

Burt Rosenberg

## Notes 1: Assertions and Loop Invariants

OUT: 12 SEPTEMBER, 1995

### Example 1:

```
void blab( int count ) {  
  
    /* ASSERT: count > 0 */  
    if ( count <= 0 ) {  
        printf("blab: Assertion failed\n") ;  
        return ;  
    }  
  
    while ( count-- ) printf("blah\n") ;  
  
}
```

### Example 2:

```
int str_equ( char *s, char *t) {  
    int i = length(s) ;  
  
    if ( length(t) != i ) return (1==0) ;  
    /* ASSERT: the strings are of equal length */  
  
    while ( i-- ) if ( s[i]!=t[i] ) return(1==0) ;  
    return(0==0) ;  
  
}
```

### Example 3:

```
.  
. .  
. .  
if (a<b) {  
    int tmp ;  
    tmp = a ;  
    a = b ;  
    b = tmp ;  
}  
/* ASSERT: a >= b */  
. . .
```