Design Patterns
W2A1

Topic: - Write a Program to implement Adapter Design Patternit

Github Link:- https://github.com/RajAditya01/Design-And-Pattern

Definition :-

Adapter pattern works as a bridge between two incompatible interfaces. This type of design pattern comes under structural pattern as this pattern combines the capability of two independent interfaces.

This pattern involves a single class which is responsible to join functionalities of independent or incompatible interfaces. A real life example could be a case of card reader which acts as an adapter between memory card and a laptop. You plugin the memory card into card reader and card reader into the laptop so that memory card can be read via laptop.

Code: -

```java
package adapter;

interface WebDriver {
 public void getElement();
 public void selectElement();
}


class ChromeDriver implements WebDriver {

 @Override
 public void getElement() {
  System.out.println("Get element from ChromeDriver");
 }

 @Override
 public void selectElement() {
  System.out.println("Select element from ChromeDriver");
```

```java
  }

}

class IEDriver {

 public void findElement() {
   System.out.println("Find element from IEDriver");
 }

 public void clickElement() {
   System.out.println("Click element from IEDriver");
 }

}

class WebDriverAdapter implements WebDriver {

 IEDriver ieDriver;

 public WebDriverAdapter(IEDriver ieDriver) {
   this.ieDriver = ieDriver;
 }

 @Override
 public void getElement() {
   ieDriver.findElement();

 }

 @Override
 public void selectElement() {
   ieDriver.clickElement();
 }

}

public class AdapterDesignPattern {

 public static void main(String[] args) {
   ChromeDriver a = new ChromeDriver();
   a.getElement();
   a.selectElement();
```

```
    IEDriver e = new IEDriver();
    e.findElement();
    e.clickElement();

    WebDriver wID = new WebDriverAdapter(e);
    wID.getElement();
    wID.selectElement();

 }


}
}
```

Output: -

```
PS D:\Design-And-Pattern> cd "d:\Design-And-Pattern\" ;
Get element from ChromeDriver
Select element from ChromeDriver
Find element from IEDriver
Click element from IEDriver
Find element from IEDriver
Click element from IEDriver
PS D:\Design-And-Pattern>
```