UTI Mutual Funds

Project report submitted in fulfillment of the requirement for the degree of

Bachelor of Technology
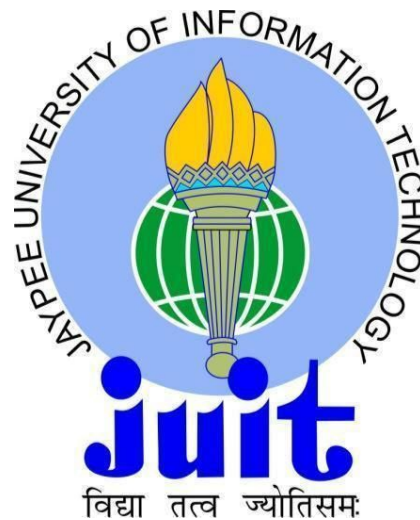
In

Computer Science and Engineering

By

Arpit Roopchandani (131249)

Under the Supervision of

(Mr. Nitish Rai)

To

Department of Computer Science & Engineering and Information Technology

Jaypee University of Information Technology, Waknaghat, Solan - 173234

Himachal Pradesh

Certificate

Candidate's Declaration

This goes to state that the work which is here presented under the report under the title "UTI Mutual Funds" as part of fulfilment of requirements for the degree of Bachelor of Technology in Computer Science and Engineering submitted to the department of Computer Science & Engineering and Information Technology of Jaypee University of Information Technology Waknaghat is the genuine record of our own work at Kuliza Technologies under the supervision of Mr Nitish Rai (Project Manager, Kuliza Technologies) occurring over a period from Feb 2017 to May 2017.

The matter embodied in the report has not been submitted for the award of any other degree or diploma.

Arpit Roopchandani, **131249**

This is to certify that the above statement made by the candidates is true to the best of my knowledge.

Mr. Nitish Rai
Product Manager
Kuliza Technologies
Dated:

Acknowledgement

We owe our heartfelt thanks to our project manager **Mr. Nitish Rai**, who helped us along our way through the work under the project titled - **UTI Mutual Funds**, from its commencement till its final completion by providing us help and guidance and teaching us all we needed to know during the process. The project development helped us learn a lot of new things in our domain and made us better engineers.

I also owe my thanks to our Project Frontend Lead, **Mr. Vinit Agarwal** who taught us a great deal of things and eased our transition to full time working employees at Kuliza Technologies.

I am really thankful to them and without their help, we would never be able to deliver the project with such high standards.

Arpit Roopchandani
131249

Abstract

Mutual Funds in India are financial instruments. A mutual fund is not an alternative investment option to stocks and bonds, rather it pools the money of several investors and invests this in stocks, bonds, money market instruments and other types of securities. The owner of a mutual fund unit gets a proportional share of the fund's gains, losses, income and expenses. The share value of the Mutual Funds in India is known as net asset value per share (NAV). The NAV is calculated on the total amount of the Mutual Funds in India, by dividing it with the number of shares issued and outstanding shares on daily basis.

UTI (Unit Trust of India) mutual fund is a public company, who offer the best and top mutual funds in India. This company offer to buy mutual fund without any paperwork i.e. all the process will be online. We are providing them end to end service with latest technology using Python and Angular.

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List of Abbreviations and Terms

UTI	Unit Trust of India
STP	Systematic Transfer Plans
SWP	Systematic Withdrawal Plans
SIP	Systematic Investment Plans
SDLC	Software Development Life Cycle
MVC	Model View Controller
MVVM	Model View View Model
AJAX	Asynchronous JavaScript and XML
ACID	Atomicity, Consistency, Isolation, Durability
CRUD	Create, Update, Delete
IT	Information Technology
UI	User Interface
UX	User Experience
OTP	One Time Password
URL	Uniform Resource Locator
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheets
PHP	PHP : Hypertext Preprocessor
JS	JavaScript
CMS	Content Management System
E2E	Exchange to Exchange
TDD	Test Driven Development
SQL	Structured Query Language
DOM	Document Object Model
HTTP	HyperText Transfer Protocol

Chapter 1

Introduction

1.1   Organisation Profile

Kuliza is a product engineering firm assisting enterprises and startups build and maintain end-to-end web and mobile products. Our offerings include solutions for enterprise digital commerce and digital media transformation journeys in addition to agile custom product engineering implementations for fast growing tech startups.

