

**** JAVA IS AN OBJECT ORIENTED PROGRAMMING LANGUAGE.**

**** JAVA HAS SOME IMPORTANT FEATURES:**

- 1.OBJECT ORIENTED CONCEPT.
- 2.PLATFORM INDEPENDENT LANGUAGE.
- 3.HIGHLY STRUCTURED LANGUAGE.

Q: What is object?

Object is an instance of a class.

****INSTANCE>REFERENCE: WHEN AN OBJECT IS CREATED .**

****OBJECT> IS THE BASE OF ALL CLASS.**

**** JAVA IS AN OBJECT ORIENTED PROGRAMMING LANGUAGE BECAUSE EVERY OBJECT HAS ITS OWN ATTRIBUTE AND IT BEHAVES EXACTLY THE SAME WAY WHILE IT USE.**

**** JAVA CAN SPEAK WITH ANYTHING THAT HAS ELECTRICITY.**

Q: What is the base class of all classes?

Ans: Object

Few methods of Object class : finalize(), notify(), notifyAll(), equals(), wait(), wait(x), wait(x, y), getClass(), hashCode().

Q: Is Java a pure object oriented language?

**** JAVA IS NOT 100% PURE OBJECT ORIENTED PROGRAMMING LANGUAGE LIKE RUBY & PYTHON.**

- 1.JAVA IS NOT 100% OOP BECAUSE IT USES PRIMITIVE/PREDEFINE DATA-TYPE
- 2.AND CANNOT HANDLE MORE THAN ONE INHERITANCE.

Q: Does Java support multiple inheritance?

Ans: No,Java doesn't support multiple inheritance.

Q: What is Class?

CLASS IS THE BLUEPRINT OR A TEMPLATE OF ITS OBJECT.. It has state and behavior.(by state we mean variable and by behavior we mean method.)

its describe state and behavior of that object.

****STATE/VARIABLE=(example=character/dog)**

****BEHAVIOR/METHOD=(example=function/barking).**

**** IN ORDER TO BUILD A JAVA APPLICATION WE NEED THE FOLLOWING:**

JAVAC, JDK, JRE , JVM,

****JAVAC== JAVAC MEANS JAVA COMPILER.WHICH COMPILES JAVA CODE.
>> JAVAC CONVERTS HUMAN READABLE LANGUAGE (.JAVA) INTO MACHINE
READABLE LANGUAGE(.CLASS) OR INTO BINARY NUMBER(01010101/// 0=NO
ELECTRICITY//1=ELECTRICITY)**

****JDK==JAVA DEVELOPMENT KIT. WHICH HELPS TO BUILD THE PROGRAM (OR
WRITE CODE).**

****JRE==JAVA RUNTIME ENVIRONMENT. WHICH HELPS TO RUN A PROJECT.**

****JVM==JAVA VIRTUAL MACHINE. WHICH EXECUTES CLASS FILES OR MACHINE
LANGUAGE IN ORDER TO GET RESULT OF A PROGRAM.**

Q: What are the four fundamental concepts of java?

- a. Abstraction
- b. Inheritance
- c. Polymorphism
- d. Encapsulation

Q: What is method?

Collection of statements which grouped together to perform an operation

**** in java method is responsible to perform an action.**

Q: What is variable?

Variable is name of memory location.example:int a(variable name)=5;

Q: What is local and global variable?

Local variable:Local variables are declared in methods, constructors, or blocks.

EXAMPLE=NOT PARAMETERIZED.

Global variable declared outside the method inside the class.
Global variable also known as Instance variable
EXAMPLE==PARAMETERIZED.

Q: What is datatype?

Data type is a set of data with having predefined characteristics. Data type also gives some space in memory.

There are two kinds of data type:

1: **Primitive**(PREDEFINED)

Ex: byte, short, int, long, float, double, character, boolean.

2: **Referenced / Non-primitive**: (ANY BUILT-IN CLASS OR ANY CLASS OR INTERFACE ,WHICH WE CREATED TO DECLARE A VARIABLE .

Ex:String,Integer

Q: Are arrays primitive data types?

Ans: No, In Java Arrays are objects.

Q: What are wrapper classes?

Java provides specialized classes corresponding to each of the primitive data types. These are called wrapper classes. They are example: Integer, Character, Double, Boolean etc.

