# Requirement Identifying Technique

Following requirements gathering techniques were implemented.

**1.1 Questionnaire and Surveys:**

A set of Questions were given to the public for their thoughts on application. Requirements for our system were extracted from these Questionnaires. Data was gathered for Improvement and best features that were to be included.

**1.2 Group Discussion:**

Group discussions with public and group partner were held for gathering the information necessary for development of this application.

**1.3 Studying Related Systems:**

Various related system was studied to improve the requirements and cope up with the problems of the users. Research was complete and adequate to add value to the users.

**1.4 Observation:**

Different types of people were observed in different cases to make the system more reliable to the user and help solve their main problems through the system.

# Use Cases

## Use Case Diagrams:

## List of Use Cases:

List of use cases per module is given below:

* ***Module 2: Place Voice Record***

|  |  |
| --- | --- |
| **UC-ID** | **Use Case Name** |
| **UC-2.1** | Record Voice |
| **UC-2.2** | Upload Existing Voice |
| **UC-2.3** | Upload Existing Video to Fetch Voice |
| **UC-2.4** | Update Voice |
| **UC-2.5** | Update Video |
| **UC-2.6** | Delete Voice |
| **UC-2.7** | Delete Video |

* ***Module 4: Face-Vector to Face-Image Model***

|  |  |
| --- | --- |
| **UC-ID** | **Use Case Name** |
| **UC-4.1** | Vector to Image Modeling via Deep Learning |

* ***Module 6: Features Enhancer***

|  |  |
| --- | --- |
| **UC-ID** | **Use Case Name** |
| **UC-6.1** | Edit Picture |
| **UC-6.2** | Nose Enhancement |
| **UC-6.3** | Eyebrow Enhancement |
| **UC-6.4** | Beard Maker |
| **UC-6.5** | Eye Enhancement |

* ***Module 8: Setting and Configuration***

|  |  |
| --- | --- |
| **UC-ID** | **Use Case Name** |
| **UC-8.1** | Sent Feedback |
| **UC-8.2** | Contact Support Team |
| **UC-8.3** | View Feedback History |
| **UC-8.4** | Dark Mode |
| **UC-8.5** | Change Language |
| **UC-8.6** | Privacy Policy |

## Tabular Use Cases:

The Detail of Use Cases of each module is given below:

#### Module 2: Place Voice Record

* **Record Voice**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.1 |
| **Use Case Name:** | Record Voice |
| **Actors:** | User |
| **Description:** | The goal is to enable the users to record the voice which is then used for conversion of image of that person. |
| **Priority** | High |
| **Preconditions:** | * User must be logged into the application. |

|  |  |
| --- | --- |
| **Trigger** | The user will click convert button. |
| **Include** | UC-1.2 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * After the home screen appears, move to the Add a voice option, then record voice. |
| **Alternative Flows:** | None |
| **Exceptions:** | * Microphone must be present in system to record a voice. |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * The user must be able to find the correct menu. |

* **Upload Existing Voice**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.2 |
| **Use Case Name:** | Upload Existing Voice |
| **Actors:** | Primary Actor: User  Secondary Actor: Security User |
| **Description:** | The goal is to enable the users to upload existing voice which is recorded previously by person. |
| **Priority** | High |
| **Preconditions:** | * Users must be logged into the application. |

|  |  |
| --- | --- |
| **Trigger** | The users will click convert button. |
| **Include** | UC-1.2 |
| **Normal Flow:** | * The users will open the web or mobile application * The users will sign into his/her account * After the home screen appears, move to the upload existing voice option, and then upload voice. |
| **Alternative Flows:** | * When user click upload existing option then two options appear: * Upload voice from Music folder or Upload voice from saved voices. |
| **Exceptions:** | None |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * The user must be able to find the correct menu. |

* **Upload Existing Video to Fetch Voice**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.3 |
| **Use Case Name:** | Upload Existing Video to Fetch Voice |
| **Actors:** | Primary Actor: User  Secondary Actor: Security User |
| **Description:** | The goal is to enable the users to upload existing video and voice is being extracted by video which is then converted to image. |
| **Priority** | High |
| **Preconditions:** | * User must be logged into the application. |

|  |  |
| --- | --- |
| **Trigger** | The user will click convert button. |
| **Include** | UC-1.2 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * After the home screen appears, move to the upload existing video option, and then upload video. |
| **Alternative Flows:** | * When user click upload existing option then two options appear: * Upload video from gallery or Upload video from saved videos. |
| **Exceptions:** | None |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * User must have a stable internet connection. * The user must be able to find the correct menu. |