Based out of the IT capital Bangalore, we've worked with more than 80 enterprises and tech startups across the world for the last ten years and launched more than 100 products for our clients in the market.

Our clients include F500 and Global 2000 enterprises such as Ford, Nissan, Best Buy, Intuit, Bosch, HDFC Life, Asianet, Capital First, Titan, Vistara, in addition to fast-growing startups such as ConnectAndSell, Opsclarity, Managed Methods, Flipkart, Quikr, Urban Ladder, Myntra amongst others.

Our highly skilled team of experts include designers, developers, architects and data specialists to help you bring great ideas to life.

- Kuliza Vision
  We help entrepreneurs and forward-thinking company launch innovation new digital products. With our tried and tested lean approach, we'll help you realize your vision in on time.

- Kuliza Mission
  "My goal is to build Kuliza as a billion dollar technology company in India over the decade" - Anand, Kuliza.

- Kuliza Values
  - Client
  - Honesty, Hard work and Trust
  - Great Ideas

1.2   Objective of Project

UTI Mutual Fund project objective is to enable people into the world of equity. Since every person may not have complete knowledge, or time or inclination towards the big list of enlisted stocks, mutual funds come as an option wherein, financial experts invest your money in avenues which based on their research is supposed to grow. We are building its complete process so that user can purchase/buy a mutual fund anytime anywhere through online without any paperwork.

1.3   Project Description

- This project flow simply start with login or signup process if user has already created login credentials then he can login after the login the page will redirect to dashboard page, if user doesn't have login credentials then he has to first signup. For signup process user must has its own pan card or registered email id. In login and signup module flow there is also concept of otp.

- Dashboard service provider module its help the customer to see his old records, old transactions history, review own profile, update profile and future plan etc. there are also showing list of different type mutual fund so that customer can buy or purchase mutual fund depending on his financial situation for earning great profit. There are list of other service available of customer to feel free to choose different type of mutual fund.

- Tools and calculator module helps to get use of our different tools and mutual fund investment calculators to plan your financial goals better. There are five different type of calculator for different purpose.

  a. Children Career Planner Calculator - Need to plan finances for children's future but don't know how to do it. To know about the exact figure you need to invest to realize children's dreams.

  b. SIP Calculator - A systematic plan assures you the maximum benefits. SIP calculator will help you clearly plan to achieve your investment goals.

  c. Financial Health Check Calculator - Need help setting financial goals? Use our Financial Health Check calculator to capture your current financial commitments.

  d. Retirement Planner Calculator - Estimate your cost of living in retirement, the investment returns required and the financial wealth you need to build, prior to retirement.

e. Goal Calculator - A systematic plan assures you the maximum benefits. Goal calculator will help you clearly plan to achieve your investment goals.

- Purchase module is one of the most important module of this project where customer can invest in mutual fund depending on his choice, customer has to select different type of mutual fund from listed mutual fund. After selecting customer has to fill his all details related to verification process. There are so many options also available for customer like if customer wants to add Holder or Nominee then there is button for add holder and add nominee, customer can add maximum two holder and two nominee.

Chapter 2

Software Specifications

Software requirements specification sets up the reason for an agreement amongst clients and service or software providers (in market driven ventures, these roles might be played by the marketing and development division) on what the software product is expected to do and in addition what it is not anticipated to do. Programming prerequisites specification allows a thorough assessment of necessities before design can start and lessens later redesign. It ought to similarly give a reasonable premise to assessing product costs, risks, and schedules.

2.1   Product Context

Kuliza applications uses web services for CRUD (create, update, delete) operations. Web Services are maintained by Kuliza.com backend team. For frontend Development, corresponding web services has been provided by Kuliza backend team. Kuliza uses three stages of development or three different servers

- Staging Server

- Development Server

- Production Server

Developers are allowed to use these three servers with step by step development of any application. For that backend team divide web services into three categories

- Staging Web Services

- Development Web Services

- Production Web Services

Firstly developer start work on staging web services and based on requirements of the project. Once any application is passed from Staging, it can be moved to production. Production is the main server which host main applications which is visible to everyone.

Kuliza has huge team which is responsible for design (UI/UX Person) for each kind of application. Design team is responsible for whenever any changes in design.

