

A black funnel is positioned at the top center, with a single gold coin falling into it. Below the funnel, a large pile of gold coins is scattered across the surface. The coins are of various types, including Kruggerand and Canadian Maple Leaf coins. The background is dark and textured, with a warm, golden light illuminating the scene.

BuckCal

for when you need something
smarter to Calculate your Bucks
(\$\$\$), amongst other things

The Team



Ahmad Maruf

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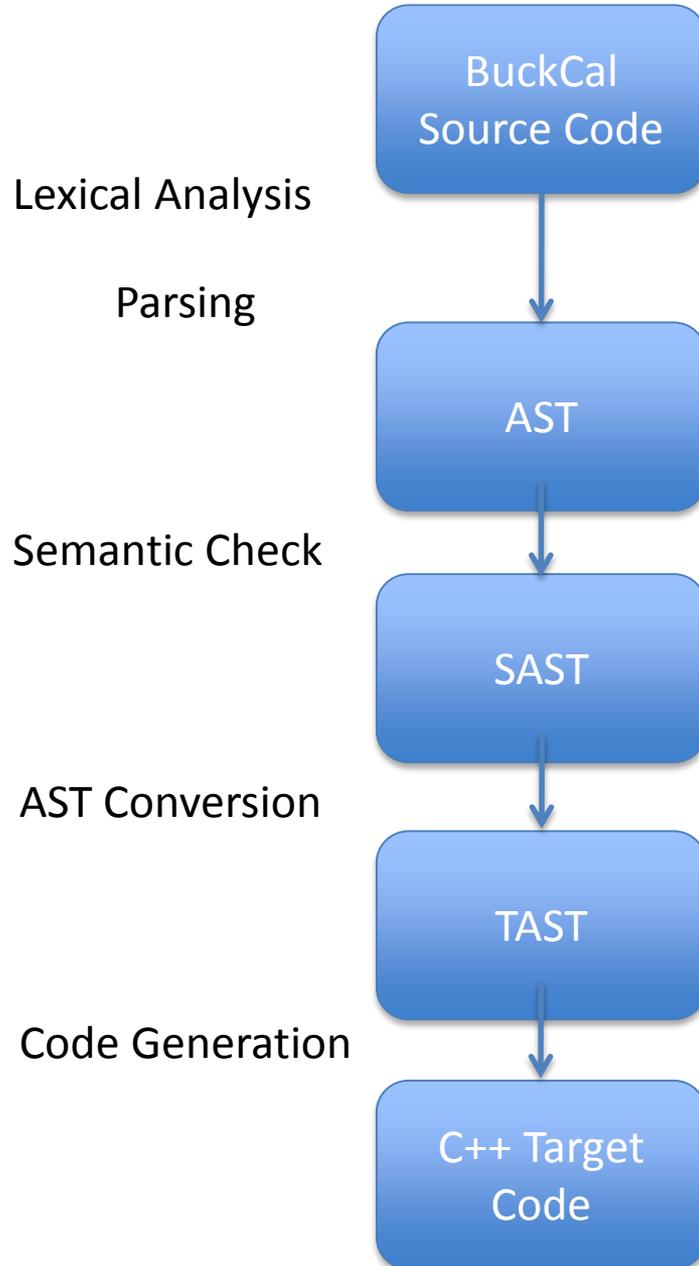
Meng Wang

Prachi Shukla

The Overview

- BuckCal is a matrix manipulation language
- Essentially a scripting-style language with full support for mathematical matrix operation and spreadsheet calculation

The Structure



The Implementation in OCaml and C++

Matrix literal

BuckCal

```
disp {1, 2, x};
```

C++

```
int T_0[] = {1, 2, x};  
int mat TT_1 = int_mat(T_0, 1, 3);  
cout << TT_1 << endl;
```

