MICRO CONTROLLER EXERCISE 3

The waterfall model of development comprises of the following phases:

1. REQUIREMENTS ANALYSIS: this is the phase where the project requirements are analyzed and documented and are checked for feasibility and validity.
2. SYSTEMS DESIGN: In this phase, the hardware and systems requirements like the programming language, network infrastructure etc. is determined.
3. IMPLEMENTATION: This is the phase where the source code is written mostly in small program units and its functionality tested before integrating it into a whole system.
4. TESTING: At this phase, the tool is tested to check for defects and functionality to ensure that all requirements were met. The client is involved in the testing process.
5. DEPLOYMENT: This is the phase where the tested and approved tool is deployed to its purpose of use.
6. MAINTENANCE: As the tool is deployed and being used by the client, issues may arise which needs to be fixed. This phase solves these issues by releasing patches in the form of versions and updates.

To implement the V-model software development process, the following additional stages needs to be implemented:

- Architecture Design
- Module Design
- Coding
- Unit Testing
- Integration Testing
- System testing
- Acceptance Testing

V-model being an enhancement to the Waterfall model has many advantages which include it being simple, straight forward, easier to follow and understand. It also saves time and resources as errors are simultaneously tracked and corrected along the development phases. The V model is also very effective in small scale projects.

To achieve an effective team, the developer team should be between 5-10 developers, with the ideal number being between 7. It has been deduced that for effective project development, a tightly knitted communication line between fewer developers gets the job done faster than having many people in the development group.