* **Update Voice**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.4 |
| **Use Case Name:** | Update Voice |
| **Actors:** | Primary Actor: User  Secondary Actor: Security User |
| **Description:** | The goal is to enable the users to update voice which is recorded previously by person. |
| **Priority** | High |
| **Preconditions:** | * User must be logged into the application. * User must record voice at least one time. |

|  |  |
| --- | --- |
| **Trigger** | The user will click convert button. |
| **Include** | UC-2.1 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * When user record voice then he/she has option to update voice by clicking update voice option. |
| **Alternative Flows:** | None |
| **Exceptions:** | None |
| **Post condition:** | * The user will again allow to record voice or upload voice. |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * The user must be able to find the correct menu. * User must have a stable internet connection. * Microphone must be present in application. |

* **Update Video**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.5 |
| **Use Case Name:** | Update Video |
| **Actors:** | Primary Actor: User  Secondary Actor: Security Person |
| **Description:** | The goal is to enable the users to provide facility to update video, which is previously uploaded by his/her. |
| **Priority** | High |
| **Preconditions:** | * User must be logged into the application. * User must upload video at least one time. |

|  |  |
| --- | --- |
| **Trigger** | The user will click convert button. |
| **Include** | UC-2.3 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * When user upload video he/she has option to update video by clicking update video option. |
| **Alternative Flows:** | * When user click update video option then two options appear: * Upload video from gallery or Upload video from saved videos. |
| **Exceptions:** | None |
| **Post condition:** | * The user will again allow to upload video. |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * User must have a stable internet connection. * The user must be able to find the correct menu. |

* **Delete Voice**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.6 |
| **Use Case Name:** | Delete Voice |
| **Actors:** | Primary Actor: User  Secondary Actor: Security Person |
| **Description:** | The goal is to enable the users to provide facility to delete saved voices. |
| **Priority** | High |
| **Preconditions:** | * User must be logged into the application. * User must have at least one saved voice. |

|  |  |
| --- | --- |
| **Trigger** | None. |
| **Include** | UC-1.2 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * User will select saved voices option. * Then, User will delete voice which he/she wants. |
| **Alternative Flows:** | None |
| **Exceptions:** | None |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The user must understand the English language. * User must have a stable internet connection. * The user must be able to find the correct menu. |

* **Delete Video**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-2.7 |
| **Use Case Name:** | Delete Video |
| **Actors:** | Primary Actor: User  Secondary Actor: Security Person |
| **Description:** | The goal is to enable the users to provide facility to delete saved videos. |
| **Priority** | High |
| **Preconditions:** | * Users must be logged into the application. * Users must have at least one saved video. |

|  |  |
| --- | --- |
| **Trigger** | None. |
| **Include** | UC-1.2 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * User will select saved videos option. * Then, User will delete video which he/she wants. |
| **Alternative Flows:** | None |
| **Exceptions:** | None |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The users must understand the English language. * Users must have a stable internet connection. * The users must be able to find the correct menu. |

#### Module 4: Face Vector to Face Image Model

* **Vector to Image Modeling via Deep Learning**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-4.1 |
| **Use Case Name:** | Vector to image Modeling via Deep Learning |
| **Actors:** | User |
| **Description:** | The goal is to enable the users to see how vector is converted to image using Machine learning. |
| **Priority** | High |
| **Preconditions:** | * Users must be logged into the application. * User must have stable internet connection. |

|  |  |
| --- | --- |
| **Trigger** | Convert image button plays role of trigger here. |
| **Include** | UC-1.2, UC-3.1 |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * When voice is converted to vector then * User enter convert image button to convert vector to image. |
| **Alternative Flows:** | None |
| **Exceptions:** | None |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None |
| **Assumptions:** | * The users must understand the English language. * Users must have a stable internet connection. * The users must be able to find the correct menu. |

