#### Boundaries of the System

* The system can be used by every people with a smart phone which enable NFC feature and a laptop/computer with Internet connection.
* The language of the system is Vietnamese.
* The complete product includes:

+ The website, for admins, partners and users.

+ The mobile applications, for partners and users.

+ All the process document involved.

* The system can only used by the librarian in library with application on PC.
* The system can work fully function with Internet connection.
* The complete product will includes :
  + An application, for librarian only.
  + Components which use to write and read RFID tags.
  + Components which use to scan RFID tags.
  + Wires, batteries, frame and other necessary.

#### Development Environment

##### Hardware requirements

**For PC application**

|  |  |  |
| --- | --- | --- |
|  | Minimum Requirements | Recommended |
| Internet Connection | Cable, Wi-Fi (4 Mbps) | Cable, Wi-Fi (8 Mbps) |
| Operating System | Window Server 2008 | Window Server 2008 |
| Computer Processor | Intel® Xeon ® 1.4GHz | Intel® Xeon ® Quad Core (12M Cache, 2.50 GHz) |
| Computer Memory | 1GB RAM | 2GB or more |

Table 1: Hardware Requirement for Application

**For Components**

|  |  |
| --- | --- |
|  | Requirements |
| Communication | Wi-Fi, UART, cable, SPI |
| Development languages | C or assembly |
| Power | 5V 12A(battery or supplier) |
| Memory | 512MB |

Table 2: Hardware Requirement for Mobile

##### Software requirements

* Window Server 2008: operating system and platform for development.
* SQL Server 2008 Enterprise R2:used to create and manage the database for system.
* Visual Studio 2012: used to implement website and web service.
* Code Vision : used to develop and embedded code to device.
* Google Code &TortoiseSVN: used for source control.
* StarUML: used to create models and diagrams.
* Skype: used for communication and meeting.