

7-2: Basic use of OpenSSL and ring

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Create new crate

- Create new branch in the repository **p72**
- Create new library crate **p72**
- Check that **p72** is listed as a member of the workspace in the root **Cargo.toml**

File encryption using `openssl`

- Create two binaries in the `bin/` folder:
 - `openssl_enc`: accepts input file path, output file path, and key as a hex-encoded string. Reads the input file, encrypts it using an AEAD algorithm, and saves it to the output file
 - `openssl_dec`: accepts input file path, output file path, and key as a hex-encoded string. Reads the input file, decrypts it, and saves it to the output file.
- Use random nonces generated with `getrandom`
- Append generated nonces to encrypted files

File encryption using ring

- Create two binaries in the `bin/` folder:
 - `ring_enc`: accepts input file path, output file path, and key as a hex-encoded string. Reads the input file, encrypts it using an AEAD algorithm, and saves it to the output file
 - `ring_dec`: accepts input file path, output file path, and key as a hex-encoded string. Reads the input file, decrypts it, and saves it to the output file.
- Use random nonces generated with `getrandom`
- Append generated nonces to encrypted files