ProjectDesignPhase-Il

FUNCTIONALREQUIREMENTDOCUMENT

FUNCTIONALREQUIREMENTSDOCUMENT

Overview

Thefunctionalrequirementsdocument(FRD)isaformalstatementof anapplication’sfunctionalrequirements.Itservesthesamepurposeas acontract.Thedevelopersagreetoprovidethecapabilitiesspecified. Theclientagreestofindtheproductsatisfactoryifitprovidesthe capabilitiesspecifiedintheFRD.

Qualityismeetingrequirements.Forthatreason,theFRDisthecentral documentinsystemdevelopment.Itisusedforthefollowing:

Designinganddevelopingtileapplicationsystem.

|  |  |
| --- | --- |
| Date | 15October2022 |
| TeamID | PNT2022TMID48053 |
| ProjectName | Project–NutritionAnalyzerforfitness Enthusiastic |
| MaximumMarks | 4Marks |

Evaluatingtheproductinallsubsequentphasesofthelifecycle. Determiningthesuccessoftheproject.

1GENERAL

1.1ProjectDescription

Foodisessentialforhumanlifeandhasbeentheconcernofmany healthcareconventions.Nowadaysnewdietaryassessmentand nutritionanalysistoolsenablemoreopportunitiestohelppeople understandtheirdailyeatinghabits,exploringnutritionpatternsand maintainahealthydiet.Sowecreatedasolutiontohelpfitness enthusiast.ThissolutionhelpsfitnessenthusiaststodoNutritional analysisoffoodwhichprovidesinformationaboutthechemical composition,processing,andqualitycontroloffood.

1.1.1Background

Torunthenutrition-basedanalyzer,theyneedasmartphoneorlaptop thatsupportstheapptorunontheirdevice.

1.1.2Purpose

Nutritionalanalysisistheprocessofdeterminingthenutritional contentoffood.Itismainlycreatedforthepeoplewhoareinneed fortheirdietarymanagementtoknowwhatnutritioncomposition iscontainedintheirfoodtheyeat.

1.1.3AssumptionsandConstraints

Thefuturesituationoftheprojectis,therearechancesthatmany peoplemaydependinthisinnovativeidea.Apartfromhowmuch thisprojectiscreatedefficientlyandeffectively,ourcontribution liesonthebackendlikecreatingandmaintaining.Itismainly basedonthepeoplewhogetstoknowaboutthisapplicationand howtheyfeelaboutthis.

Thefollowingareexamplesofassumptions:

Availabilityofahardware/softwareplatform

Pendinglegislation

Courtdecisionsthathavenotbeenrendered

Developmentsintechnology

1.2PointsofContact Industrymentors.

Projectmentors.

Projectleader.

Projectmembers.

2FUNCTIONALREQUIREMENTS

Thefunctionalrequirementsdescribethecorefunctionalityofthe application.Thissectionincludesthedataandfunctionalprocess requirements.

2.1USERREGISTRATION RegistrationthroughGmail

-RegistrationthroughMobileNumber

-RegistrationthroughFace-book

2.2USERCONFIRMATION ConfirmationviaEmail ConfirmationviaOTP

2.3USERDETAILS

PERSONALDETAILSFOODDETAILS

|  |  |
| --- | --- |
| Age | Food |
| Height | Recipe |
| Weight | Added  ingredients |
| Diseasesif any | Age |
| Conditionsis any |  |
| Allergiesis  any |  |

2.4USERREQUIREMENTS

The user simply inputsyourrecipeingredientsandamounts.The softwarewillinstantlyproduceanaccuratereadoutofyourdishinterms ofnutritionalanalysisinareadableformatthatconsumersarefamiliar with.

-Withalreadygivendetailsthesystemcanalerttheconsumerifany contentoftheirallergies,itcanalerttheconsumer.

3OPERATIONALREQUIREMENTS

Operationalrequirementsdescribethenon-businesscharacteristics ofanapplication.

3.1 SECURITY

AIpowerednutritionanalyserforfitnessshouldcontainmore securityinwhichourdatawhichenteredormaintainedshouldbe moresecurity.