Web Services play a very important role in Kuliza applications. It is very simple and easy to use. Every Web Service is Simple HTTP or HTTPs call which contain one of the following methods -

- POST

- GET

- DELETE

- PUT

With the help of header and input we get response for each web Service. Web service will response to us after reading our data. Each response of web service contains response code, which explains whether the response of the service successful or not.

- 400 499 : Server Not Found

- 500 599 : Bad or ill Formed Request

- 200 299 : Success

Each of the project module uses web services for its operations. This Web Service is provided by the Backend Team. In every module same web Service is used for mobile app, iphone app and for Website, once user make changes in anyone, then changes reflect in other kind of devices too.

- Supplier Reviews and Ratings module helps customers to choose best suppliers based on reviews and ratings.

- Service Provider Admin Panel module is for Internal Purpose, it means whenever Service provider registered on the website, the details automatically comes in admin panel, once it will approve then only details of service provider is visible on the website.

- Calculator module helps to use our different tools and mutual fund investment calculators to verify your financial goals.

- Service Provider (Web Version) module is latest requirement under this all the things which is in mobile App, will have to implement for Website.

2.2   System Requirements

The following are the hardware and software specifications for this project.

2.2.1 Hardware Requirements

Processor   :   i5, i7 Recommended
RAM   :   4 GB, 8 GB Recommended

2.2.2 Software Requirements

Operating System   :   Windows 10, Ubuntu (Linux) 14.04
Web Language   :   HTML5, CSS3, JavaScript, JQuery, Ajax, AngularJs, Python, Angular material.
Tools   :   Notepad++, Sublime, XAMPP Server, Git

2.3   Technologies Requirements

The following are the list of tools and technologies used for development.-

- **HTML5** -

  HTML5 is the most recent and most enhanced version of HTML. Actually, HTML isn't a programming language, but instead a markup language. HTML5 is a W3C particular that characterizes the fifth major version of the Hypertext Markup Language (HTML). One of the real changes in HTML5 is in regard to how HTML addresses Web applications. Other new components in HTML5 incorporate particular capacities for inserting images, sound, video, and intelligent records.

  HTML5 allows the user to also create animations using Canvas and manage data within its syntax, issue commands, and manage form inputs more precisely.

- **CSS3**

  CSS stands for Cascading Style Sheets. CSS depicts how HTML components are to be shown on screen, in print, or in other forms of media. CSS spares a great deal of work as it can control the format of various pages at the same time. External stylesheets are put away in CSS files.

In this project, we also follow a set standard of css naming so as to maintain a set syntax for the css files.

- **SASS -**

Sass is a preprocessor used to create css files from scss files. This allows the developers to use variables, nest css more intuitively and reuse a lot of css so as to avoid rewriting a lot of code. It also allows a file structure to be made, since it will eventually rendered to one single css file. It also allows for better minification and better code readability.

- **JavaScript** -

JavaScript is an abnormal state, dynamic, untyped, and translated programming dialect. It has been institutionalized in the ECMAScript dialect determination. Close by HTML and CSS, it is one of the three center advancements of World Wide Web content production; the greater part of sites utilize it and it is upheld by all current Web programs without plugin. JavaScript is model based with top of the line capacities, making it a multi worldview dialect, supporting item arranged, basic, and practical programming styles. It has an API for working with content, exhibits, dates and normal expressions, yet does exclude any I/O, for example, systems administration, stockpiling, or designs offices, depending for these upon the host condition in which it is installed.

- **JQuery** -

jQuery is a JavaScript library that permits web designers to add additional usefulness to their sites. It is open source and given to free under the MIT permit. Lately, jQuery has turned into the most mainstream JavaScript library utilized as a part of web advancement.

To execute jQuery, a web designer just needs to reference the jQuery JavaScript record inside the HTML of a site page. A few sites have their own nearby duplicate of jQuery, while others basically reference the library facilitated by Google or the jQuery server. For instance, a site page may stack the jQuery library utilizing the accompanying line inside the <head> segment of the HTML:

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.2/jquery.min.js"></script>

Once the jQuery library is stacked, a page can call any jQuery work bolstered by the library. Basic illustrations incorporate changing content, preparing structure information, moving components on a page, and performing livelinesss. jQuery can likewise work with Ajax code and scripting dialects, for example, PHP and ASP to get to information from a database. Since jQuery keeps running on the customer side (instead of the web server), it can refresh data on a website page continuously, without reloading the page. A

typical case is "autocomplete," in which a hunt frame consequently shows basic ventures as you write your inquiry.

