

# clangd

## C++ Smarts in Any Editor

by Botond Ballo



Visual Studio Code



THEIA



eclipse



neovim



# Language Server Protocol

M Editors



Visual Studio Code



...

One  
Protocol

N Languages



...

# What Clangd Can Do

## Presentation

```
auto angle: double  
| = std::atan2(y: mypoint.y, x: mypoint.x);  
return angle;
```

No viable conversion from returned value of type  
'double' to function return type  
'std::error\_code' clang(typecheck\_nonviable\_condition)

## Navigation

```
84 static llvm::ErrorOr<PrecompiledPreamble>  
85 Build(const CompilerInvocation &Invocation,
```

PrecompiledPreamble.h ~/dev/projects/llvm/src/clang/include/clang/Frontend - References (4)

Line	File	Symbol	Count
34	namespace clang {		
51	class PrecompiledPreamble {		
78	/// \param StoragePath		
79	/// file to store PCH		
80	/// used. This parameter		
81	///		
82	/// \param Callbacks		
	Preamble.cpp clang-tools-extra/clangd		1
	PrecompiledPreamble.h clang/include/clang/Frontend		1
	ASTUnit.cpp clang/lib/Frontend		1
	PrecompiledPreamble.cpp clang/lib/Frontend		1

## Code Completion

```
void takePoint(point);
```

```
int main() {  
    std::vector<point> points;  
    takePoint(points.);
```

at(size\_type n)  
back()  
emplace\_back(Args &&args...)  
front()  
assign(initializer\_list<value\_type>  
assign(InputIterator first, InputIt  
assign(size\_type n, const value\_t  
begin()

## Refactoring

TERMINAL PROBLEMS 7 OUTPUT DEBUG CONSOLE PORTS REFACTOR PREVIEW

- ✓ ☒ Compiler.cpp clang-tools-extra/clangd
- ✓ ☒ const PrecompiledPreamble MyPrecompiledPreamble \*Preamble,
- ✓ ☒ Compiler.h clang-tools-extra/clangd
- ✓ ☒ ilerInvocation>, const PrecompiledPreamble MyPrecompiledPreamble \*,
- ✓ ☒ ParsedAST.cpp clang-tools-extra/clangd
- ✓ ☒ const PrecompiledPreamble MyPrecompiledPreamble \*PreamblePCH =
- ✓ ☒ Preamble.cpp clang-tools-extra/clangd
- ✓ ☒ auto BuiltPreamble = PrecompiledPreamble MyPrecompiledPreamble::Build(  
✓ ☒ Preamble.h clang-tools-extra/clangd
- ✓ ☒ PreambleData(PrecompiledPreamble MyPrecompiledPreamble Preamble): Preamble(std::move(Preamble  
✓ ☒ PrecompiledPreamble MyPrecompiledPreamble Preamble;

# How to Set Up compile\_commands.json

```
[  
  {  
    "directory": "...",  
    "file": "...",  
    "command": "..."  
  },  
]
```

---

## CMake

```
~/project/build$ cmake \  
> -DCMAKE_EXPORT_COMPILE_COMMANDS=ON ..
```

## Build EAR 9.2.2

```
$ bear -- make
```

# How to Get Involved

Clangd is part of the LLVM Project



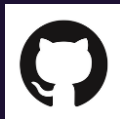
[clangd.llvm.org](https://clangd.llvm.org)



LLVM Discord (#clangd channel)



LLVM Discourse



[github.com/clangd/clangd](https://github.com/clangd/clangd)

