

# Walman A Virtual Wallet Management System

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## **ABSTRACT**



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### 1 INTRODUCTION

- 1.1 CONTEXT
- 1.2 MOTIVATION
- 1.3 SIMILAR PRODUCTS AVAILABLE ON THE MARKET

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#### 2 FEATURES

- 2.1 USE CASES
- 2.2 PASSWORD MANAGEMENT
- 2.3 QR AND BARCODE MANAGEMENT
- 2.4 OTP AUTHENTICATOR
- 2.4.1 The HOTP algorithm
- 2.4.2 The TOTP algorithm
- 2.5 CRYPTOCURRENCY WALLET
- 2.6 BACKUP
- 2.6.1 Cloud Backup
- 2.6.2 Blockchain Backup

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#### 3 TECHNOLOGY STACK

- 3.1 FRONTEND
- 3.1.1 Dart
- 3.1.2 Flutter
- 3.2 FIREBASE
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- 3.3 BLOCKCHAIN
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- 3.3.2 Smart Contracts
- 3.3.3 Solidity
- 3.4 DEVELOPMENT ENVIRONMENT

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#### 4 IMPLEMENTATION

- 4.1 SYSTEM ARCHITECTURE
- 4.2 REDUX
- 4.3 PASSWORD MANAGEMENT
- 4.4 QR AND BARCODE MANAGEMENT
- 4.5 OTP TOKEN MANAGEMENT
- 4.6 CRYPTOCURRENCY WALLET
- 4.7 BACKUP
- 4.7.1 Cloud Backup
- 4.7.2 Blockchain Backup
- 4.8 SECURITY

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#### 5 TESTS

- 5.1 TEST PIPELINE
- 5.2 UNIT TESTS
- 5.3 WIDGET TESTS
- 5.4 PERFORMANCE STATISTICS

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## 6 CONCLUSIONS

#### 6.1 POSSIBLE IMPROVEMENTS



## REFERENCES