#### Module 6: Features Enhancer

* **Face Shape Enhancement**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-6.1 |
| **Use Case Name:** | Edit Picture |
| **Actors:** | Security Person |
| **Description:** | The goal is to enable the person to edit the face of person after generation of image model. |
| **Priority** | High |
| **Preconditions:** | * person must be logged into the application. |

|  |  |
| --- | --- |
|  | * The person must use place a voice option. * conversion of voice to image model is compulsory. |
| **Trigger** | None |
| **Include** | UC-4.2 |
| **Normal Flow:** | * The person will open the web or mobile application * The person will sign into his/her account * After the home screen appears, move to the Add a voice, then select conversion to image button. * After generation of image click edit button and select face enhancement option and enhance according to your need. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the user is not connected to the internet, then: * Conversion of image is not possible. * Face enhancement is also not possible. |
| **Post condition:** | None |
| **Business Rules:** | Person should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * Person must have a stable internet connection. * The Person must understand the English language. * The Person must be able to find the correct menu. |

* **Nose Enhancement**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-6.2 |
| **Use Case Name:** | Nose Enhancement |
| **Actors:** | Security Person |
| **Description:** | The goal is to enable the person to enhance the Nose of person after generation of image model. |
| **Priority** | High |
| **Preconditions:** | * person must be logged into the application. |

|  |  |
| --- | --- |
|  | * The person must use place a voice option. * conversion of voice to image model is compulsory. |
| **Trigger** | None |
| **Include** | UC-4.2 |
| **Normal Flow:** | * The person will open the web or mobile application * The person will sign into his/her account * After the home screen appears, move to the Add a voice, then select conversion to image button. * After generation of image click edit button and select nose enhancement option and enhance according to your need. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the person is not connected to the internet, then: * Conversion of image is not possible. * Nose enhancement is also not possible. |
| **Post condition:** | None |
| **Business Rules:** | User should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * person must have a stable internet connection. * The person must understand the English language. * The person must be able to find the correct menu. |

* **Eyebrow Enhancement**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-6.3 |
| **Use Case Name:** | Eyebrow Enhancement |
| **Actors:** | Security Person |
| **Description:** | The goal is to enable the person to enhance the Eyebrow of person after generation of image model. |
| **Priority** | High |
| **Preconditions:** | * person must be logged into the application. |

|  |  |
| --- | --- |
|  | * The Person must use place a voice option. * conversion of voice to image model is compulsory. |
| **Trigger** | None |
| **Include** | UC-4.2 |
| **Normal Flow:** | * The person will open the web or mobile application * The person will sign into his/her account * After the home screen appears, move to the Add a voice, then select conversion to image button. * After generation of image click edit button and select Eyebrow enhancement option and enhance according to your need. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the person is not connected to the internet, then: * Conversion of image is not possible. * Eyebrow enhancement is also not possible. |
| **Post condition:** | None |
| **Business Rules:** | User should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * person must have a stable internet connection. * The person must understand the English language. * The person must be able to find the correct menu. |

* **Beard Maker**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-6.4 |
| **Use Case Name:** | Beard Maker |
| **Actors:** | Security Person |
| **Description:** | The goal is to enable the person to make the beard of person after generation of image model. |
| **Priority** | High |
| **Preconditions:** | * Person must be logged into the application. |

|  |  |
| --- | --- |
|  | * The person must use place a voice option. * conversion of voice to image model is compulsory. |
| **Trigger** | None |
| **Include** | UC-4.2 |
| **Normal Flow:** | * The person will open the web or mobile application * The person will sign into his/her account * After the home screen appears, move to the Add a voice, then select conversion to image button. * After generation of image click edit button and select beard option and make according to your need. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the perosn is not connected to the internet, then: * Conversion of image is not possible. * Making of beard is also not possible. |
| **Post condition:** | None |
| **Business Rules:** | person should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * User must have a stable internet connection. * The user must understand the English language. * The user must be able to find the correct menu. |

