## **Hash function**

File insecure\_hash implements the hash function hash\_string.

- If a message m consists of two blocks B1;B2 of 128 bits, the hash is computed as EAS-decrypt(B1, B2): i.e. it decrypts the block B1 using B2 as key.
- If the message consists of three blocks B1;B2;B3, the hash is computed as EAS-decrypt(EAS-decrypt(B1, B2), B3)
- If the message consists of n blocks B1;B2;B3;...Bn, the hash is computed as EAS-decrypt(... EAS-decrypt(EAS-decrypt(B1, B2), B3)..., Bn)

The message is padded with =" "= to be block aligned, e.g. if the length of the message is 200 bits, then 56 spaces are appended to the message before computing the hash.

This hash function is not secure. In particular it is not weak collision resistant. Complete the stub in collision.py, implementing the function find\_collision(message) that finds a collision. **Do not brute force**.

To test your solution execute ./test.py or py.test test.py.