Supervisor:

**Syed Qamar Askari**

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| Project Plan Document 1.0  Global Optimization using Meta-heuristics | |  |  | | --- | --- | | Faiza Shanawar | 15140070 | | Mohsin Qamar | 15150104 | | Haider Ali | 15140101 | | Usama Imran | 15140098 | |

# Introduction:

## Purpose:

The primary purpose of this document is to elaborate rules and principles which are to be followed by developers in order to avoid any conflicts during research and development processes. This document provides detailed information of intended work of development team including their tasks and deadlines.

Intended audience for this document is: Research and development team, Supervisor and consulting Faculty Members of Capstone Spring 2019.

## Document Conventions:

|  |  |
| --- | --- |
| Assum | Assumptions |
| Cn | Constraints |
| AR | Artifact |

# Summary of Project:

This project is Research and Development Project in a sense that the team has to develop an algorithm which is inspired by war tactics exhibited by military forces. Development of an algorithm is the main objective of team and to show the experimental results of research, team would develop a small application that would show the performance of their developed algorithm on some Benchmarks functions and against some well-known algorithms. This is further elaborated in [**Project Proposal Document 1.0.**](Our%20Proposal.doc)

## Assumptions:

**Assum-01:** As this is a research based project therefore, it is highly subjective and it would make problems in following the tight schedule of project deadlines.

**Assum-02:** The outcomes of this research projects are highly uncertain, it may or may not be better than already existing algorithms.

## Constraints:

**Cn-01:** Time is primary constraint for this project. (4 months)

# Scope Management:

## Work Breakdown Structure:

Work Breakdown Structure is explained in [**WBS document.**](WBS.mpp)

# Schedule and Time Management:

## Milestones:

This project shall output following artifacts:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Artifact ID** | **Artifact Name** | **Description** | **Responsibilities** | **Deadline** |
| AR-01 | Project Proposal Document | This artifact would include brief introduction to problem statement and proposed solution | Faiza Shanawar, Mohsin Qamar | 27-03-19 |
| AR-02 | Software Requirement Specifications | This artifact would include complete software requirements that the system should meet | Faiza Shanawar, Mohsin Qamar |  |
| AR-03 | Literature Review | This artifact would include preliminary literature review of problem domain, studied algorithms and their inspirations | Usama Imran | 3-04-19 |
| AR-04 | Functional Specifications | This artifact would include use cases, use case diagrams and mockups of desired system under development | Haider Ali |  |
| AR-05 | Detailed Literature Review | This artifact would include detailed Literature Review of Selected Domain, it can be called as revised version of  **AR-03** | Usama Imran |  |
| AR-06 | Formulation Of Proposed Methodology | This artifact would include the proposed methodology and its mathematical formulation.  Note: this document could have several versions, this would be determined by experimental results | Mohsin Qamar, Haider Ali |  |
| AR-07 | Software Design Specifications | This artifact would include UML diagrams, ER Diagrams, complete design of system | Haider Ali,  Faiza Shanawar |  |
| AR-08 | Experiment Results | This artifact would include experiments like: benchmark functions, their graphs and tables | Usama Imran,  Mohsin Qamar |  |
| AR-9 | Test Plan Document | This artifact would depict complete plan test execution of test cases | Usama Imran |  |
| AR-10 | Test Cases Document | This artifact would include complete test cases of system | Haider Ali |  |
| AR-11 | Bug Report | This artifact would include bugs identified from test execution | Usama Imran |  |
| AR-12 | Complete Research Paper | This document would include complete research work. This document would be final version of following artifacts:  AR-03, AR-05, AR-06, AR-09 | Usama Imran, Mohsin Qamar, Faiza Shanawar, Haider Ali |  |