**CHAPTER 5**

**SOFTWARE DESCRIPTION**

A software requirements specification (SRS) is a description of a [software system](https://en.wikipedia.org/wiki/Software_system) to be developed. It lays out [functional](https://en.wikipedia.org/wiki/Functional_requirement) and [non-functional requirements](https://en.wikipedia.org/wiki/Non-functional_requirements), and may include a set of [use cases](https://en.wikipedia.org/wiki/Use_case) that describe user interactions that the software must provide. Software requirements specification establishes the basis for an agreement between users and banking bot on what the software product is to do as well as what it is not expected to do. Software requirements specification permits a rigorous assessment of requirements before design can begin and reduces later redesign. It should also provide a realistic basis for estimating product costs, risks, and schedules.

**5.1 FRONT END**

The front end is designed using Visual Basic6.0 it used to creating a desktop application for College Management. Visual Basic is a programming environment Microsoft in which a programmer uses a graphical user interface. Visual Basic was derive from basic & enables of GUI. It access to database using Data Access Objects. A programmer can create an application using the components provide by the Visual Basic program itself.

**5.1.1 Features**

* Simple: It is very simple and easy to use, compare to other scripting language it is very simple and easy, this is widely used all over the world.
* Easy to create a desktop application.
* Interpreted: It is an interpreted language, i.e. there is no need for compilation.
* Open Source: Open source means you no need to pay for Visual Basic, you can free download and use.
* Platform Independent:, Unix, Mac OS X, Windows.
* Case Sensitive:.

**5.1.1.2Advantages**

* The structure of the Basic Programming language is very simple, particularly as to the executable code.
* VB is a component integration language which is attuned to Microsoft components object model.
* It built around the .NET environment used by all Microsoft Visual languages, so there is very little that can not be done other language.
* One of the most important things to be consider with regard to programming in VB is that the structure VB is designed in way that allow programmers to convert executable code to Exe code.
* It enables programmers to develop programs that can be used as front end to databases.

**5.1.2 Machine Learning**

Machine learning is a core sub-area of artificial intelligence; it enables computers to get into a mode of self-learning without being explicitly programmed. When exposed to new data, these computer programs are enabled to learn, grow, change, and develop by themselves.

**5.1.2.1 Features**

* Machine learning can easily consume unlimited amounts of data with timely analysis and assessment.
* Machine learning algorithms tend to operate at expedited levels.
* Applying machine learning to practical applications and scenarios is simply vital.

**5.1.2.2 Advantages**

* Sophisticated pattern recognition
* Intelligent decisions
* Self-modifying
* Multiple iterations
* Automation of tasks

**5.1.3 NLP**

Natural-language processing (NLP) is an area of computer science and artificial intelligence concerned with the interactions between computers and human (natural) languages, in particular how to program computers to fruitfully process large amounts of natural language data.

**5.1.3.1 Advantages**

* No training.
* Relives burden of learning syntax.

**5.2 BACK END**

The back end is designed using MySQL, whose primary function is to store data securely and retrieve it later, as requested by other software applications.

**5.2.1 MySQL**

MySQL is an open-source relational database management system (RDBMS).The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python". Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, Simple Machines Forum, phpBB, MyBB, and Drupal.

**5.2.2 Features of MySQL**

* A broad subset of ANSI SQL 99, as well as extensions.
* Cross-platform support.
* Stored procedures, using a procedural language that closely adheres to SQL/PSM.
* Triggers.
* Cursors.
* Updatable views.
* Online DDL when using the InnoDB Storage Engine.
* Information schema.

**5.2.3 Advantages of MySQL**

* Data Security
* On-Demand Scalability
* High Performance
* Round-the-Clock Uptime
* Comprehensive Transactional Support
* Complete Workflow Control
* Reduced Total Cost of Ownership
* The Flexibility of Open Source

**5.2.2 JSON**

JSON, or JavaScript Object Notation, is a minimal, readable format for structuring data. It is used primarily to transmit data between a server and web application, as an alternative to XML.

The two primary parts that make up JSON are keys and values. Together they make a key/value pair.

* **Key:** A key is always a string enclosed in quotation marks.
* **Value:** A value can be a string, number, boolean expression, array, or object.
* **Key/Value Pair:** A key value pair follows a specific syntax, with the key followed by a colon followed by the value. Key/value pairs are comma separated.