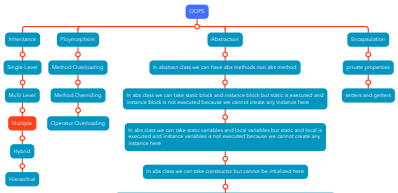

Static Variable
static method
static block
user defined constructors
Non Static
instance method /non static method
instance block / non static block
build constructors
Local Variables


OOPS
Inheritance
Polymorphism
Abstraction
Encapsulation
Single Level
Method Overloading
private properties
Multi Level
Method Overriding
setters and getters
Multiple
Operator Overloading
Hybrid
Heirarchical

In abstract class we can have abs methods non abs method
In abs class we can take static block and instance block but static is executed and instance block is not executed because we cannot create any instance here
In abs class we can take static variables and local variables but static and local is executed and instance variables is not executed because we cannot create any instance here
In abs class we can take constructor but cannot be initalised here

In abs class we can declare multiple abs method and we can decalre two of them in first abs class and remaing two them in second abs class
Note:
abs class A{
//4
}
abs Class B extend A{
//2
}
abs Class C extends B{
//2
}
class D extends C{
}
class Client{
//Implementations
}

we can extends non abs class from abs class
class A{
}
abs class B extends A{
}

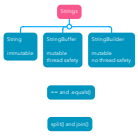

this and super
this keyword : instance variables and method always refer to the current class
super keyword: it refres to the parent class instance variables and instance methods


this() and super()
both are constructors


Enums
ordinal()
valueof()
toValue()


Modifiers
default modifier
same package
same class and child class
public modifier
note: any where
protected modifier
note: same package and other package using inheritance
private modifier
note: In the class itself


diff b/w class, abs class, interface
class allow all types of methods
abs class allows abs methods and non abs method
interface allows only abs method


Strings
String
immutable
StringBuffer
mutable
thread safety
StringBuilder
mutable
no thread safety
== and .equals()
split() and join()


Arrays
fixed in size
homogenious


Diff b.w for loops, while loop, do-while, foreach
for loop: if know iterations in advance (applies<5)
while loop: infinity loop (Custom)
do-while : if we want iteration once
forEach : objects (elements)


Diff b.w length keyword and length()
length : arrays
length() : strings


Diff b/w switch case and if else-else if
if use switch case we have direct execution based on the case
else-if
if we use else if compiler will check condition by condition


Wrapper Classes
primitive to object
string to object
primitive to string
object to primitive
object to string
string to primitive


Operators
diff b/w & and &&
diff b/w pre and post
diff b/w leftshift and rightshift

Java Tree Structure

1. Wrapper Classes

1.1. Byte

1.1.1. Short

1.1.1.1. Integer

1.1.1.1.1. Long

1.2. Float

1.2.1. Double

1.3. Character

1.4. Boolean

2. Literals

2.1. Integer Literals

2.1.1. Floating Point Literals

2.1.1.1. Character Literals

2.1.1.1.1. String Literals

2.1.1.1.1.1. Boolean

2.2. Hexa Literals

2.2.1. Octal Literals

2.2.1.1. Binary Literals

3. Elements

3.1. Variables

3.1.1. Static Variable

3.1.1.1. Non Static

3.1.1.1.1. Local Variables

3.2. Methods

3.2.1. static method

3.2.1.1. instance method /non static method

3.3. Blocks

3.3.1. static block

3.3.1.1. instance block / non static block

3.4. Constructors

3.4.1. user defined constructors

3.4.1.1. build constructors

4. OOPS

4.1. Inheritance

4.1.1. Single Level

4.1.1.1. Multi Level

4.1.1.1.1. Multiple

4.1.1.1.1.1. Hybrid

4.1.1.1.1.1.1. Hierarchial

4.2. Ploymorphsim

4.2.1. Method Overloading

4.2.1.1. Method Overriding

4.2.1.1.1. Operator Overloading

4.3. Abstraction

4.3.1. In abstract class we can have abs methods non abs method

4.3.1.1. In abs class we can take static block and instance block but static is executed and instance block is not executed because we cannot create any instance here

4.3.1.1.1. In abs class we can take static variables and local variables but static and local is executed and instance variables is not executed because we cannot create any instance here

4.3.1.1.1.1. In abs class we can take constructor but cannot be intialized here

4.3.1.1.1.1.1. In abs class we can declare multiple abs method and we can decalre two of them in first abs class and remaing two them in second abs class Note: abs class A{ //4 } abs Class B extend A{ //2 } abs Class C extends B{ //2 } class D extends C{ } class Client{ //Implementations }

4.3.1.1.1.1.1.1. we can extends non abs class from abs class class A{ } abs class B extends A{ }

4.4. Encapsulation

4.4.1. private properties

4.4.1.1. setters and getters

5. this and super

5.1. this keyword : instance variables and method always refer to the current class

5.1.1. super keyword: it refres to the parent class instance variables and instance methods

6. Enums

6.1. ordinal() values() valueOf()

7. Modifiers

7.1. default modifier same packge same class and child class

7.1.1. public modifier note: any where

7.1.1.1. protected modifier note: same package and other package using inheritance

7.1.1.1.1. private modifier note: In the class itself

8. this() and super()

8.1. both are constructors

9. Operators

9.1. diff b/w & and | diff b/w pre and post diff b/w leftshift and rigthshift

10. Strings

10.1. String immutable

10.2. StringBuffer mutable thread safety

10.3. StringBuilder mutable no thread safety

11. Arrays

11.1. fixed in size

11.1.1. homogenious

12. Wrapper Classes

12.1. primitive to object

12.1.1. object to primitive

12.2. string to object

12.2.1. object to string

12.3. primitive to string

12.3.1. string to primitive

13. == and .equals()

14. split() and join()

15. diff bw class, abs class, interface

15.1. class allow all types of methods

15.1.1. abs class allows abs methods and non abs method

15.1.1.1. interface allows only abs method

16. Diff b.w length keyword and length() length : arrays length() : strings

17. Diff b/w switch case and if-else-else-if if use switch case we have direct execution based on the case else-if if we use else if compiler will check condition by condition

18. Diff b.w for loop, while loop, do-while, foreach for loop: if know itterations in advance (apples<5) while loop: infinity loop (Cursors) do while : if we want itteration once forEach : objects (elements)

19. Datatypes

- 19.1. byte
  - 19.1.1. short
    - 19.1.1.1. int
      - 19.1.1.1.1. long
- 19.2. float
  - 19.2.1. double
- 19.3. char
- 19.4. boolean