

Padification SDD

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McKenzie College SWTS2102

1. Revision History

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| --- | --- | --- | --- |
| Date | Author | Ver. | Revision Notes |
| 2017-06-19 | William Gale | 0.1 | Heading layout for document. Integration of SQL TCP/IP configuration and a quick development tool outline prototype. |

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# Development Tool Outline

|  |  |
| --- | --- |
| Development Language | Python 3.5.2 |
| Development Environment | Visual Studio 2015 |
| Documentation | Word 2016 |
| UML Design Tool | UMLet |
| Relational Database Environment | MSSQL 2014 |
| RDMS | Microsoft SQL server 2014 Management Studio |
| ERD Design Tool | ERD Concepts |
| Python Modules | Tkinter  Pypyodbc  Pygubu |
| Testing tools |  |

# Design Viewpoints

## Introduction

## Context Viewpoint

### User Use Case Diagrams

## Composition Viewpoint

### Deployment Diagram

## Logical Viewpoint

## Dependency Viewpoint

## Information Viewpoint

### Information gathering

## Patterns Viewpoint

## Interface Viewpoint

## Structure Viewpoint

## Interactions Viewpoint

## State Dynamics Viewpoint

## Algorithm Viewpoint

## Resources

# Appendices

## Tool Configuration

### Configure MSSQL DB for Remote Connections.

#### Purpose

Allowing MSSQL 2014 servers to Accept TCP/IP connections and SQL authentication.

#### Prerequisites

* MSSQL 2014 Installed
* Microsoft SQL Server Management Tool

#### Enable TCP/IP Connection

To enable the TCP/IP protocol in SQL Server 2014, follow these steps:

1. Open **SQL Server Configuration Manager**

for 64 bits: "**C:\Windows\SysWOW64\SQLServerManager12.msc**"

for 32 bits: "**C:\Windows\system32\SQLServerManager12.msc**"

1. Expand **SQL Server Network Configuration** and click on **Protocols for MSSQLSERVER**
2. Right click on **TCP/IP** and choose **Enable**
3. Click **OK** on the Warning that the service will have to be restarted
4. Click on **SQL Server Services**
5. Right click on **SQL Server (MSSQLSERVER)** and choose **Restart**

#### Setup User for SQL TCP/IP Connection

To create a username to access the SQL Server Via TCP/IP:

1. Open **SQL Server Management Studio** and **Login**.
2. Expand **Security** in the **Object Explorer**.
3. Right Click **Logins** and Select **New Login**.
4. In the Login Creation Screen first select **SQL Server Authentication**.
5. Enter the New **Login Name** and **Password / Confirm Password**.
6. Uncheck **Enforce Password Policy**.
7. Select **Server Roles** at the top left.
8. Select the role **SysAdmin**. "If more constraints are needed, creating custom Roles is possible."
9. Click **OK**
10. Right Click on server in **Object** **Manager** \*first item\* and Select **Properties**
11. Select **Security** on the left
12. Select **SQL and Windows Authentication Mode** and Press **ok**
13. Restart the SQL server.

#### Setup Firewall Exceptions:

To allow connection through the Windows Firewall

1. Open **Windows Firewall**
2. Select **Inbound Rules** on the Left.
3. Select **New Rule** on the Right.
4. Select **Port** and hit **Next >**
5. Set **Specific Local Ports** to **1433** and hit Select **Next >**
6. Select **Allow the connection** and hit **Next >**
7. Select all check boxes and hit **Next >**
8. Name **SQL IN** and hit **Finish**
9. Select **Outbound Rules** on the Left.
10. Select **New Rule** on the Right.
11. Select **Port** and hit **Next >**
12. Set **Specific Remote Ports** to **1433** and hit Select **Next >**
13. Select **Allow the connection** and hit **Next >**
14. Select all check boxes and hit **Next >**
15. Name **SQL OUT** and hit **Finish**