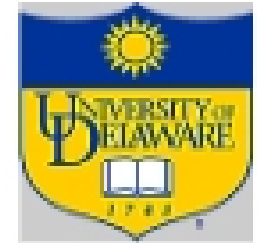




Context-sensitive Analysis



Beyond Syntax

There is a level of correctness that is deeper than grammar

```
fie(a,b,c,d)
  int a, b, c, d;
  { ... }

fee() {
  int f[3],g[0],
  h, i, j, k;
  char *p;
  fie(h,i,"ab",j, k);
  k = f * i + j;
  h = g[17];
  printf("<%s,%s>.\n",
  p,q);
  p = 10;
}
```

What is wrong with this program?
(let me count the ways ...)



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```

What is wrong with this program?
(let me count the ways ...)

- declared g[0], used g[17]
- wrong number of args to fie()
- "ab" is not an int
- wrong dimension on use of f
- undeclared variable q
- 10 is not a character string

All of these are

"deeper than syntax"

To generate code, we need to understand its meaning !