

1. Write a program in Java to create a thread by extending the 'Thread' class and by implementing the "Runnable" interface

// Create a thread by extending the 'Thread' class

```
class MyThread extends Thread {  
    public void run() {  
        System.out.println("Thread created by extending Thread class.");  
        // Perform some task  
        for (int i = 1; i <= 5; i++) {  
            System.out.println("Thread: " + i);  
            try {  
                Thread.sleep(1000); // Pause execution for 1 second  
            } catch (InterruptedException e) {  
                e.printStackTrace();  
            }  
        }  
    }  
}
```

// Create a thread by implementing the 'Runnable' interface

```
class MyRunnable implements Runnable {  
    public void run() {  
        System.out.println("Thread created by implementing Runnable interface.");  
        // Perform some task  
        for (int i = 1; i <= 5; i++) {  
            System.out.println("Thread: " + i);  
            try {  
                Thread.sleep(1000); // Pause execution for 1 second  
            } catch (InterruptedException e) {  
                e.printStackTrace();  
            }  
        }  
    }  
}
```

```
    }  
    }  
}
```

```
public class ThreadExample {  
    public static void main(String[] args) {  
        // Creating and starting a thread by extending 'Thread' class  
        MyThread thread1 = new MyThread();  
        thread1.start();  
  
        // Creating and starting a thread by implementing 'Runnable' interface  
        MyRunnable runnable = new MyRunnable();  
        Thread thread2 = new Thread(runnable);  
        thread2.start();  
    }  
}
```

OUTPUT:

Thread created by extending Thread class.

Thread created by implementing Runnable interface.

Thread: 1

Thread: 1

Thread: 2

Thread: 2

Thread: 3

Thread: 3

Thread: 4

Thread: 4

Thread: 5

Thread: 5