* **Eye Enhancement**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-6.5 |
| **Use Case Name:** | Eye Enhancement |
| **Actors:** | Security Person |
| **Description:** | The goal is to enable the users to enhance the Eyes of person after generation of image model. |
| **Priority** | High |
| **Preconditions:** | * Person must be logged into the application. |

|  |  |
| --- | --- |
|  | * The person must use place a voice option. * conversion of voice to image model is compulsory. |
| **Trigger** | None |
| **Include** | UC-4.2 |
| **Normal Flow:** | * The person will open the web or mobile application * The person will sign into his/her account * After the home screen appears, move to the Add a voice, then select conversion to image button. * After generation of image click edit button and select Eye enhancement option and enhance eyes according to need. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the person is not connected to the internet, then: * Conversion of image is not possible. * Eye enhancement is also not possible. |
| **Post condition:** | None |
| **Business Rules:** | person should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * person must have a stable internet connection. * The person must understand the English language. * The person must be able to find the correct menu. |

#### Module 8: Feedback Panel

* **Send Feedback**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.1 |
| **Use Case Name:** | Send Feedback |
| **Actors:** | User |
| **Description:** | The goal is to enable the users to send feedback to the management team about the app. |
| **Priority** | High |
| **Preconditions:** | 1. User must be logged into the application. |

|  |  |
| --- | --- |
|  | 2. The user must select the feedback option available in the interface of the app. |
| **Trigger** | When the user wants to send the feedback. |
| **Include** | None. |
| **Normal Flow:** | * The user will open the web or mobile application * The user will sign into his/her account * After the home screen appears, move to the feedback section, then select the feedback option to add description. * The user can also rate the app while sending feedback. |
| **Alternative Flows:** | None |
| **Exceptions:** | * If the user is not connected to the internet, then: * The feedback will be failed to be sent. * The feedback might reload if the internet facility comes back. * The feedback is blank. * No rating star is selected. |
| **Post condition:** | The feedback would be sent to the management team which will help them make their application better and get notified about any bugs |
| **Business Rules:** | User should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | * User must have a stable internet connection. * The user must understand the English language. * The user must be able to find the correct menu. |

* **Contact Support Team**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.2 |
| **Use Case Name:** | Contact Support Team |
| **Actors:** | User |
| **Description:** | The goal is to enable the users to chat with the support team by sending a message. |
| **Priority** | Low |
| **Preconditions:** | User must be logged into the application. |
| **Trigger** | When the user clicks the Contact Us option provided in the interface. |
| **Include** | None. |
| **Normal Flow:** | 1. The user will open the web or mobile application 2. The user will sign into his/her account 3. After the home screen appears, move to the FAQ section. 4. Then select Contact us option. |
| **Alternative Flows:** | The user can directly contact the support team through email if he/she knows the email address of the support team. |
| **Exceptions:** | 1. If the user is not connected to the internet, then: 2. The message will be failed to send. 3. The message might reload if the internet facility comes back. 4. The message is blank. |
| **Post condition:** | The message will be sent to the management team and the query will be answered within 3-4 hours. |
| **Business Rules:** | User should have a stable internet connection. |
| **Notes and Issues** | None |
| **Assumptions:** | 1. User must have a stable internet connection. 2. The user must understand the English language. 3. The user must be able to find the correct menu. |

* **View Feedback History**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.3 |
| **Use Case Name:** | View Feedback History |
| **Actors:** | User |
| **Description:** | The user can view the history of the feedbacks provided. |
| **Priority** | Low |
| **Preconditions:** | 1. User must be logged into the application. 2. The user must go to the help and support option to view the feedback history. |
| **Trigger** | When the user clicks the view history button. |
| **Include** | None |
| **Normal Flow:** | None |
| **Alternative Flows:** | None |
| **Exceptions:** | The user must be connected to the internet otherwise the page will fail to load and  move to the previous menu. |
| **Post condition:** | The user will be able to view the history of the feedbacks given by the user. |
| **Business Rules:** | None |
| **Notes and Issues** | None. |
| **Assumptions:** | 1. The user must understand the English language. 2. The user must be able to find the correct menu. |

