**Team Rocket**

CSC 4350: Software Engineering

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Fall 2018

Sydney Adams William K. Holley. IV, Lee Klarich, Jawad Usman

RTM:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Entry # | Paragraph # | System Specification Text | Type | Build | Use Case Name |
| 1 | 4.1 | Shall encrypt text. | SW | B4 | Host Page |
| 2 | 4.2 | Shall decrypt encrypted text. | SW | B4 | Host Page |
| 3 | 4.3 | Shall send encrypted plaintext to client. | SW | B4 | Host Page |
| 4 | 4.4 | Shall verify encryption of messages. | SW | B4 | Host Page |
| 5 | 4.5 | Shall store evidence of encryption within the console. | SW | B4 | Host Page |
| 6 | 4.6 | Shall be able to add friends. | SW | B4 | Host Page |
| 7 | 4.7 | Shall be able to remove friends. | SW | B4 | Host Page |

COCOMO:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cost Drivers** |  |  | **Ratings** |  |  |  |
|  | Very Low | Low | Nominal | High | Very High | Extra High |
| **Product Attributes** |  |  |  |  |  |  |
| Required Software Reliability | 0.75 | 0.89 | 1.00 | 1.14 | 1.40 |  |
| Database Size |  | 0.90 | 1.00 | 1.09 | 1.15 |  |
| Product Complexity | 0.70 | 0.78 | 1.00 | 1.14 | 1.29 | 1.60 |
| **Hardware Attributes** |  |  |  |  |  |  |
| Run Time Constraints |  |  | 1.00 | 1.14 | 1.29 | 1.66 |
| Memory Constraints |  |  | 1.00 | 1.10 | 1.30 | 1.65 |
| Virtual Machine Volatility |  | 0.85 | 1.00 | 1.07 | 1.15 |  |
| Turnaround Time |  | 0.85 | 1.00 | 1.08 | 1.20 |  |
| **Personnel Attributes** |  |  |  |  |  |  |
| Analyst Capability | 1.45 | 1.18 | 1.00 | 0.89 | 0.72 |  |
| Applications Experience | 1.20 | 1.18 | 1.00 | 0.86 | 0.79 |  |
| Virtual Machine Experience | 1.49 | 1.19 | 1.00 | 0.92 | 0.82 |  |
| Programming Language Experience | 1.45 | 1.10 | 1.00 | 0.94 |  |  |
| **Project Attributes** |  |  |  |  |  |  |
| Modern Programming Practices | 1.25 | 1.10 | 1.00 | 0.91 | 0.85 |  |
| Use of Software Tools | 1.21 | 1.12 | 1.00 | 0.90 | 0.83 |  |
| Required Development Schedule | 1.23 | 1.10 | 1.00 | 1.10 | 1.03 |  |

Description: Wispr is an application that utilizes RSA encryption to allow users to message each other with maximum security. The app focuses on its small size and portability to deliver a safe way to host or join a chat room. Users can login with their own username and join or host a chat room that has been encrypted for privacy. Users will be able to add and remove friends.

User Guide: To use Wispr, open the app and either type in your username and password or create a new account. Choose a chat room to join, and begin sending messages. To create an account, click the create an account button, then enter a username and desired password. This creates a new user in the database and logs them in. To login as a registered user, enter your username and password. If they are correct, the information passes the check and continues to the app. If not, an error is thrown and the user is prompted to try again. Select a server by clicking on a button next to one of the server names. In the chat screen, type a message in the bar and click send to post it into the server. Existing login credentials are: username – user, password – yes.

Storyline:

* The application shall be able to encrypt user messages.
* The application shall be able to decrypt user messages.
* The application shall be able to verify encryption of messages.
* The application shall be able to store evidence of encryption within the console.
* The application shall be able to add friends to your friends list.
* The application shall be able to remove friends from your friends list.