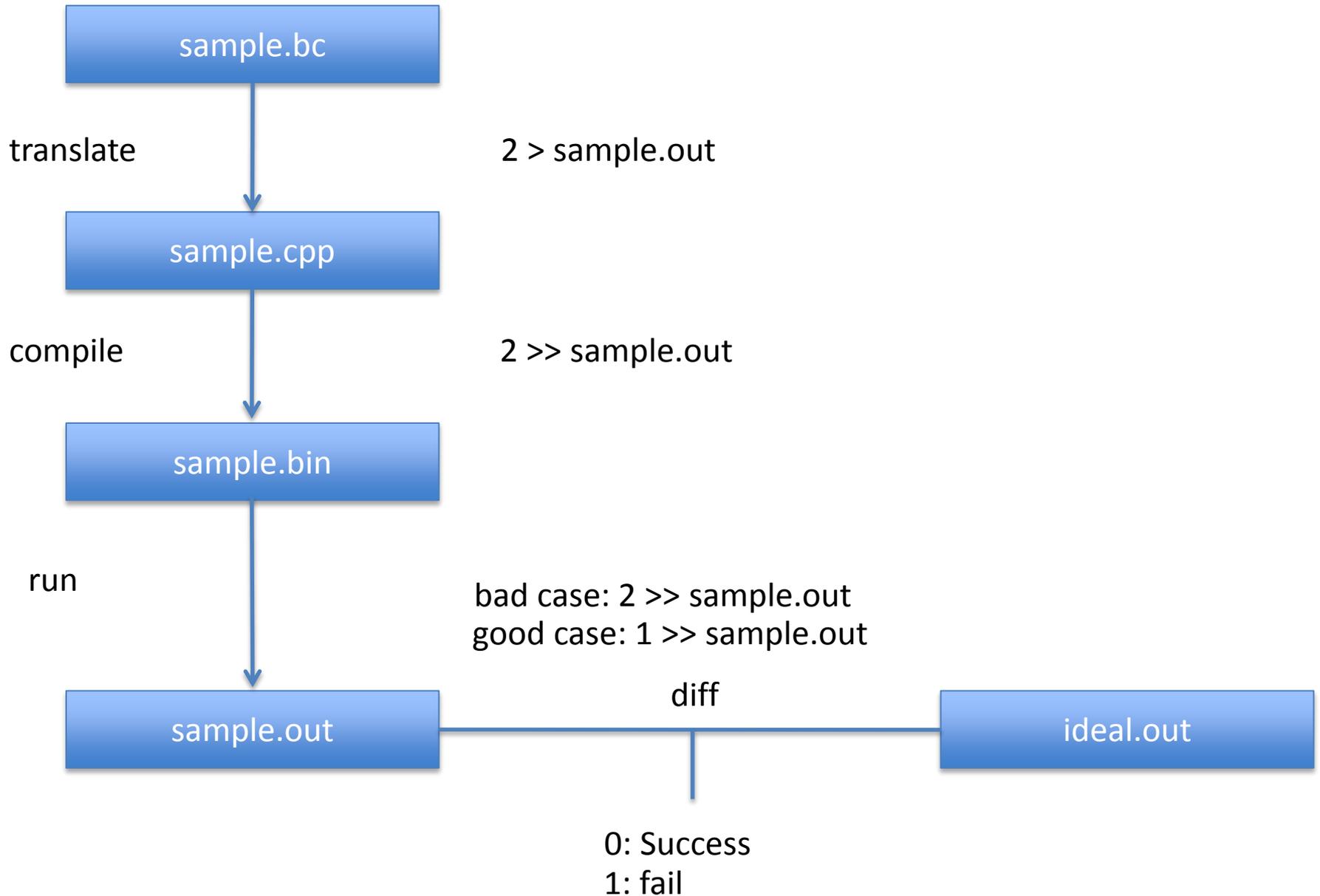
Implementation in C++

- Why C++?
 - One abstraction level down
 - Typed with primitives similar to BuckCal
 - Class abstraction with operator overload to easily add operation

Implementation in C++

- Structure:
 - Class `int_mat` / `double_mat` / `string_mat`;
 - Operators (+ - * /) in between `int/int_mat`
`double/double_mat`
 - Operator `<<` for matrix output
 - Built-in functions concerning concatenation,
row/col names and conversion

Testing



Combat Issues

ⓘ 0 Open ✓ 55 Closed

- ⓘ **Reminder of bad samples** enhancement
#65 opened 3 days ago by lingyuan-he
- ⓘ **Import buckcal_lib.bc from a imported file.** bug
#64 opened 3 days ago by lingyuan-he
- ⓘ **Test Sample Error**
#63 opened 3 days ago by lingyuan-he
- ⓘ **Still problem with function overloading**
#60 opened 5 days ago by Lan-Yang
- ⓘ **built in function error**
#59 opened 5 days ago by Lan-Yang

The Lessons Learned

- Delivering good work is not dictatorship
- It's more about making a timeline
- A complete testing framework should be built ASAP
- Get people to work in small teams
- Keep the modules small

The Demos

