**Multithreading in Java**

* **Multithreading in Java is a process of executing multiple threads simultaneously.**
* **A thread is a lightweight sub-process, the smallest unit of processing. Multiprocessing and multithreading, both are used to achieve multitasking.**
* **Java Multithreading is mostly used in games, animation, etc.**
* It **doesn't block the user** because threads are independent and you can perform multiple operations at the same time.
* You **can perform many operations together, so it saves time**.
* Threads are **independent**, so it doesn't affect other threads if an exception occurs in a single thread.

**There are two ways to create threads**

1. **By Thread class**
2. **By Runnable interface**

**By Thread Class:**

**class** t1 **extends** Thread{

**public** **void** run() {

**for**(**int** i=0;i<5;i++) {

System.***out***.println("Thread1... "+i);

}

}

}

**class** t2 **extends** Thread{

**public** **void** run() {

**for**(**int** i=0;i<5;i++) {

System.***out***.println("Thread2... "+i);

}

}

}

**public** **class** MultiThreading\_Class {

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

t1 obj1 = **new** t1();

t2 obj2 = **new** t2();

obj1.start();

obj2.start();

}

}

**output:**

**Thread1... 0**

**Thread2... 0**

**Thread1... 1**

**Thread2... 1**

**Thread1... 2**

**Thread2... 2**

**Thread1... 3**

**Thread2... 3**

**Thread1... 4**

**Thread2... 4**

**By Runnable Interface:**

**class** thread1 **implements** Runnable{

**public** **void** run() {

**for**(**int** i=0;i<5;i++) {

System.***out***.println("Thread1... "+i);

}

}

}

**class** thread2 **implements** Runnable{

**public** **void** run() {

**for**(**int** i=0;i<5;i++) {

System.***out***.println("Thread2... "+i);

}

}

}

**public** **class** MultiThreading\_Interface {

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

thread1 obj1 = **new** thread1();

thread2 obj2 = **new** thread2();

Thread tobj1 = **new** Thread(obj1);

Thread tobj2 = **new** Thread(obj2);

tobj1.start();

tobj2.start();

}

}

**OutPut:**

**Thread1... 0**

**Thread2... 0**

**Thread1... 1**

**Thread1... 2**

**Thread2... 1**

**Thread2... 2**

**Thread1... 3**

**Thread1... 4**

**Thread2... 3**

**Thread2... 4**