Withthehelpoftheusernameandpassworditprovidesmore securityinwhichitcanaccessmoresecurableandthedataare private.

Itshouldbesocial-economicwhichshouldaccesstosufficient andsafetouse.

3.2USABILITY

NotrainingisrequiredtoaccesstheNutritionAnalyzer.

Theresultsshouldbeloadedwithin30seconds.

Itshouldbeuserfriendlyandcomfortable.

Itshouldbesimpleandeasytouse.

Theresultsshouldbeself-explanatorysothatitcanbeunderstood bycommonpeople.

3.3 RELIABILITY

ItisImportantthattheAIpowerednutritionanalyserforfitness providesshouldMustreliable.

Howapersoncanfinditisreliable?Itiseasytofindthatishe/she cancomparethenutrition-basedfoodwithothernutritionrelated applicationso,itcaneasilyrectifywhetheritisreliableornot.

Butittakestoomuchtime,toavoidthisareliableapplication shouldmadeinwhichititselfproduceswhetherwecangetcorrect solutionornot.So,itisnecessarythattheAIpowerednutrition analyzerforfitnessshouldhaveproperdataandinformationin whichwecangetacorrectinformationaboutitandalsogeta properguidanceaboutit.

Withtheproperguidelessandproperinformationinwhichwecan getanutritionproperlyandwecanhavegotaproperfitnessplan.

Itshouldalsoprovidetheinformationonnutritionandhealthwhich itshouldpreventfromhealthinformationondiseases,healthrisks andpreventionguidelines.Itshouldalsoprovideanextensiona researchbasedonlinelearningnetworkwithseveralresource areas,soitprovidesmorereliabilityinthatarea.Formorereliable itcanalsocontainthecalorieinformation,balanceddietplans, whattypefoodcanconsumeatwhattimeetc.....So,bythiswayit canreliable.

3.4 PERFORMANCE

Itshouldprovideagreaternumberofuserstoconsumeatanytime andatanyplace.

ItshouldprovideReliability,Scalability,SecurityandUsability.

Itshouldcontainminimumdatawhileover-pagingthewebsitesor applicationanditisnecessarythatitshouldnotexceedmorethan

20mb.

Whileconsumingthepageitshouldprovidetheresponseasmuch aspossiblewithoutanydelayortimetraffic.

Theconnectionshouldbeproperlymaintainedsothatitcanuse whiletravellingorinremoteplaces.

Thenutritiousfoodtomeettheirdietaryneedsandthefood preferencesforanactiveandhealthylife.

Itshouldbeconsistentlyaccess,availabilityandaffordabilityof foodsandbeveragesthatpromotewell-beingandpreventfrom diseases.

Itshouldsuitableinallsituationsthatexiststoallpeople,atall times.

3.5 AVAILABILITY

EasytoaccessData.

AvoidsDataredundancyandinconsistency.

FastandEfficient.

UserFriendly.

3.6 SCALABILITY

ThearchitectureforAIpoweredNutritionAnalyzerforfitness providestheclearproceduredailyconsumptionoffoodandhelps theusertomaintainahealthydiet.

Accordingtotheirtrackingsystemimplementedinarchitecture providetheproper mechanismtoeveryindividualoftheirnutrients intakewhichcanbeincreasedordecreased.

Thepremiumamountforanalyzerisverymuchoptimum.

4REQUIREMENTSTRACEABILITYMATRIX

Therequirementstraceabilitymatrix(RTM)providesamethodfor trackingthefunctionalrequirementsandtheirimplementation throughthedevelopmentprocess.Eachrequirementisincludedin thematrixalongwithitsassociatedsectionnumber.Astheproject progresses,theRIMisupdatedtoreflecteachrequirement’sstatus. Whentheproductisreadyforsystemtesting,thematrixlistseach requirement,whatproductcomponentaddressesit,andwhattest verifythatitiscorrectlyimplemented.

IncludecolumnsforeachofthefollowingintheRTM:

Requirementdescription

RequirementreferenceinFRD

VerificationMethod

RequirementreferenceinTestPlan