

Towards a Transpiler from C/C++ to Safer Rust

gperf module transpilation table using CRust

File Name	Conversion	Remarks
bool-array.h	0%	Unable to create the bool-array class and its subsequent members.
bool-array.cc	0%	The destructor syntax was copied as it is in the file.
bool-array.icc	5-7%	Very minimal reproduction of the actual required Rust Code
hash-table.cc	40-45%	Able to convert logic fragments of the code, most of which are common to both C and Rust. The data types are not added to the variables. Some of the functions are transpiled, and some are ignored as comments.
hash-table.h	0%	Unable to create hash-table class
input.h	0%	Unable to create the input class, class copied as it is from CPP code.
input.cc	20-30%	Able to convert logic fragments of the code, most of which are common to both C and Rust. Like array access and arithmetic operations. Some code is skipped and mistaken for comments. Most of the parts are just copied, but some variables are appropriately assigned data types in Rust
keyword-list.cc	0%	File not transpiled
keyword-list.h	0%	Unable to create the keyword-list class.
keyword-list.icc	0%	The functions are just defined, and implementations are skipped.
keyword.cc	0%	The file is not transpiled.
keyword.h	0%	Unable to create keyword class, class copied as it is in the file.
keyword.icc	0%	The functions are copied as it is.
output.h	0%	Unable to create output class, class copied as it is
output.cc	0%	The file is not transpiled.
positions.h	0%	Unable to create the positions class, class copied as it is in the file.
positions.cc	20-30%	Able to convert logic fragments of the code, most of which are common to both C and Rust. Like array access and arithmetic operations. Some code is skipped and mistaken for comments. Most of the parts are just copied, but some variables are appropriately assigned data types in Rust.
positions.icc	5-10%	Some code is skipped and mistaken for comments. Most of the parts are just copied, but some variables are appropriately assigned data types in Rust.

Table 1. Conversion percentages for gperf files transpiled using CRust