

COMP6991 23T1

Getting started with Rust

let statements

> **BINDINGS**

> **MUTABILITY**

> **SHADOWING**

> **ASIDE: CONSTANTS**

Basic types

> INTEGER TYPES (FIXED, ARCH)

> FLOATING POINT TYPES

> BOOLEAN

> CHARACTER

Compound types

> **TUPLES, ARRAYS**

> **STRUCTS, ENUMS**

> **ASIDE: PERVASIVE MUTABILITY**

> **ASIDE: UNIT**

Expression vs Statement

> **VALUE PRODUCTION**

> **IMPLICATIONS ON NESTING**

> **ITEM DECLARATIONS**

> **LET STATEMENTS**

> **EXPRESSION STATEMENTS**

Functions

> **PARAMETERS**

> **RETURN VALUES**

> **EARLY-RETURN**

> **EXPRESSION-RETURN**

If expressions

- > **BRANCHING**
- > **WHAT IS A VALID CONDITION?**
- > **AS AN EXPRESSION**
- > **TERNARY IF?**

Looping

> LOOP

> WHILE

> FOR

> EARLY TERMINATION

> LOOP BREAK VALUE

Match

> PATTERN MATCHING

> EXHAUSTIVENESS

> CATCH-ALL

> EXAMPLE: MATCH OPTION<T>

> EXAMPLE: MATCH RESULT<T, E>

Ownership

e.g. String, Vec

> **ONE OWNER**

> **TRANSFER OF OWNERSHIP (MOVE)**

> **DROP (VS GC? RC?)**

> **ESCAPE HATCH: CLONE**

Copy

e.g. `i32`, `bool`, `char`

> DOES NOT FOLLOW OWNERSHIP

> VALUE SEMANTICS

> SIMPLE SCALAR TYPES

> TUPLES? ARRAYS?

> STRUCTS? ENUMS?

Ownership x fn

> PASSING OWNERSHIP INTO A FN

> OWNERSHIP OUT OF A FN



Get excited for workshop 1!

See you next week!