

Ops Systems & Concurrency 3

Lab 1 - Threads

1. Extending the Thread class

a) Create a thread class called SimpleThread by extending the Thread class. This thread should receive a string print this string 10 times. Each iteration should last 1000ms. This thread should also print a message after printing all messages.

```
public class SimpleThread extends Thread {  
  
    // Implement your Simple Thread here  
  
}
```

b) Create a testing class for SimpleThread which will receive the following strings:

```
new SimpleThread("Dog").start();  
new SimpleThread("Cat").start();  
new SimpleThread("Fish").start();
```

b) Change the sleep method so each thread can sleep for a random number of milliseconds from 0-1000.

2. Using the runnable interface.

```
class SimpleThreadRunnable implements Runnable {  
    //Implement you class here  
}
```

a) Create a thread class called SimpleThreadRunnable by implementing the runnable interface. This thread should receive a string print this string 10 times. Each iteration should last 1000ms. This thread should also print a message after printing all messages.

b) Create a testing class for SimpleThreadRunnable which will receive the following strings:

```
new SimpleThread("Dog").start();  
new SimpleThread("Cat").start();  
new SimpleThread("Fish").start();
```

b) Change the sleep method so each thread can sleep for a random number of milliseconds from 0-1000.

3. All together

Build an app where one Thread runs 50% slower than the other by having it sleep on average for a longer period. (You will have to pass in a value to the YourThread constructor and store it).