**Solution Approach**

The solution begins with identifying the problem clearly. All the issues will be delineated beforehand so that all the involved parties have a pellucid understanding about every single detail. OJO believes that spending an appropriate amount of time on outlining the issues produces great results and alleviates many of the issues projects experience during their development lifecycle. After this stage of the project the most efficient solution should be devised. In this conceptual design phase of the project OJO always appreciates innovative solutions to the problems. A simple solution to a complicated problem is always the goal. OJO strives to achieve this and there are many actions that the company has taken to move toward this goal. By creating a positive and creative environment at OJO, our members come up with groundbreaking ideas and can present their ideas to others without any hesitation. After the solution has been proposed and a basic conceptual design agreed upon, the overall design shall be broken down into subsystems so that work can be done in parallel. All the dependencies must be identified so that the timeline can be prepared. All the tasks that are independent of each other can be done by different team members while the tasks on which other tasks depends on can be identified and assigned critical status. Human resources can be assigned accordingly, and any some time buffers can be assigned around critical tasks so that and unfortunate circumstances do not affect the timeline.

For our project, the platoon, we have identified all the tasks that need to be accomplished and created a timeline.

**Tasks**

* Conceptual Design of overall system
* Creating bill of material
* Procuring components
* Gather theoretical knowledge about components
* Component testing
* Effectiveness of components evaluated
* Eliminating subpar components
* Conceptual design of modules
* Creating microprocessor Image processing algorithm
* Implement motors and drivers
* Interfacing microprocessor and microcontroller
* Implement Power System
* Create a robot chassis
* Testing and design revision of submodules
* Final Testing
* Documentation
* Setting standards
* Demo of modules
* Conceptual Design report
* Presentation of submodule systems

Meeting the deadline always makes the customer happy. To keep up with the deadlines defining a timeline is important. The defined timeline should be possible to keep up to, so the time required for each step is thought of individually and then combined instead of trying to manipulate the timeline to fit the deadline.

To accurately evaluate the project through the various stages of its development life cycle, be an evaluation rubric must be designed so that the health of the project can be measured in an objective manner. A preliminary rubric for the project has been created for this purpose. This rubric shall also grow with the project as more information is gathered from experience.

To understand the progress of the project, milestones can be defined. The milestones not only serve to evaluate progress but also serves as motivation of team members to strive to achieve them.

The milestones for our project are as follows.

1. Complete the detailed conceptual design of the overall project.
2. Components evaluated and shortlisted.
3. Submodules implemented. All submodules perform their respective tasks.
4. All the submodules comply with the evaluation rubric.