* **Dark Mode**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.4 |
| **Use Case Name:** | Dark Mode |
| **Actors:** | User |
| **Description:** | The user can switch the mode of application. |
| **Priority** | Medium |
| **Preconditions:** | User must be logged into the application with active internet connection |
| **Trigger** | When the user clicks the view history button. |
| **Include** | UC-1.2 |
| **Normal Flow:** | User will click on Dark mode button and click on the check to on it and then the system will apply dark mode to application |
| **Alternative Flows:** | None |
| **Exceptions:** | The user must be connected to the internet. |
| **Post condition:** | Dark mode will apply to the application. |
| **Business Rules:** | None |
| **Notes and Issues** | None. |
| **Assumptions:** | 1. The user must understand the English language. 2. The user must be able to find the correct menu. |

* **Change Language**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.5 |
| **Use Case Name:** | Change Language |
| **Actors:** | User |
| **Description:** | The user can change language of application according to his or her need. |
| **Priority** | Medium |
| **Preconditions:** | User must be logged into the application with active internet connection |
| **Trigger** | When the user clicks the language button. |
| **Include** | UC-1.2 |
| **Normal Flow:** | User will click on Change Language button and then the system will apply that language to the application which user clicks |
| **Alternative Flows:** | None |
| **Exceptions:** | The user must be connected to the internet. |
| **Post condition:** | Chosen language will apply to the application. |
| **Business Rules:** | None |
| **Notes and Issues** | None. |
| **Assumptions:** | 1. The user must understand the English language. 2. The user must be able to find the correct menu. |

* **Privacy Policy**

|  |  |
| --- | --- |
| **Use Case ID:** | UC-8.6 |
| **Use Case Name:** | Privacy Policy |
| **Actors:** | User |
| **Description:** | The user can read the privacy policies about the application. |
| **Priority** | Low |
| **Preconditions:** | User must be logged into the application with active internet connection |
| **Trigger** | None |
| **Include** | UC-1.2 |
| **Normal Flow:** | User will click on Privacy Policy button and then the system will show the user the privacy policy of the application. |
| **Alternative Flows:** | None |
| **Exceptions:** | The user must be connected to the internet. |
| **Post condition:** | None |
| **Business Rules:** | None |
| **Notes and Issues** | None. |
| **Assumptions:** | 1. The user must understand the English language. 2. The user must be able to find the correct menu. |

# Functional Requirements

This section describes the functional requirements of the system expressed in the natural language style.

## Functional requirements X

The Functional Requirements of the system are listed below:

### Module 2(Place a Voice Record)

#### Record a Voice

***Table 198: Description of FR-2.1.1***

|  |  |
| --- | --- |
| **Identifier** | FR-2.1.1 |
| **Title** | Add voice |
| **Requirement** | The user will record voice which is then converted to image later. |
| **Source** | Shayan Zameer |
| **Rationale** | Voice to be record. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.1.2***

|  |  |
| --- | --- |
| **Identifier** | FR-2.1.2 |
| **Title** | Play voice |
| **Requirement** | The user will play voice which is previously record. |
| **Source** | Shayan Zameer |
| **Rationale** | Voice to be played. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.1.3***

|  |  |
| --- | --- |
| **Identifier** | FR-2.1.3 |
| **Title** | Pause voice |
| **Requirement** | The user will have option to pause a voice. |
| **Source** | Shayan Zameer |
| **Rationale** | Voice to be paused. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

#### Upload Existing Voice

***Table 198: Description of FR-2.2.1***

|  |  |
| --- | --- |
| **Identifier** | FR-2.2.1 |
| **Title** | Selection of folder |
| **Requirement** | The user will select the folder from where voice to be uploaded. |
| **Source** | Shayan Zameer |
| **Rationale** | Selection of folder. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.2.2***

|  |  |
| --- | --- |
| **Identifier** | FR-2.2.2 |
| **Title** | Upload Voice |
| **Requirement** | The user will Upload voice to application. |
| **Source** | Shayan Zameer |
| **Rationale** | Upload voice. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.2.3***

|  |  |
| --- | --- |
| **Identifier** | FR-2.2.3 |
| **Title** | Check Saved Voices |
| **Requirement** | The user will have option to check saved voices folder where he/ she wants to upload voice. |
| **Source** | Shayan Zameer |
| **Rationale** | Saved voices checking. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

