# **aCSC289 Programming Capstone Project**

**Project Name:** Integrated Library System

**Team Number:** 7

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**Team Members:** Connor Nelson, Phoebe Andrews

**Mentor:** Lisa Schenkewitz

**Software Installation Guide: Integrated Library System**

**Introduction**

This installation guide expects a Linux OS and explains the necessary software and tools needed to start locally hosting the Integrated Library System. It also covers installing a MariaDB or MySQL database to pair with the management system.

**System Requirements**

Software Requirements

* Python 3.9+
* Django
* Pymysql
* Requests
* MariaDB/MySQL
* Nginx
* Gunicorn

**Downloading the Installer**

**Clone the repository:**

git clone https://github.com/your-username/library-management-system.git

**Installing the Software**

Please install a working MariaDB/MySQL database with a user that has permissions to operate on the chosen DB.

This can be done using the MariaDB or MySQL secure installation script provided with the package.

If you wish to set up an Amazon RDS DB instance for your Integrated Library System, the official Amazon User Guide can be found at: <https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Tutorials.WebServerDB.CreateDBInstance.html>

**Install the required dependencies:**

“sudo yum install nginx python3” (or your OS’s equivalent)

“pip install -r requirements.txt”

Add your IP to the *allowed hosts* and modify the *databases* variable in *config.json* file to correctly connect to your database.

**Launching the Software**

**To run locally:**

“python manage.py runserver <ip:port>” (From the project root directory)

**Deploy the server with:**

* Follow the Nginx and gunicorn quickstart documentation to create a gunicorn.service and gunicorn.socket to serve your app to the nginx service <https://docs.gunicorn.org/en/latest/deploy.html>
* Modify the nginx config to support TLS and provide it with the certificate files to enable https and set the proper hostname.

**Followed by:**

“systemctl start gunicorn.service”

“systemctl start nginx”

**Uninstalling the Software**

Delete the cloned git repository and remove created databases

**Troubleshooting**

Depending on the operating system used to host the application some packages required may not be available in the main package repositories. This can be fixed by building the packages from source or using a different OS.

**Support and Contact Information**

Please create an issue on the GitHub repository found here:  
<https://github.com/DSDouglas/Integrated-Library-System>