C Bug

GCC -O3 bug GCC bug C ""undefined behavior

" x x x > 1 x 1 x ≤ 1 ……"

Chris Lattner 2011 ""

```
void contains_null_check(int *P) {
  int dead = *P;
  if (P == 0)
    return;
  *P = 4;
}
```

GCC bug RNCE DCE""

```
void contains_null_check_after_RNCE(int *P) {
  int dead = *P;
  if (false)  // PPnull
    return;
  *P = 4;
}
```

```
void contains_null_check_after_RNCE_and_DCE(int *P) {
  // int dead = *P;    //
  // if (false)        //
  //   return;         //
  *P = 4;
}
```

1. `int dead = *P` P P null `P == 0` false
2. false if
3. dead dead

`*P = 4`"" Clang -O3

Lattner C ……