 **Air University**

(Multan Campus)

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| Department of Computer Sciences |
| Software Engineering |
| **STEGANOGRAPHY** |
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**User Requirements:**

* Encryption Process
* Login with system
* Browse the image file
* Write the message
* Auto generated key
* Encryption
* Receiver email and phone number
* Send Image
* Decryption Process
* Download and browse the image
* Enter the key
* Decryption
* After 3 wrong attempts, data will destroy

**Functional Requirements:**

**Login System**

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| **FR01.01** | **The system shall get the username** |
| **FR01.02** | **The system shall get the password** |
| **FR01.03** | **System shall allow user to Remember his username and password** |
| **FR01.04** | **System shall allow user to Reset his username and password when he/ she clicks on the Reset button** |

**Encryption Level**

|  |  |
| --- | --- |
| **FR02.01** | **The system shall allow user to upload the image** |
| **FR02.02** | **The system shall allow user to write the message** |
| **FR02.03** | **The system shall allow user to enter the key** |
| **FR02.04** | **The system shall allow user to encryption when he/she click the encryption button.** |
| **FR02.05** | **The system shall allow send the encrypted photo to his/her gmail and send key to his/her phone number.** |

**Decryption Level**

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| --- | --- |
| **FR03.01** | **The system shall allow user to browse the image** |
| **FR03.02** | **The system shall allow user the enter the key** |
| **FR03.03** | **The system shall destroy the data after three wrong attempts** |
| **FR03.04** | **The system shall allow to decrypt the image** |
| **FR03.05** | **The system shall allow user to open new page and display the hidden data.** |

**Non- Functional Requirements:**

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| --- | --- |
| **NFR01.1** | **The system shall destroy the data if he/she enter three times wrong password** |
| **NFR01.2** | **The system shall set the encryption level** |
| **NFR01.3** | **The system shall send the key receiver’s to his/her phone number.** |
| **NFR01.4** | **The system shall send the image receiver’s his/ her email.** |

**Actors:**

1: Sender

2: Receiver

**Descriptive:-**

Steganography encompasses techniques for writing hidden messages. The intended purpose is that only the sender and receiver should be able to find the hidden message without attracting the attention of others. I addition, a secure steganography method is able to hide the message in such a way that even when an object is suspected to contain a hidden message, the presence of this hidden data cannot be determined with a high certainty. First we login for encryption then we browse the image in which we hide our data like any message and picture. After this we write the message which we want to send. Then we enter the receiver email and his/her phone number. In email, he/she receive the image and auto generates key is send to his/her phone number. On the other hand, first the receiver downloads the image file and browses the image in the system. Now he/ she enter the key which he/she receive on his/ her phone number. If the user entre three times wrong key, data will automatically destroy. If he/she enter the correct the right key the data will decrypt, and he/she will see the hidden data.

**SYSTEM ANALYSYS:**

**Sender Side**

Encrypted

Embed

Plain Text

Image with message

**Receiver Side**

Message receive

Decryption of message

Extraction

Password

Embedded text inside the picture