

4-4: Procedural and declarative macros (Practice)

Artem Pavlov, TII, Abu Dhabi, 06.05.2024

Create new crate

- Create new branch in the repository p44
- Create new library crate p44
- Check that p44 is listed as a member of the workspace in the root Cargo.toml

hash_map macro

- In `lib.rs` create a public `hash_map!` macro which allows to create `HashMap` like this:

```
let map = hash_map!(  
    42 => true,  
    64 => false,  
    128 => true,  
);
```
- Write an integration test for the macro

Multiple BigUints with macro

- Create `big_unit` module
- Copy `BigUint4096` implementation from the 3-4 exercise
- Based on `BigUint4096` create a macro for creating `BigUints` like
`new_biguints!(`
 `BigUint1024, 16;`
 `BigUint2048, 32;`
 `BigUint4096, 64;`
 `BigUint8192, 128;`
`);`
- Create `BigUint` types using the macro
- Created types should contain a simple doctest