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Application Security

Assignment 2

Part 2

To encrypt the database of this website I used the encrypt function from the Django.crytography.fields library which has the functionality to encrypt certain fields in the database. I chose the password field for the User table and the data field for the Card table to encrypt as these are the fields that contain the most sensitive data in the database. The encrypt function works by using the SECRET_KEY in the settings.py file to generate a hash for the fields that we chose to encrypt.

Another aspect of security in this encryption is the SECRET_KEY key storage. During testing the string can be stored in the settings.py file with no issues. However, during the production, the key should not be stored in plaintext in this file. I chose to store the key in the OS as an environment variable "DjangoSecret" This allows us to use the OS as the security key storage, so essentially if an attacker wanted to gain access to the key, they would have to gain access to the server that has the key stored within.