relation R is f(x) = x^2

has the form aRb where a is domain and b is range

1R1

2R4

3R9

…

we’ll make multiple relations

relation RTI is (text) RTI (image)

relation RTV is (text) RTV (video)

relation RTS is (text) RTS (sound)

relation RII is (image) RII (image)

relation RIV is (image) RIV (video)

relation RIS is (image) RTS (sound)

relation RVI is (video) RTI (image)

relation RVV is (video) RTV (video)

relation RVS is (video) RTS (sound)

relation RSI is (sound) RSI (image)

relation RSV is (sound) RSV (video)

relation RSS is (sound) RSS (sound)

we need to maybe write some proofs that there is a closure on the operations we do on input files such that they’ll create the outputs we expect

we can begin to do this by showing that we can:

* convert one file type to another
* convert one file type to another and back
* convert one file type to another to another and back

Message -> encrypt(message) -> decrypt(message) -> message