Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 15 October 2022 |
| Team ID | PNT2022TMID28599 |
| Project Name | Virtual eye – lifeguard for swimming pools for active drowning |
| Maximum Marks | 4 Marks |

# Functional Requirements:

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Installation | Needed to be fixed under the water without Creating any disturbance to the people in the swimming pool. |
| FR-2 | Deduction | Either not moving or in unconscious. |
| FR-3 | Audio | Alert the life guard for help or rescue. |
| FR-4 | Support | Take swim tubes or take the help of rescuer. |
| FR-5 | Pulse rate sensor | Detect the pulse rate of a swimmer. |
| FR-6 | Prior Alert | Send alert message to the lifeguard. |
| FR-7 | Alert | Set alarm and send message through the application to  life guard. |

# Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | To ensure the safety of each and every person present in the pool. A Lifeguard should be present all the time in the pool. |
| NFR-2 | **Security** | Lifeguards should be aware of the alert message to save the life of the swimmer. |
| NFR-3 | **Reliability** | Virtual eye lifeguard triggers an immediate prior alarm if a swimmer is in peril, helping to avoid panic even in critical situations. |
| NFR-4 | **Performance** | The alarm is triggered when the swimmer’s pulse rate is decreasing. |

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| NFR-5 | **Availability** | Equipment and accessories include lifesaver rings, inflatable vests, aShepherd's Crook, life hooks, spine boards, rescue tubes, and a first aid kit. Remember to keep them accessible to quickly pull someone from the water safely. |
| NFR-6 | **Scalability** | Virtual eye lifeguard detects potential drownings and promptly notifies you. It features the latest artificial intelligence technology and adapts to the needs of the user. |