## Industry Standard Best Practices

Industry standard best practices were followed by incorporating a robust RSA encryption method and SHA-256 hashing algorithm, both well regarded as being secure. HTTPS was also made mandatory to encrypt data in transit, avoiding the less secure HTTP protocol. Exception handling was also used to manage errors and avoid unexpected system responses that could be exploited. SSL certificates were generated to establish secure communication channels.

Applying industry standard best practices for secure coding benefits the company in many ways. For one, encrypting sensitive information minimizes the risk of data breaches. Data breaches are very costly to company resources, mainly money, time, and reputation. Not only can financial resources be stolen with data breaches but the time it takes to recover from an attack can result in considerable down time for the company’s system leading to a loss of business. Aside from this, secure applications build trust with their clients, improving the company’s reputation. Secure coding practices are also important for complying with data protection laws such as GDPR and HIPAA.