- **Ajax** -

  AJAX is a method for creating fast and vibrant webpages. AJAX allows webpages to be kept up to date asynchronously by exchanging smaller amounts of data with the server behind the moments. Which means that you'll be able to update elements of a website, without reloading the complete page. Classic webpages, (which do not use AJAX) must reload the complete page if this content should change. Types of applications using AJAX: Yahoo Maps, Gmail, YouTube, and Facebook.

How AJAX Works

Browser
- An event occurs...
- Create an XMLHttpRequest object
- Send HttpRequest

Internet

Server
- Process HTTPRequest
- Create a response and send data back to the browser

Browser
- Process the returned data using JavaScript
- Update page content

Internet
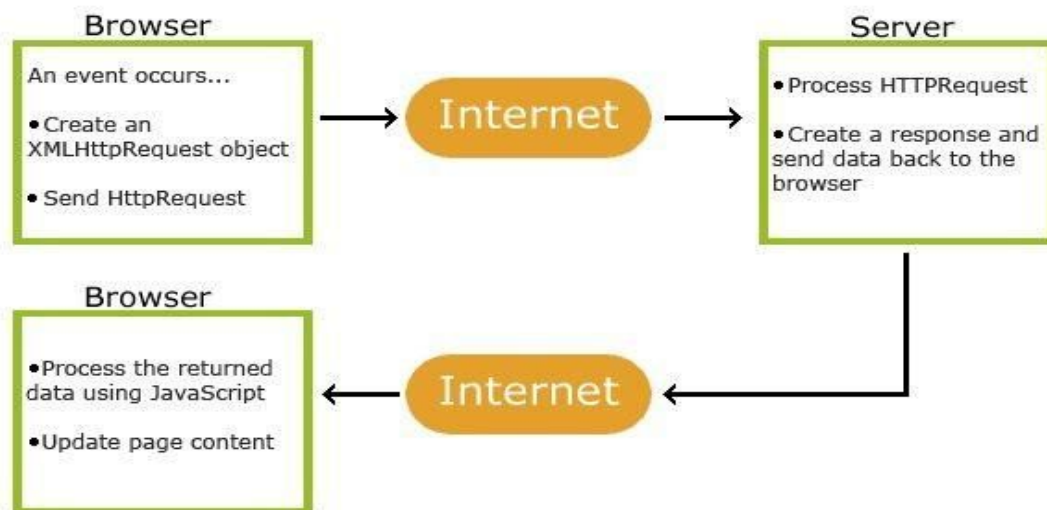
- **AngularJs** -

  AngularJS (commonly known as "Angular" or "Angular.js") is a full JavaScript based wide open source consumer and server part web application platform mainly retained by Yahoo and by a community of people and corporations to handle lots of the challenges came across in developing sole site applications. The JavaScript components go with PhoneGap, the construction used for expanding cross system mobile apps. It is designed to simplify both development and the tests of such applications by giving a platform for client part model-view-controller   (MVC) and model-view-viewmodel (MVVM) architectures, along with components commonly found in abundant Internet applications. It enables you to use HTML as your template vocabulary and enables you to prolong HTML's syntax expressing your application's components plainly and succinctly. Angular's data binding and dependency shot eliminate a lot of the code you'll otherwise

have to create. And everything happens within the internet browser, so that it is a perfect spouse with any server technology.

Angular is the thing that HTML would have been, had it been intended for applications. HTML is an incredible revelatory dialect for static archives. It doesn't contain much in the method for making applications, and subsequently constructing web applications is an activity in what do I need to do to trap the program into doing what I need?
The impedance mismatch between changing applications and static applications is often fixed with:

- A library a gathering of capacities which are helpful when composing web applications. Your code is in control and it calls into the library when it sees fit. E.g., jQuery.

- Systems a specific execution of a web application, where your code fills in the points of interest. The system is in control and it calls into your code when it needs something application particular. E.g., durandal, ember, and so on.

Angular adopts another strategy. It endeavors to limit the impedance confound between report driven HTML and what an application needs by making new HTML builds. Rakish instructs the program new sentence structure through a develop we call mandates. Illustrations incorporate:

- Data binding, using {{}}.

- DOM control structures for rehashing, appearing and concealing DOM pieces.

- Bolster for structures and frame approval.

