**3. SYSTEM REQUIREMENTS**

**EXTERNAL INTERFACE REQUIREMENT**

**3.1 User Interface**

* Platform – Desktop or Mobile browser
* Display – 1024x768 or higher, 1366x768 recommended
* Colour – 16 million coloured display
* JavaScript enabled browser.
* Latest Video and supported graphics drivers.

**3.2 Hardware Interface**

* Processor – i3/i5/i7 x64 Bit Minimum 2 Ghz.
* Hard Disk – 8 GB + at least 2 GB for Relational Database System
* Memory – 2 GB RAM minimum, 4 GB RAM recommended
* High Speed Internet Access
* LAN Connection with Ethernet.

**3.3 Software Interface**

* Linux / Windows OS, Ubuntu 16.04 Preferred
* JDK 7 or above
* NetBeans IDE
* Relational Database Server, MYSQL Preferred
* Apache Tomcat Server

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**3.4 FUNCTIONAL REQUIREMENTS**

The functional requirement part discusses the functional behavior that should be possessed by the system. Each requirement maps to a higher-level function that transforms the given set of input data into output data. The functional requirements can be identified as the modules involved. These modules perform separate functions based on the given input and return output data for the next level. Each module acts as an independent entity acting on its own but the output collected is just an intermediate data for other modules.

Different types of functional requirements possessed by the system are:

1. Introduction Module
2. Registration Module
3. Key Exchange Module
4. ID Generation Module
5. Login Module

**Module 1: Introduction Module**

* Purpose – A brief introduction. It is invented to be engaging and communicate the theme of the cloud application to the user.
* Inputs – No input is necessary.
* Outputs – Immediately load the Main Menu Screen (Registration Screen).

**Module 2: Registration Module**

* Purpose – The central point after connection establishment. The menu responds to user clicks and details are sent to the server.
* Inputs – Username, Mobile Number, Email, DOB fields are displayed, submit button.
* Outputs – Control is passed to key exchange page with a random registration created.

**Module 3: Key Exchange Module**

* Purpose – For ECCDH equivalent key exchange.
* Inputs – Secret Private Key for exchange.
* Outputs –ECDH Key is generated and OTP sent to mail ID.

**Module 4: ID Generation Module**

* Purpose – For user ID generation. Generation of user ID. Accessing the cloud storage. Fresh OTP sent to email ID.
* Inputs – OTP from email ID in the text field. User ID and OTP Request.
* Outputs – Random user ID is generated. OTP verification and redirecting to user account.

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**Module 5: Login Module**

* Purpose – To check credentials of the user and log him in if they are correct and grant the access to their account.
* Inputs – User ID and the OTP sent to the user’s email ID.
* Outputs – Immediately load the Profile Screen if the credentials match.

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