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Runnable interface:

The Runnable interface should be implemented by any class whose instances are intended to be executed by a thread. The class should implement the run() method in the Runnable interface.The functionality that is expected by the Thread to be executed is put in the run() method.

Creating Thread By implementing Runnable interface:

```
class M2 implements Runnable
{
public void run()
{
System.out.println("running thread.");
}
public static void main(String args[]){
M2 m1=new M2();
Thread t1 =new Thread(m1);
t1.start();
 }
}
```

Thread Scheduler in Java:

The entire responsibility of maintaining the sequence of execution of threads, where which thread should be given first preference than the other, lies with the thread scheduler. The scheduler maintains a pool of threads. When Java thread is started calling start() method, it joins the pool of waiting threads.
Only one thread at a time can run in a single process.
The JVM is based on **preemptive and priority based** scheduling algorithm. The thread with more priority is given first preference than the thread with less priority. The thread with more priority relinquishes (empties) the thread with less priority that is being executed.

Under time slicing, a task executes for a predefined slice of time and then reenters the pool of ready tasks. The scheduler then determines which task should execute next.At any given time, the highest priority thread is running. However, this is not guaranteed.

Sleep method in java:

Sleep method of java.lang.Thread class is used to pause current execution of thread for specific period of time. Thread.sleep() works with thread scheduler to pause current thread execution for specific period of time. Once thread wait period is over, the thread's state is changed to runnable again and it is available for further execution for CPU.

```java
class SL1 extends Thread
{
public void run()
  {
try
    {
for(int i = 0; i<5 ; i++)
      {
        System.out.println("Welcome to threads: " + i);
Thread.sleep(100);
      }
    }
catch(InterruptedException e)
    {
System.out.println(e);
    }
System.out.println("Successful");
  }
public static void main(String args[])
  {
   SL1 d1 = new SL1();
d1.start();
  }
}
```

This number is in milli-seconds

Exercise:

1. How can we create thread using runnable interface? Explain.
2. What is sleep method?How is it useful in performing thread related tasks?
3. What is thread scheduler in Java?How is it useful?Explain with proper examples.