- Connecting new conduct to DOM components, for example, DOM occasion taking care of.

- Gathering of HTML into reusable parts.

The accompanying realistic shows how everything cooperates after we presented the controller -
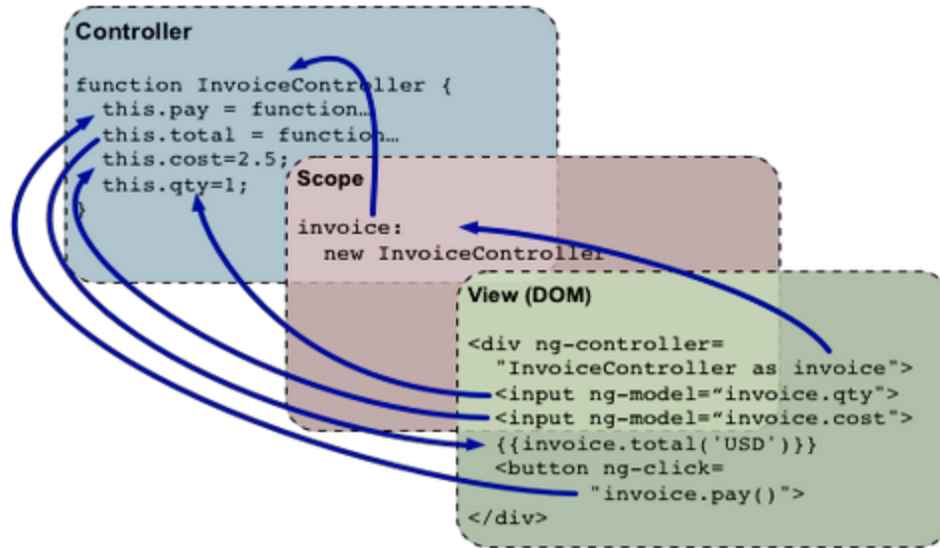
- **Python** -
  Python is broadly utilized abnormal state programming dialect for universally useful programming. Its abnormal state worked in information structures, joined with dynamic writing and dynamic authoritative, make it extremely alluring for Rapid Application Development, and additionally for use as a scripting or paste dialect to interface existing segments together. Python's basic, simple to learn language structure underlines meaningfulness and consequently diminishes the cost of program upkeep. Python underpins modules and bundles, which supports program measured quality and code reuse. The Python mediator and the broad standard library are accessible in source or twofold shape without charge for every significant stage, and can be uninhibitedly conveyed.

  Components of Python:

    - Simple to-learn

    - Simple to-peruse

    - Simple to-keep up

    - Convenient

    - Intuitive Mode

    - Database

Chapter 3

Software Development Methodology

3.1 Software Development Life Cycle (SDLC)

The software development life cycle (SDLC), or software development engineering in software building, is a procedure of making or modifying data frameworks, and the models and techniques that individuals use to build up these systems.In software designing, the SDLC idea supports a wide range of software development philosophies. These techniques shape the structure for arranging and controlling the making of a data framework in the software development prepare.

The way toward modifying or making frameworks and the methodologies which individuals use to create frameworks is known as the entire cycle of Software Development Life Cycle. The information systems and the computers are the two items to which this idea of software development life cycle can be connected to.

The Software Development Life Cycle is a procedure that guarantees great software is assembled. Each stage in the life cycle has its own particular procedure and expectations that sustain into the following stage. There are regularly 5 stages beginning with the investigation and necessities assembling and completion with the execution.
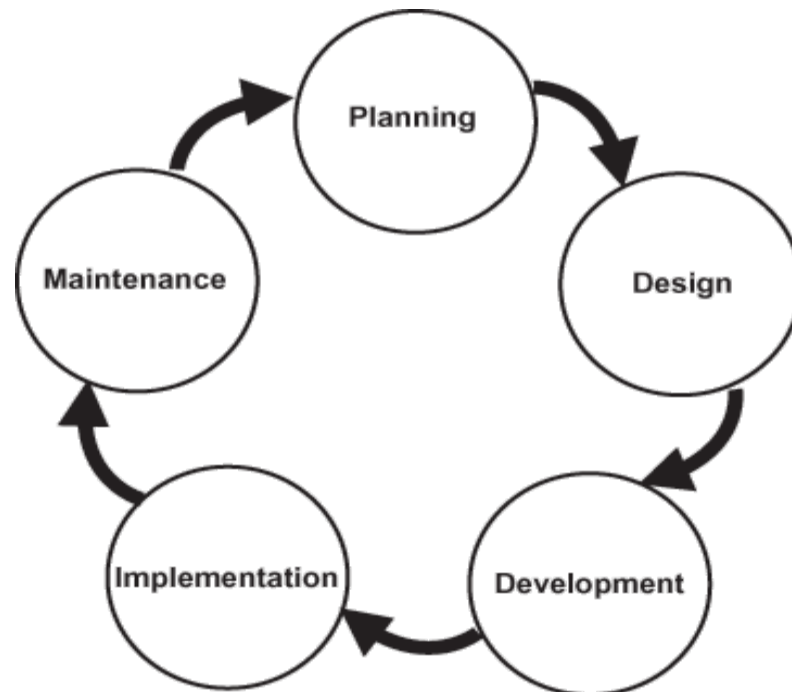
3.2   Approach And Framework