#### Upload Existing Video

***Table 198: Description of FR-2.3.1***

|  |  |
| --- | --- |
| **Identifier** | FR-2.3.1 |
| **Title** | Upload Existing Video |
| **Requirement** | The user will upload video from where voice is extracted and then converted to image later. |
| **Source** | Shayan Zameer |
| **Rationale** | Upload video. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.3.2***

|  |  |
| --- | --- |
| **Identifier** | FR-2.3.2 |
| **Title** | Pause video |
| **Requirement** | The user will have option to pause a video. |
| **Source** | Shayan Zameer |
| **Rationale** | Video to be paused. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

***Table 198: Description of FR-2.3.3***

|  |  |
| --- | --- |
| **Identifier** | FR-2.3.3 |
| **Title** | Play video |
| **Requirement** | The user will have option to play a video. |
| **Source** | Shayan Zameer |
| **Rationale** | Video to be played. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-2.3.4***

|  |  |
| --- | --- |
| **Identifier** | FR-2.3.3 |
| **Title** | Check Saved Videos |
| **Requirement** | The user will have option to check saved videos where he/ she wants to upload video. |
| **Source** | Shayan Zameer |
| **Rationale** | Saved videos checking. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

#### Update Video

***Table 198: Description of FR-2.4.1***

|  |  |
| --- | --- |
| **Identifier** | FR-2.3.1 |
| **Title** | Update Video |
| **Requirement** | The user will update video which is previously uploaded. |
| **Source** | Shayan Zameer |
| **Rationale** | Video to be updated. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, FR-2.3.1 |
| **Priority** | High |

#### Update Voice

***Table 198: Description of FR-2.5.1***

|  |  |
| --- | --- |
| **Identifier** | FR-2.5.1 |
| **Title** | Update Voice |
| **Requirement** | The user will update voice which is previously uploaded. |
| **Source** | Shayan Zameer |
| **Rationale** | Voice to be updated. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, FR-2.2.1 |
| **Priority** | High |

#### Delete Voice

***Table 198: Description of FR-2.6.1***

|  |  |
| --- | --- |
| **Title** | Delete Voice |
| **Requirement** | The user will delete voices from saved voices folder. |
| **Source** | Shayan Zameer |
| **Rationale** | Voice to be deleted. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

#### Delete Video

***Table 198: Description of FR-2.7.1***

|  |  |
| --- | --- |
| **Title** | Delete Video |
| **Requirement** | The user will delete videos from saved videos folder. |
| **Source** | Shayan Zameer |
| **Rationale** | Videos to be deleted. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

### Module 4(Face Vector to Face Image Model)

***Table 198: Description of FR-4.1.1***

|  |  |
| --- | --- |
| **Title** | Vector to image |
| **Requirement** | The vector is converted to image using Machine learning and AI. |
| **Source** | Shayan Zameer |
| **Rationale** | Conversion of vector to image. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

***Table 198: Description of FR-4.1.2***

|  |  |
| --- | --- |
| **Title** | Generate Image |
| **Requirement** | When vector is converted to image by using Machine learning and AI the image is generated. |
| **Source** | Shayan Zameer |
| **Rationale** | Generation of image. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | High |

### Module 6(Features Enhancer)

#### Edit Picture

***Table 198: Description of FR-6.1.1***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.1 |
| **Title** | Adjust Brightness |
| **Requirement** | The Security person will adjust brightness according to his/her need |
| **Source** | Shayan Zameer |
| **Rationale** | Brightness to be adjusted. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.1.2***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.2 |
| **Title** | Adjust Saturation |
| **Requirement** | The Security person will adjust Saturation according to his/her need |
| **Source** | Shayan Zameer |
| **Rationale** | Saturation to be adjusted. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.1.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.3 |
| **Title** | Applying Filter |
| **Requirement** | The Security person will have authority to apply filter |
| **Source** | Shayan Zameer |
| **Rationale** | Filter to be applied. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.1.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.4 |
| **Title** | Crop Picture |
| **Requirement** | The Security person will have authority to crop picture. |
| **Source** | Shayan Zameer |
| **Rationale** | Picture to be cropped. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.1.5***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.5 |
| **Title** | Applying Lightning Effects |
| **Requirement** | The Security person will have authority to apply some effects on picture. |
| **Source** | Shayan Zameer |
| **Rationale** | Lightning affects to be applied on picture. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.1.5***

|  |  |
| --- | --- |
| **Identifier** | FR-6.1.6 |
| **Title** | Selection of tool for enhancement |
| **Requirement** | The Security person will select the tools for editing such as liquify tool , dodge and run tool or any other tool etc. |
| **Source** | Shayan Zameer |
| **Rationale** | Selection of tool for Enhancement |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

