2-4: Ownership Rules and Borrowing (Practice)

Artem Pavlov, TII, Abu Dhabi, 15.04.2025

Create new crate

- Create new branch in the repository p24
- Create new library crate p24
- Check that p24 is listed as a member of the workspace in the root Cargo.toml

References

- Create new module refs.rs
- Write the following functions
 - f1: accepts mutable reference to tuple with two u32s and bool flag. If flag is false, returns mutable reference to the first element in the tuple. If flag is true, returns mutable reference to the second element in the tuple.
 - f2: accepts mutable slice &mut [u32] and number n, returns mutable reference to the n-th element in the slice (counting from zero).
 - f3: accepts slice &mut [u32] and number n, returns mutable reference to the n-th element from the end of the slice (counting from zero, i.e. 0 means the last element).
 - f4: accepts slice &[u32], partitions it into 4 equal (as much as possible) parts, and returns 4 resulting slices
- Write unit tests for all functions

Fixing bad code

- Copy content of bad_lifetimes.rs from https://github.com/newpavlov/tii-workshop-2025 to p24/src/main.rs
- Fix code by adding appropriate lifetime annotations