Q: What is the most important feature of Java?

Ans: Java is a platform independent language

Q: What do you mean by platform independence? OR Why Java is Platform independent language?

Platform independence means that we can write and compile the java code in one platform (eg Windows) and can execute the class in any other supported platform eg (Linux, Solaris, etc) because of JVM which actually helps to do that.

Q: What is the base class of all classes?

Ans: Object

Few methods of Object class : finalize(), notify(), notifyAll(), equals(), wait(), wait(x), wait(x, y), getClass(), hash code().

SELENIUM

****SELENIUM HELPS TO AUTOMATE THE BROWSER**

****SELENIUM CANNOT AUTOMATE DESKTOP/WINDOWS BASE APPLICATION.**

****SELENIUM ITSELF IS A TOOL OR API(application programming interface).**

****FOUR TYPES OS SELENIUM**

1.SELENIUM IDE(record and play).

2.SELENIUM RC(remote control).

3.SELENIUM GRID

4.SELENIUM WEB DRIVE.

**** OUR GOAL IS TO LEARN SELENIUM WEB DRIVE(which is API.full authority to copy &paste).(not API then its called a tool).**

**** in order to make a package we have to camel case the name of the package**

example(RadiUzzamanChpwdhury)or(radi_uzzaman_chowdhury).

**** HOW TO MAKE A METHOD**

example:: VOID RADI(){

}//

**** HOW TO DECLARE A VARIABLE**

Example:: DataType Variable=value;
takespace name =5;
Int a =5;

**** WHO WILL BE CONSIDERED AS Return Type**

```
Example :: ReturnType m1(){  
                }//
```

Example:: **Demo D=new Demo();**

```
system.setProperty(".....", ".....chromedriver")
```

****METHODS::**

Q: What is a package?

Ans: Package is a collection of related classes and interfaces.

```
// MAIN = NAME OF JAVA MAIN METHOD
```

*** Public Static Void

PUBLIC: MEANS EVERYONE CAN ACCESS.

****Q:what is the difference between public and non-public**

***public class may be accessed outside of its package .**

*** Non public class may not be accessed outside of its package.**

STATIC: MEANS WE CAN INBOOK WITHOUT HAVING ANY OBJECT OF A CLASS

NON-STATIC CANNOT GO INSIDE THE STATIC (because we are not creating object).

VOID: IS A KEYWORD (means a method doesn't return anything).

String[]:Data-Type.

Args:variable name.

Q: Can we override a static method in JAVA

NO, we cannot override static method in java .because static method cannot take any non-static property.

Q: Can we overload static method in JAVA

YES, static method can be overloaded just like any other method.

DATA-TYPE	VALUE
*WebELEMENT	= driver.findelement();
*ChromeDriver	= new ChromeDRIVER();
*void	= a method doesn't return anything.
*BY	= BY by(any locator : ID, NAME, CLASSNAME, TAG NAME , LINK TEXT, PARTIAL TEXT, X-PATH, CSS)
*int	= any numeric number(ex:1.2.3)
*String (ex:"hi")//	=anything inside double quotation ""
*boolean	= true/false(ex:3>5).

RETURN-TYPE:
Void
ELEMENT.

ACTION:
.Click(); // CLICK ON AN

Void	.sendKeys(); // type on text
box.	
Void	.clear(); //to clear the text box.
String	.getText(); // to get text from
webElement/ or to Read.	
String	.getAttribute(); //to get
attribute value.	
boolean	.isDisplayed(); //is element
present.	
boolean	.isSelected(); // box is selected
or not.	
boolean	.isEnabled(); //button enabled
or not.	

ChromeDriver dr:

```
** Void openBrowser(){
dr.findElement(By.id("email")).click();
//
```

```
** webElement m1(){
return dr.findElement(By.id("email"));
//
```

////////

***** VALUE**

- 1.Fixed= no parameterize //void m1()
2. Not Fixed = parameterize // void m1(webElement e)

****ACTION**

Know= void or No returnType

Don't know= returnType

****VOID** =will only perform the action.

**** RETURN-TYPE**=will perform the action and store the value against the method name in a memory.

**** keep in MIND**

1. WHAT KINF OF VALUE.

2. DO I KNOW THE TYPE OF ACTION.

