PROJECT DESIGN PHASE – I
SOLUTION ARCHITECTURE

INTRODUCTION:

Every solution architecture design contains 6 to 7 phases these standards should be followed by all development team to ensure the standard of the software, so the software is scalable, versatile and reusable.

REQUIREMENTS:

This project is done using the **C/C++ framework** for **AVR, ARM**, and more (based on Wiring) Device **BootLoader.**

IBM Cloud Platform is used for storage and APIs.

Front end is done using **XML** for **android**.

DESIGN:

All the requirements are used to design the software. The design and architecture of the software is done in a unique manner so the software can be reused and developed in future.

The Arduino gets the location from the gps hardware and send it to the cloud to check if the user is within the confined zone. If the user is outside the confined zone, a notification is sent to the registered mobile via cloud. When the application is opened, the location is fetched from the cloud and displayed in the mobile.

IMPLEMENTATION:

The designing process is done and implementation is done by developing the logic by coding. All the required packages are imported and for each router specific logic is developed according to the use

UNIT TESTING:

Each part of the software is developed by individual team members, and it is tested individually by the python unit testing package.

INTEGRATION AND TESTING:

After unit testing all parts of the software are integrated and tested finally, so the flask application can be runned in any platform. The testing process includes Alpha testing and Beta testing.

DEPLOYMENT:

The flask application is finally deployed in IAAS platform like IBM cloud service, so it can be runned in HTTPS protocol along with SSL. In the deployment process a real time database is connected along with real time file storage.

MAINTENANCE:

After successful deployment, if there is a package update, it is implemented in the software