POLYMORPHISM

Polymorphism is a Greek word. One entity showing different behavior is called as polymorphism.

**Types Of Polymorphism :**

1. **Compile time polymorphism :**

During compile time one thing showing multiple behavior is called as compile time polymorphism.

ex: method overloading,

where during compilation, compiler will decide which behavior to be implemented so here method name is same but depending on type of args it shows different behavior.

**run()**

**run(int i)**

**run(char ch)**

**run(String s, int i)**

**Technical definition :**

1. The process of resolving call to overloaded method during compile time

depending on type of arguments is called compile time polymorphism.

b. It is also called as static polymorphism or compile time binding.

1. **Run time polymorphism** :

During Run/Execution time one thing showing multiple behavior is called as Run time polymorphism.

ex: method overriding , upcasting, generalisation

where there are multiple methods with same name, during execution time only JVM will come to know which method to be executed depending on type of object.

**Example :**

**class A**

**{**

**public void run()**

**{**

**System.out.println("A class Method");**

**}**

**}**

**class B extends A**

**{**

**public void run()**

**{**

**System.out.println("B class Method");**

**}**

**}**

**class Main**

**{**

**public static void main(String args[])**

**{**

**A a1 = new A();**

**a1.run(); //it calls class A run()**

**B b1 = new B();**

**b1.run(); //it calls class B run()**

**}**

**}**

**Technical definition :**

1. The process of resolving call to overridden method during run time depending

On type of object we create is called run time polymorphism.

b. It is also called dynamic binding or dynamic polymorphism