Thread-local Variables Exercises

Thread-local Variables

- Convert the following code to a program which starts two threads to execute func()

```
thread_local mt19937 mt;

void func() {
   uniform_real_distribution<double> dist(0, 1);

   for (int i = 0; i < 10; ++i )
      cout << dist(mt) << ", ";
}
```

Thread-local Variables

- Test your program
- What happens if the declaration of mt is moved into func?
- What happens if mt is declared as static instead of thread_local?
- What happens if mt is declared as a normal local variable in func?
- Do these different declarations have any performance implications? (NB creating an engine instance is expensive)