In UTI Mutual Fund system component uses the angular material approach to development, utilizing the Angular Framework. This is latest in industry and which leads to the quick development and delivery of products.

The Test Driven Approach has used for development, after development of each module; the part will be tested properly and in the dev level and user level. Manual testing is following in Kuliza, and after successful testing of each module its moving to release stage.

3.3   Software Architecture

UTI mutual fund is developed according to latest technological principle, object oriented design and TDD. The system is developed in AngularJS framework, Angular material design and utilises many Open Source projects including the following-

- MySQL / PostGreSQL

- Browserstack for testing.

- Angular material and materialize css for UI design

- AngularJS, jQuery for client side development

- HTML 5 , JS , AJAX

Figure 2 - Online filling process of Mutual Fund.

3.4   Requirement Capture

In systems and software engineering, requirement analysis includes the errands that go into choosing the necessities or conditions to meet for another or changed item or venture, surveying the perhaps conflicting necessities of the distinctive accomplices, exploring, recording, favoring and supervising software or frameworks prerequisites. Stories are to be accounted for according to the best work on using the underneath structure.

- As a… <the personal / type of person or role, who needs the feature>

- I want… <a description of the feature, not the solution>

- So that... <the value statement for BT and for the Customer>

Conceptually, prerequisites investigation incorporates three sorts of exercises

- Eliciting requirements - The venture definition, business process documentation, and partner interviews. This is now and then additionally called requirement gathering or requirement discovery..

- Analysing requirements - Determining whether the expressed necessities are clear, total, reliable and unambiguous, and settling any obvious clashes.

- Recording requirements - Requirements might be reported in different structures, for the most part including a rundown list and may incorporate characteristic dialect archives, utilize cases, client stories, prepare particulars and an assortment of models including information models.

All acceptance criteria of component and engineering stories will be expressed as acceptance test to be reviewed by the E2E design lead and the test team lead or nominated representatives and validated as being testable.

Chapter 4

Designing Phase & Snapshots

The frontend of the project can be divided into two parts, both of which are quite different from each other -

1. **Non Secure Pages**-
   Non-secure pages are common for all users and can be accessed regardless of the fact that one hasn't signed in yet. These pages are divided into subparts, that we refer to as widgets, which are integrated into Kuliza's own CMS (Content Management System) which allows the admin to create various modules and new pages by themselves. It also allows the admin to edit the content inside the pages by themselves.

   These widgets are made using HTML5, CSS3 and JQuery, not involving any use of AngularJS for any of the functionality.

2. **Secure Pages -**
   These are pages can only be accessed once user is logged in. These are developed in HTML5, CSS3 and AngularJS, with no use of JQuery whatsoever.
   The creation of secure pages calls for **Secured States**, which can't be accessed by directly typing in the URL. This is done using a **OnStateChangeStart** watcher which don't let the user enter a secured state unless logged in and if he's not, he shall be redirected to the login page.

Non Secure Pages

- **Homepage**
  The page the user first enters upon opening the site. This involves various kinds of information meant to support the user to invest in mutual funds.

News : Dummy text for news present only when the user is on the first fold. More >>

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UTI Mutual Fund

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Aadhar - based KYC , your first step to investing

Know more

Learn
Invest wisely . Invest smartly. Find out how.

Know more

NAV
Track your fund daily,Track your fund performance daily

Know more

My Investment Plan

I am 25 years old. My goal is to make ₹ 50000 in the next 5 years.

