War Game Activities Manager

Suarez Araujo Bernardo	bjsuarez1@espe.edu.ec
Unda Macías Mateo	mjunda1@espe.edu.ec
Vaca Guamán Kevin	kavaca6@espe.edu.ec
Yánez Cepeda José	jgyanez2@espe.edu.ec

Instructor:	Jorge Edison Lascano, PhD
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CONTENTS

REVISIONS

Version	Primary Author(s)	Description of Version	Date	Comments
V1.0	Suarez Bernardo Unda Mateo Vaca Kevin Yánez José	This document presents our project's progress to date.	23/05/2025	

1   INTRODUCTION

The "War Game" is a joint exercise done by military forces. This activity simulates emergency situations (such as floods, earthquakes, war situations, etc.). Its main objective is to evaluate the response capacity of a military group and measure the effectiveness of its procedures and personnel. They must cooperate with other state entities, such as the National Police or the Risk Management Secretariat, such as following established protocols and complete scheduled events.

Automation in crisis management contexts reduces human error, allocates resources more efficiently, and facilitates decision-making. With our system, it's possible to perform tasks such as role assignment, activity monitoring, and real-time event logging. This is especially useful in "War Games", where multiple entities are involved and every second counts. The use of specialized software improves the traceability of actions and allows for the issuance of detailed reports at the end of the exercise.

1.1   Document Purpose

The purpose of this document is to define the software requirements for the **War Game Activities Manager** system. It is intended to support the planning, execution and analysis of military simulated exercises, conducted by defense personnel for training and strategic evaluation.

1.2   Product Scope

This project is headed to develop a management system to support the planning, execution, and evaluation of activities done during the "Juego de Guerra" (War Game) exercise.

The system will facilitate the coordination of operational units, the assignment of tasks, the tracking of resources, and the documentation of events in real time. It aims to improve the efficiency and effectiveness of decision-making during exercise development.

The expected outcome of the project is the development and implementation of a system for managing the "War Game". The system will allow for efficient assignment of roles and resources, reducing the likelihood of human error.

Develop a system that facilitates the assignment of roles and operational resources during the "War Game" simulation, improving efficiency and minimizing human error.

Implement real-time monitoring of personnel actions and mission progress to ensure accurate situational awareness throughout the simulation.

Facilitate communication and information flow between participants

1.3   Intended Audience and Document Overview

This document is intended for the internal development team responsible for building, testing, and deploying the system, as well as for our client, Major Andrés Yánez, who oversees the project and provides operational requirements and validation.

2   OVERALL DESCRIPTION

2.1   Product Overview

As mentioned, War Game development presents some inefficiency problems. Communication and tasks assignments have great potential for improvement. A system is required to address the automation challenges observed during the joint exercise "War Game." Some key issues that were identified include inefficiencies in role management, as well as resources

assignment, as well as limitations in real-time progress tracking and event reporting capabilities.

Constant monitoring of actions and proper event recording are essential elements for evaluating institutional performance. An automated system can record each reported event, time its response, and generate final reports that identify strengths and weaknesses in the procedures followed by staff.

2.2 Product Functionality

- Registration and organization of officers participating in the simulation.
- Assignment of tasks and objectives to military units.
- Tracking operational movements and events during the simulation.
- Resource management.
- Generation of reports and logs for post-exercise analysis.

3 SPECIFIC REQUIREMENTS

3.1 External Interface Requirements

The **War Game** system includes several graphical interfaces developed using **Java Swing** within a **Maven** project in **NetBeans**. These interfaces include a login panel, a timer, an area calculator, and a panel for creating and viewing events.

The system is connected to a **MongoDB (NoSQL)** database, which serves as the primary data storage for various components such as user credentials and event information. This external interface is essential for ensuring persistent and scalable data management. Currently, all interfaces are integrated into the same project. While no formal mockups have been defined, a consistent visual structure is intended. In the future, interfaces and components may be modularized based on course progression or evolving system requirements.

3.2 User Interfaces

The system will operate through a command line interface (CLI) designed for trained personnel. Users will interact with the system through text commands executed in the terminal or console window.

The console interface was chosen for its simplicity, low resource consumption, and ease of implementation in secure and controlled environments. For this version of the program, based on the knowledge acquired, graphical user interfaces (GUIs) will be added for each section of the functional requirements, from login to an event creation panel.

3.3 Functional Requirements

The functional requirements were established with our project's client in a meeting. These are These requirements are subject to minor changes or further refinement in the next version, as the system evolves and feedback is incorporated.

3.3.1   *The system shall incorporate an authentication system to manage access between Superior Officer and Subordinates.*
3.3.2   *The system shall allow to register new users.*
3.3.3   *The system shall allow Superior Officers to upload information or create tasks to be completed.*
3.3.4   *The system shall allow to view the information that was uploaded.*
3.3.5   *The system shall allow to modify information related to users.*
3.3.6   *The system shall allow to delete information related to users.*
3.3.7   *The system shall have an option to assign schedules and events.*
3.3.8   *The system shall show a stopwatch (or more than one) to specific events.*
3.3.9   *The system shall show a news/important info section (chosen by the Superior*

Officers).

3.3.10   *The system shall allow to assign priorities to activities (e.g. from HIGH to LOW)*

3.3.11   *The system shall take maps from a local repo and show them.*

3.3.12   *The system shall include a distance and areas converter (calculator).*