

Assignment: CounterExample Guided Abstraction Refinement

Verification Reading Group
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Apply the CEGAR approach in order to verify the correctness of the program listed below.

Note that `/* error */` indicates an error state, meaning that the program correctness amounts to the non-reachability of these statements.

```
_Bool lock = 0;                                }
int old , new;
void lock (void){                                void main (void) {
    if (lock==1)                                do {
        /* error */;                            lock ();
        else                                     old = new;
            lock = 1;                           if (*)
        }                                         unlock ();
                                            new++;
void unlock (void) {                            }
    if (lock==0)                                } while ( new != old );
        /* error */;                           unlock ();
    else                                     return;
        lock = 0;                                }
```