CHAPTER-5

TECHNICAL SPECIFICATION

5.1 Technology details used in the project

C#

The research project is implemented using the C# programming language which is used for the back end coding all the codes which are written are developed with the help of C# Microsoft programming language this is an object oriented programming language developed by Microsoft which is easily understandable and implementation of the coding which is done at the back end is using the C# programming language and tools most of the API’s in this programming language are helpful and hence provide rapid application development in the software project. The SOA is also used in the project management at agriculture which is mainly focused at specific crops the precision irrigation decision-making system has given solution in making decision in deploying crops using the SOA precision [71].

Azure Services Platform

The cloud platform provided by Microsoft was used in the development of this research project work the Azure Cloud which is the good development platform provided by Microsoft I have developed any research work on the Azure Cloud platform so that it can be accessible easily from across the globe the cloud infrastructure provided by Azure is highly scalable and can be extended depending on the usage of the various services I have used the Microsoft Azure SQL and the software as a service platform of Azure
Infrastructure. Cloud computing is also used in the manufacturing industry today [72].

**JQuery**

Jquery is used for the development of this software as jquery is used to ease the programming on the client machine, which uses html. This software as it is rich with ajax values all the data extraction and displaying of the data is done using the jquery most of the tables where data is displayed it done using the query mechanism this language provided an extensible good features that were really useful in the project development all the methods and the API were self explanatory and data extraction and design of the software was simplified using the jquery language I have designed a lot of screens using the jquery language which helps in implementing data extraction and the logical flow of the system it provides flexibility to connect with the database and extract and push information easily to the database without much efforts required this language provide very good API to access and push data to the database also which the help of many API which are inbuilt in this language the user interface design really looks good and handy.

**JavaScript**

JavaScript has also been extensively used in this research project some of the modules have been implemented using JavaScript programming. This Scripting languages also contains lots of API which were really useful while programming my research work I have used the calendar API which is very rich where we can schedule and add calendar events. The calendar API of the JavaScript is very handy and easy to use all the parameters are clearly
mentioned and also the input values that should be provided to the API are also clearly mentioned. Also the daily activity calendar in the research project has been implemented using the JavaScript where the daily activity of the project can be recorded and the final outcome of the project can be monitored. In most of the scripting languages that are provided the java script is the best and extensively used in this research project in most of the modules that are implemented in this research project.

CSS

The design consistency in the research project as the design is using the jquery and ASP.NET the user interface should look consistent also the calendar and the scheduler that has been designed in this research project should look consistent to keep the look and feel of the research project consistent the CSS styling has been used extensively in my research project this project actually is having lots of modules as it covers the entire SDLC so to keep consistency amongst the different modules in one set of code / project CSS styling was very helpful and used to get good color coding and design constraints in the place using the CSS styling. The database that is displayed in this research project should also look consistent and there should be a continuous flow of information in a consistent manner that is why CSS styling was helpful in my research project lot of design constrains and the compatibility issues were solved using the CSS styling. Most of the issues were related to the browser dependability and the versions of the browser using CSS these issues have been resolver to certain extend and a consistency in the research project is achieved. The reporting module and the graph module where the data had to be pushed into the system and then extracted from the system at that time the
CSS was used and also at the scheduler design module where the date and the
time where to be scheduled for a particular task in that module also CSS has
been used extensively References to Technology [60].