Mini Project Logbook

**Zombie** vs Tank (Artificial Intelligence)

Group Members

| **Roll No** | **Name of the student** |
| --- | --- |
| 23 | Sneha Kadambala |
| 41 | Tejas Patne |
| 44 | Deepak Prasad |
| 53 | Priyanshu Singh |

Supervisor/Guide: Mrs. Sangeeta Oswal



**Department of Artificial Intelligence and Data Science**

Vivekanand Education Society’s Institute of Technology

Academic Year: 2021-2022

**Department of Artificial Intelligence and Data Science**

**2021-2022**

**Group No**: 15

**Project Title**: Zombie vs Tanks (Artificial Intelligence)

**Guide**: Sangeeta Oswal

**Students Details**:

|  | Member-1 | Member-2 | Member-3 | Member-4 |
| --- | --- | --- | --- | --- |
| **Roll No** | 53 | 44 | 41 | 23 |
| **Name** | Priyanshu Singh | Deepak Prasad | Tejas Patne | Sneha Kadambala |
| **Class** | D6AD | D6AD | D6AD | D6AD |
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| **Signature** |  |  |  |  |

Course Outcomes

**Course Outcome:**

1. Identify problems based on societal /research needs.
2. Apply Knowledge and skill to solve societal problems in a group.
3. Develop interpersonal skills to work as member of a group or leader.
4. Draw the proper inferences from available results through theoretical/ experimental/simulations.
5. Analyse the impact of solutions in societal and environmental context for sustainable development.
6. Use standard norms of engineering practices
7. Excel in written and oral communication.
8. Demonstrate capabilities of self-learning in a group, which leads to life long learning.
9. Demonstrate project management principles during project work.

# Proposed Schedule for Mini Project

| **Week/ Date** | **Content** | **Time**  **Required** | **Remark** | **Signature** |
| --- | --- | --- | --- | --- |
| 1. | Searching for algorithms | 3 hr |  |  |
| 2. | Started Reinforcement Learning technique to train our agent in game | 3hr |  |  |
| 3. | Research on RL technique | 4hr |  |  |
| 4. | Learned advance Python to Implement Reinforcement Learning | 3hr |  |  |
| 5. | Trying to implement Reinforcement Learning in our game | 8 hr |  |  |
| 6. | Making some changes in position of tanks | 2 hr |  |  |
| 7. | Limit the no of zombies entering In the game | 3hr |  |  |
| 8. | Adding algorithms to find optimal path for zombie to reach the tank | 4hr |  |  |
| 9. | Implementation of the structure of the project. | 3hr |  |  |
| 10. | Completion of Project | 4hr |  |  |

**2021-2022**

# Mini-Project Progress Report

**Sem – 3**

**Project Gr No** 15

**Title**: Zombie vs Tanks (Artificial Intelligence)

**Guide**: Sangeeta Oswal

| **Roll No** | **Name of Project Member** |
| --- | --- |
| 53 | Priyanshu Singh |
| 44 | Deepak Prasad |
| 41 | Tejas Patne |
| 23 | Sneha Kadambale |

| **Week/Date** | **Work Done** | **Students Present** | **Sign of Guide** |
| --- | --- | --- | --- |
| 1 | Understanding the institution AI Project and how it can be implemented | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 2 | Learn about various AI Algorithms and unsupervised machine learning Algorithms which can be used | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 3 | Started study about the Reinforcement Learning and it depth intution | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 4 | Learned advanced python to Implement Reinforcement Learning in our game | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |

| **Week/Date** | **Work Done** | **Students Present** | **Sign of Guide** |
| --- | --- | --- | --- |
| 5 | Understanding the Working of Reinforcement Learning and how the accuracy would increase | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 6 | Started implementation of Reinforcement Learning using Jupyter Notebook and various python modules | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 7 | Training our agent (zombie) in our environment for learning the game | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 8 | Integrating of our Reinforcement Learning model and some other algorithms to our game | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 9 | Making some changes in GUI of game | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |
| 10 | Final demonstration of our game | Priyanshu Singh |  |
| Deepak Prasad |
| Tejas Patne |
| Sneha Kadambala |