#### Nose Enhancement

***Table 198: Description of FR-6.2.1***

|  |  |
| --- | --- |
| **Identifier** | FR-6.2.1 |
| **Title** | Adjust Nose Length |
| **Requirement** | The Security person will have authority to adjust length of nose in picture. |
| **Source** | Shayan Zameer |
| **Rationale** | Adjustment of length of nose. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.2.2***

|  |  |
| --- | --- |
| **Identifier** | FR-6.2.1 |
| **Title** | Adjust Nose Width |
| **Requirement** | The Security person will have authority to adjust width of nose in picture. |
| **Source** | Shayan Zameer |
| **Rationale** | Adjustment of width of nose. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.2.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.2.3 |
| **Title** | Add New Layer |
| **Requirement** | The Security person will have authority to add new layer to nose. |
| **Source** | Shayan Zameer |
| **Rationale** | Addition of new layer to nose. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Low |

#### Eyebrow Enhancement

***Table 198: Description of FR-6.3.1***

|  |  |
| --- | --- |
| **Identifier** | FR-6.3.1 |
| **Title** | Change Eyebrow Colour |
| **Requirement** | The Security person will have authority to change eyebrow colour. |
| **Source** | Shayan Zameer |
| **Rationale** | Colour changing of eyebrow. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.3.2***

|  |  |
| --- | --- |
| **Identifier** | FR-6.3.2 |
| **Title** | Add some hairs |
| **Requirement** | The Security person will have authority to add hairs to eyebrow. |
| **Source** | Shayan Zameer |
| **Rationale** | Adding hairs to eyebrows. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.3.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.3.3 |
| **Title** | Selection of Brush |
| **Requirement** | The Security person will select the brush for the enhancement of eyebrows. |
| **Source** | Shayan Zameer |
| **Rationale** | Selection of brush. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.3.4***

|  |  |
| --- | --- |
| **Identifier** | FR-6.3.4 |
| **Title** | Adjust Size of Brush |
| **Requirement** | The Security person will have to adjust the size of brush for the enhancement of eyebrows. |
| **Source** | Shayan Zameer |
| **Rationale** | Adjustment of size of brush. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2, FR-6.3.3 |
| **Priority** | High |

#### Beard Maker

***Table 198: Description of FR-6.4.1***

|  |  |
| --- | --- |
| **Identifier** | FR-6.4.1 |
| **Title** | Selection of Brush tool |
| **Requirement** | The Security person will have to select the brush tool for beard making. |
| **Source** | Shayan Zameer |
| **Rationale** | Selection of brush tool. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.4.2***

|  |  |
| --- | --- |
| **Identifier** | FR-6.4.2 |
| **Title** | Selection of Existing Template of beard |
| **Requirement** | The Security person will have option to select beard that are already existing. |
| **Source** | Shayan Zameer |
| **Rationale** | Selecting existing template of beard. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

***Table 198: Description of FR-6.4.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.4.3 |
| **Title** | Change beard color |
| **Requirement** | The Security person will have option to change the color of beard. |
| **Source** | Shayan Zameer |
| **Rationale** | Changing beard color. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | High |

#### Eye Enhancement

***Table 198: Description of FR-6.5.1***

|  |  |
| --- | --- |
| **Identifier** | FR-6.4.3 |
| **Title** | Add Lens |
| **Requirement** | The Security person will have option to add lens to the eye. |
| **Source** | Shayan Zameer |
| **Rationale** | Adding lenses. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.5.2***

|  |  |
| --- | --- |
| **Identifier** | FR-6.5.2 |
| **Title** | Adjust Eyelashes |
| **Requirement** | The Security person will have option to adjust the eyelashes. |
| **Source** | Shayan Zameer |
| **Rationale** | Adjusting eyelashes. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

