2;
    }
}
```
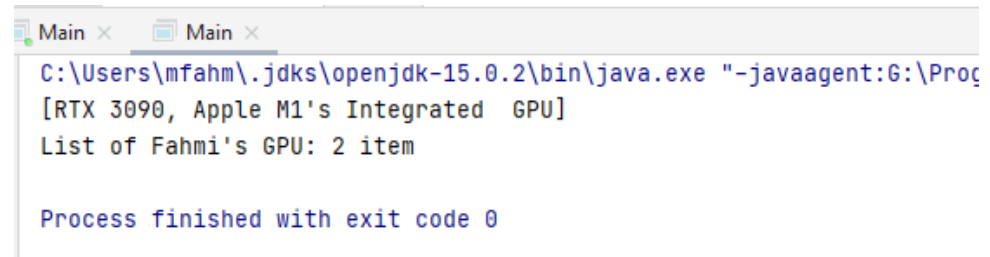
Class Main:

```java
package b;

import java.util.ArrayList;

public class Main {
    public static void main(String[] args) {
        ArrayList al = new ArrayList();
        GPU g = new GPU();
        g.setGpu1("RTX 3090");
        g.setGpu2("Apple M1's Integrated  GPU");
        al.add(g.getGpu1());
        al.add(g.getGpu2());
        System.out.println(al);
        System.out.println("List of Fahmi's GPU: " +
al.size() + " Item");
    }
}
```

Output pada IntelliJ:

```
Main ×      Main ×
C:\Users\mfahm\.jdks\openjdk-15.0.2\bin\java.exe "-javaagent:G:\Prog
[RTX 3090, Apple M1's Integrated  GPU]
List of Fahmi's GPU: 2 item

Process finished with exit code 0
```