ProjectDesignPhase-II

SolutionRequirements(Functional&Non-functional)

Date	**1October2022**
TeamID	**PNT2022TMID50683**
ProjectName	**Project-Realtime river waterquality monitoringand controlsystem**
MaximumMarks	**4Marks**

FunctionalRequirements:

Following are the functional requirements of the proposed solution.

FRNo.	FunctionalRequirement(Epic)	SubRequirement(Story/Sub-Task)
FR-1	**User Registration**	**Registration through FormRegistration through Gmail Registration through LinkedIN**
FR-2	**User Confirmation**	**Confirmation via Email Confirmation via OTP**
FR-3	**Hydroxilic level detection**	**To recognize the presence of hydroxilicacid a pH test is inescapable. So a pH sensor is utilized to identify the pH worth of stream water, intermittently.**
FR-4	**Dustpresencein water**	**To distinguish the residue presence in water we really want to dissect it with aparameter calledturbidity.for that we use turbidity sensor.**
FR-5	**Reaction turbinegenerator**	**For energy productionfor systemtohaveselfproduced power methodsas well astoclean themost contaminations ofriver waterssuchas bacteria,weusereactionturbine generator asRiverscomeunderlowhead**

Non-functionalRequirements:

Followingarethenon-functional requirements ofthepropos edsolution.

FRNo.	Non-FunctionalRequirement	Description
NFR-1	Usability	**timecontinuous observing andquality control producedbythesystem, moreeffective andless intricacies**
NFR-2	Security	**Information encryptions atfront endandbackendisapplied tothe Androidapplication.Proxy servers can't disturb or hackas adequate protectivemeasures taken atarchitecturelevel ofapp itself.**
NFR-3	Reliability	**Asafeandsecuresystem, thatassureslivingaspects forallbeingsfromaquatictolandspecies.System hasembarkedefficiencyinenergy managementand information the board. Atrustworthy andprofitable systemthatconstructedwithadvanceddata analyticsprocedurethat canprovide adynamic qualitymonitoring andcontrol framework.**
NFR-4	Performance	**Asthedifferent technolofocal blockscanitself definean systembasedonecofriendly and innovativeproduct facilitatingpeople's lifeon everyday schedule. Chances of entropyisless duetohigh end designing (Cautious executing of Building designandpretty plannedprocess models.)**
NFR-5	Availability	**Customerserviceavailablefor all day, every day ,question dealt with viahighend UIviaagency.Alsomonitoring, investigating andstreaming of sensedparameters, values are handledbycloudserviceswhich canbeviewedvia mobileapp.**
NFR-6	Scalability	**High accuracydue topresetarchitectural plan givesita item ofhighscalability.also theproduct isdevelopedjusttomeet up with clients center constraints.the systemcan bedevelopedbasedon people'sinnovativeideas as thisproductisscalable forlater overhauls andversions ,also forother productsbasedonit.**
NFR-7	Stability	**stabilityisperfectly explainedas ahighly stable systembasedon greaterpowermanagement procedures anddefinitedesign.**
NFR-8	Eficiency	**LowPower utilization and Highperformance.**