***Table 198: Description of FR-6.5.3***

|  |  |
| --- | --- |
| **Identifier** | FR-6.5.3 |
| **Title** | Adjust Eye Width |
| **Requirement** | The Security person will have option to adjust the width of eye. |
| **Source** | Shayan Zameer |
| **Rationale** | Adjusting eye width. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2, UC 4.2 |
| **Priority** | Medium |

### Module 8 (Setting and Configuration):

#### Sent Feedback

***Table 198: Description of FR-8.1.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.1.1 |
| **Title** | Write Feedback |
| **Requirement** | The user will be able to write feedback in the text box provided |
| **Source** | Shayan Zameer |
| **Rationale** | To send feedback to the support team about the app |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

***Table 199: Description of FR-8.1.2***

|  |  |
| --- | --- |
| **Identifier** | FR-8.1.2 |
| **Title** | Give Rating |
| **Requirement** | The user will be able to give rating out of 10. |
| **Source** | Shayan Zameer |
| **Rationale** | To send feedback |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

#### Contact Support Team

***Table 197: Description of FR-8.2.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.2.1 |
| **Title** | Shayan Zameer |
| **Requirement** | The user will be able to type a message to the provided email to contact the support team. |
| **Source** | User |
| **Rationale** | To Answer user’s query |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

#### View Feedback History

***Table 201: Description of FR-8.3.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.3.1 |
| **Title** | View Feedback History |
| **Requirement** | The user will be able to view the feedback history. |
| **Source** | Shayan Zameer |
| **Rationale** | To view feedback history. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

#### Dark Mode

***Table 201: Description of FR-8.4.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.4.1 |
| **Title** | Dark Mode |
| **Requirement** | The user will be able to convert the mode of application into dark colour. |
| **Source** | Shayan Zameer |
| **Rationale** | To change the mode of application. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

#### Select Language

***Table 200: Description of FR-8.5.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.5.1 |
| **Title** | Select Language |
| **Requirement** | The user can select the any language including Urdu and English. |
| **Source** | Shayan Zameer |
| **Rationale** | To Select a Language |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

#### Privacy Policy

***Table 200: Description of FR-8.6.1***

|  |  |
| --- | --- |
| **Identifier** | FR-8.6.1 |
| **Title** | Privacy Policy |
| **Requirement** | The user can read the privacy policy of system. |
| **Source** | Shayan Zameer |
| **Rationale** | To read a privacy policy. |
| **Business Rule** | N/A |
| **Dependencies** | UC-1.2 |
| **Priority** | Medium |

# External Interface Requirements

This section defines the interfaces that contain adequate specificity, protocols, ports, and logical addresses, etc. so that the software can be developed and verified against the interface requirements.

## User Interfaces Requirements

The user interface requirements are given below:

* Our application is “**Speech2Face**” is very easy to understand and there is no training time of more than 5-10 minutes.
* Our goal while making user interfaces is to make the experience of user easy and good.
* The font style that will be used in the application will be Bold.
* The font size may vary from one menu to the other, but the standard font size would be maintained at 24-26.
* Screen layout would be optimized for every device.
* Buttons like Back button might appear in different menus.

## Software Interfaces Requirements

* Our application is “**Speech2Face**” is an android and web-based application.
* The application will maintain active connections with MongoDB Database version 5.0, Machine Learning Libraries and will support Flutter Dart version 3.5.
* The software will be supported on Android 6 and above, and iOS 11 and above.
* Our application also supports multitasking functionality and split screen functionality also available in our application.

## Communications interfaces

* Our application “**Speech Emotion Recognition**” needs active internet connection.
* If user has downloaded something using internet, he can access that later without internet connection
* When users send feedbacks, the application will send an email to the support team.
* For security authentication, application will connect the user to their mobile network by sending an OTP (One Time Password) code to their phones.

## Hardware interfaces

* Our application automatic “**Speech2face**” also need some hardware help as well to complete its task.
* Microphone is used in our application to input the user’s voice so that it can detect it and to process it digitally.

# Conclusion

The SRS document portrays the final product of the project. The Functional and Non-Functional Requirements of the system are stated in detail. The document explains and quantifies Non- Functional Requirements. The document also portrays interface mockups. It is the ultimate guideline for all the stakeholders involved in the project. This SRS document is the first step into the development phase of the project**.**