

# Worksheet #19:

## Insertion of isolated for correctness

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Name 1: \_\_\_\_\_

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The goal of `IsolatedPRNG` is to implement a single Pseudo Random Number Generator object that can be shared by multiple tasks. Show the isolated construct(s) that you can insert in method `nextSeed()` to avoid data races and guarantee proper semantics.

```
class IsolatedPRNG {
  private int seed;
  public int nextSeed() {
    int retVal;

    retVal = seed;

    seed = nextInt(retVal);

    return retVal;
  } // nextSeed()
  . . .
} // IsolatedPRNG
```

```
main() { // Pseudocode
  // Initial seed = 1
  IsolatedPRNG r = new IsolatedPRNG(1);
  async(() -> { print r.nextSeed(); ... });
  async(() -> { print r.nextSeed(); ... });
} // main()
```

