



BURGER

PLT FALL 2017

TEAM MEMBERS

Jordan
Manager



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Language Guru



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System Architect



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Tester



ft. **Frederick (“Freddy”) Kellison-Linn**

OVERVIEW

- General-purpose programming language
- BURGer is statically typed and convenient to use
- Allows top-level code
- Functions

ARCHITECTURE

SCANNER

PARSER

SEMANTIC CHECKING

CODE GENERATION

LLVM IR

BURGer EXECUTABLE

TYPES

- BURGer supports integers, booleans, strings, and a null type
- BURGer has explicit type declarations
- BURGer supports variable initialization

```
int x;  
int y = 12;  
bool z = true;  
string hello = "Hello World!";
```

SYNTAX

Control Flow

```
int i;  
i = 0;  
  
while (i < 5)  
{  
    println("yum");  
    println("burger");  
    i = i+1;  
}
```

Function Declaration

```
def int add(int a, int b)  
{  
    println("add!")  
    return a + b;  
}  
  
print(add(1, 3))
```

BEHIND THE SCENES

- A "hidden" main function wraps top-level BURGer code
- Print functions are implemented in a standard library written in C

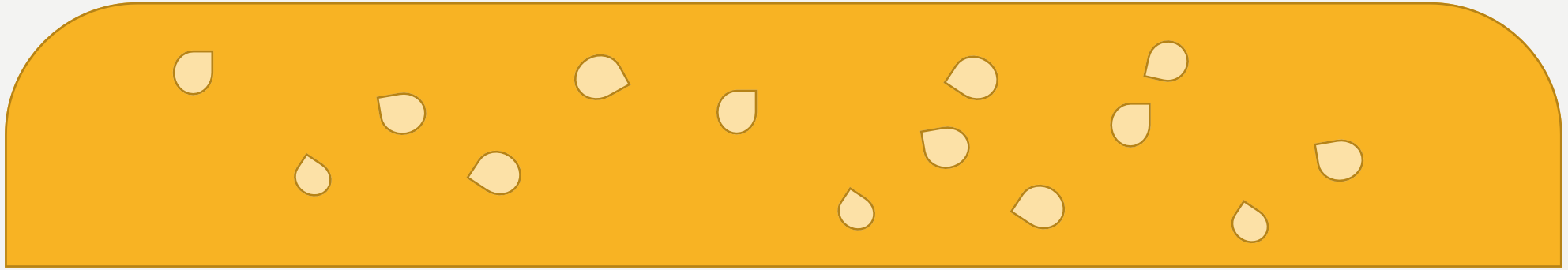
PROCESS

- Group meetings on Monday, meetings with Freddy on Tuesdays



LESSONS LEARNED

- Functional programming
- How a compiler works
- Start early
- Use resources available
- Be realistic



DEMO

