

Project Design Phase-II
Solution Requirements (Functional &
Non-functional)

| | |
|---------------|----------------------------------------------------------------|
| Date | 17 November 2022 |
| Team ID | PNT2022TMID44672 |
| 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.

| 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. |
|-------|-----------|----------------------------------------------------------------------------------------------------------------------------|

| 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 horrified or in unconscious |
| FR-3 | Audio | Ask for help or stay quiet if the person is unconscious |
| FR-4 | Support | Take swim tubes or take the help of rescuer |
| FR-5 | Prior Alert | Send alert message to the lifeguard |

Non-functional Requirements:

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

| | | |
|-------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 is drowning |
| NFR-5 | Availability | Equipment and accessories include lifesaver rings, inflatable vests, a Shepherd's Crook, life hooks, spine boards, rescue tubes, and a first aid kit. Remember to keep the accessible to quickly pull someone from the water safely. |

| | | |
|-------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NFR-6 | Scalability | Virtual eye lifeguard detects potential drowning and promptly notifies you. It features the latest artificial intelligence technology and adapts to the needs of the user. |
|-------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|