Plan for Retirement ˅

Get Started

Top 5 Products

Fund 1	Equity Fund Regular - Dividend ▼	🔖 📆	Performance	
	Moderately High Risk Returns ⓘ		Monthly SIP ▼ of ₹ 1000 for 5 years ago ▼ ✔ Dividend pay	Apply

Moderately High Risk
Equity - Diversified
S&P BSE 100
AUM - ₹ 50,000 Cr
Inception : 15th Jan 2017

Returns
Last 1 year - 21.87%
Since Inception - 22.87%

NAV
03 Feb 2017 - ₹ 175.424

Monthly SIP ▼ of ₹ 1000 for 5 years ago ▼ ☑ Dividend pay   **Apply**

Principal invested: Rs. 5,000 x 61 installments = Rs. 305,000

Investment Objective

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Rakesh Goel
Managing this fund since June

Rakesh Goel
Managing this fund since June

Rakesh Goel
Managing this fund since June

● This Scheme   ● SNP BSE 100   ● NIFTY 50   ● Gold   ● PPF

Invest in this Product

View all funds

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Save tax, plan to create wealth by investing in UTI Mutual Funds. Remember, money saved is money earned!

Invest

● ○ ○

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Retirement Planning Funds
Child Career Planning Funds
Insurance Cover Funds
New Fund Offers
Top Trending Funds

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* Mutual fund investments are subject to market risks, read all scheme related documents carefully.

- **Product List Page**
  List of products of various types, like Equity and Debt among other types. This page also involves two other widgets inside it, namely -

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○ **Filter widget** - The functionality of this widgets enables the user to filter or sort the results and choose a product based on his choice.
○ **Compare Widget** - The functionality of this widgets enables the user to compare various products so as to gain a better understanding of them and choose the best suited product accordingly

● **Compare Products Page**
On clicking on compare from the compare widget, the user is led to a product comparison page which shows the difference between various products. The user can choose to invest in a product from here, or add more products to compare.

- **Product Details Page**
  Shows the product details for a product and allows the user to Invest in it. Includes a lot of charts created using **Highcharts**.

- **Knowledge Hub-**
  Provides a lot of information regarding new schemes, products and change in policies as well as articles on the same.

We have personalised the content as per your performance.

▽ Category

Categories

Lorem ipsum

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Lorem ipsum dolor sit amet

Know more

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- **Article Page -**
  Page for displaying the information in an article. Also involves a widget which allows user to switch between articles directly.
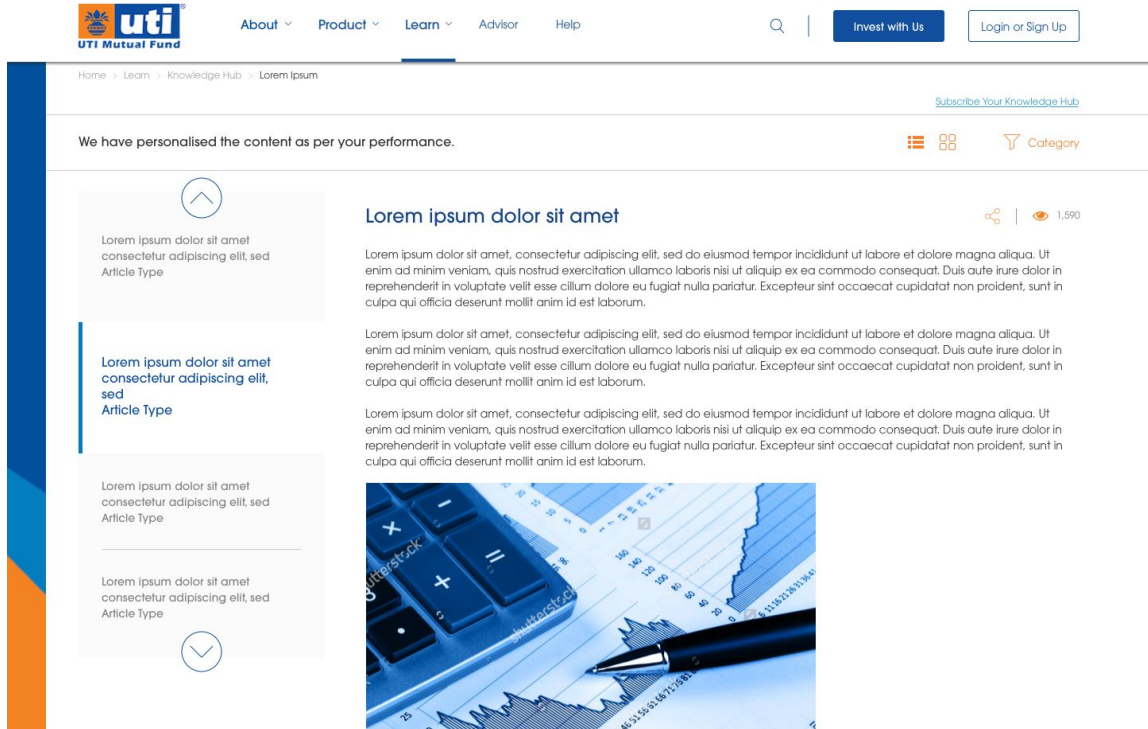
- **Mutual Fund Calculators**
  Tools and calculator module helps you plan your future better using our various calculators, so as to help you invest in mutual funds in a more planned manner. A few of the calculators are-

