

Exercise 5-1 (MultiThread)

Q1

The following is a class that extends **Thread** to execute multiple threads. Rewrite this program from extending **Thread** to implementing **Runnable** interface.

Example

```
public class MyThread {

    public static void main(String[] args) {

        new MyThread().start();

    }

    public void start() {
        InnerThread it1 = new InnerThread("Thead1");
        InnerThread it2 = new InnerThread("Thead2");
        InnerThread it3 = new InnerThread("Thead3");

        it1.start();
        it2.start();
        it3.start();
    }

    class InnerThread extends Thread {
        private String name;

        InnerThread(String name) {
            this.name = name;
        }

        public void run() {
            try {
                for(int i = 0; i < 10; i++) {
```

```
        System.out.println(name + " " + i + "times");
        Thread.sleep(1000);
    }
    } catch (InterruptedException e) {
    }
}
}
```

Execution example

```
%java MyThread
Thead1 times
Thead2 times
Thead3 times
Thead1 times
Thead2 times
Thead3 times
```

Q2

Implement multi-threaded `TinyHttpServer` that always returns "Hello TinyHttpServer" to the client. Besides, implement `TinyHttpClient` that sends a request to `TinyHttpServer` then receives and output the response to the standard output. Note that, `TinyHttpClient` need not to be multi-threaded and close a connection when receiving the response.