OOPS Concept Real Time Explanation:

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OOPS is Object Oriented Programming Structure, It have

class, method, object

Encapsulation

Inheritance

polymorphism

Abstractions

In our project we have implemented OOPS concepts lots of places

Class:

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1.Class is a collection of methods and objects

2.In our project We are using lots of predefined classes like

1.ChromeDriver

2.FireFoxDriver

3.InternetExplorerDriver

4.Actions

5.Robot

6.Select

7.RemoteWebDriver

For Example, Actions is predefined class and it have multiple predefined methods available, like moveToElement is method

which is available in the actions class

Methods:

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1.Method is a set of action to be performed

2.Inside the methods We used to write the business logics in methods

3.In our project We are using lots of predefined Methods like

get()

getTitle()

getCurrentUrl()

getText()

getAttribute()

For Example, getText is predefined method which is available under WebElement interface

Encapsulations:

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1.In our project we used to Maintain the all locators in the POJO class as object repository and using Object

indirectly access the locators in the different class using the concept of page object Model(POM) with page Factory.

2.Also we can say the Structure of creating folders are called Encapsulations

Inheritance:

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1.We can access one class property(methods) into another class using extends keywords.

2.To Reduce the memory wastage

3.We can reuse the methods

4.In our project, we used to maintain the all reusable methods (sendKeys, click) and using extends keyword

we can access all the methods where its required

Method Overloading:

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1.The Same method is going to act as different behaviour that is called method overloading

2.In our project we are using method overloading concepts like println(), sendKeys(), frame(), Waits(SECONDS,MINUTES,HOURS)

For Example, if you want to switch frame we switch by using WebElement (WebElement interface), index(int) and frame id/name(String)

Method Overriding:

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1.Method overriding is used to provide the specific implementation of a method which is

already provided by its superclass.

2.In our project we have implemented method overriding concepts like

1.To create User define Exception we need to override the getMessage() method which is available in the Exception class

2.To take the screenshot we need to override the getScreenShotAs() method which is available in the Takes Screenshot interface

3.RetryAnalyzer---retry()

4.IAnnotationTransformer---transform

5.List---(get(), indexOf())

6.Set----(add(), remove())

7.Map----(put,containsKey())

Abstract class:

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1.It supports abstract method and non-abstract method is called abstract class

2.Using extends keyword we write our business logics

3.We can’t create object directly

4.In our project we are using by as abstract class to declare the locators

Interface:

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1.Its supports only abstract methods

2.Using implements keyword we can write the implementations in any classes

3.We can’t create object directly

4.In our project we are using lots of interfaces

1.SearchContext

2.WebDriver

3.JavaScriptExecutor

4.TakesScreenShot

5.RetryAnalyzer

6.IAnnotationTransformer

7.Alters

8.WebElement

9.Waits

10.List

11.Set

12.Map