  - Children Career Planner Calculator
    The Children career planner calculator helps to plan finances for your children's future when you don't know how much investment you must make in your children's future through mutual funds, and with what frequency.

Children Career Planner Calculator

- ○ **SIP Calculator**
  Systematic Investment Plans ensure that you get the maximum return on your investment. SIP Calculator will help you plan your investment so as to achieve your goals in the most efficient manner. This sip calculator will explain to you how periodic investments yield a much greater return than saving liquid cash and investing it in the end.

SIP Calculator

- ○ **Financial Health Check Calculator**
  Require help defining money related objectives? Utilize our Financial Health Check calculator to catch your current budgetary responsibilities. Health Check to give you a look of your accounts and an action plan to enable you to enhance your circumstances.

- ○ **Retirement Planner Calculator**

  Gauge your typical cost for basic items in retirement, the venture returns required and the budgetary riches you have to work, preceding retirement. This free apparatus is a visual adding machine. Input your objective retirement year, age, compensation, resources, current investment funds and evaluated returns.

Retirement Planner Calculator

- ○ **Goal Calculator**

  A systematic plan guarantees you the most extreme advantages. Goal Calculator will help you plainly plan to accomplish your investment objectives. The financial goal planner helps evolve a comprehensive plan for all your life events. The planner brings together all your retirement and investment needs and plots them as milestones along your life line.

Goal Calculator

All these mutual fund calculators help to your mutual funds giving you great returns. The Returns Calculator gives you an answer by computing store returns for the period picked by you. It additionally shows returns and execution rank of the reserve inside its associate gathering for various time spans.
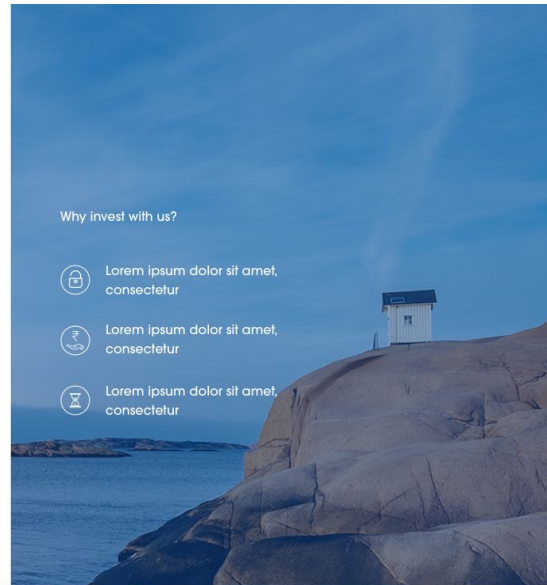
Secure Pages

- **Login Portal**

  Login module is the process by which an individual gains access to a computer system by identification and authenticating themselves. Login module helps to secure the all the process/service and save the user date uniquely to database.
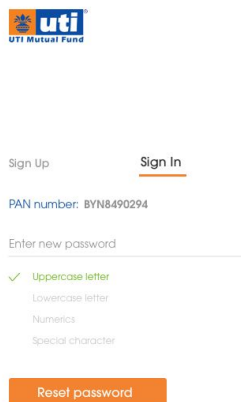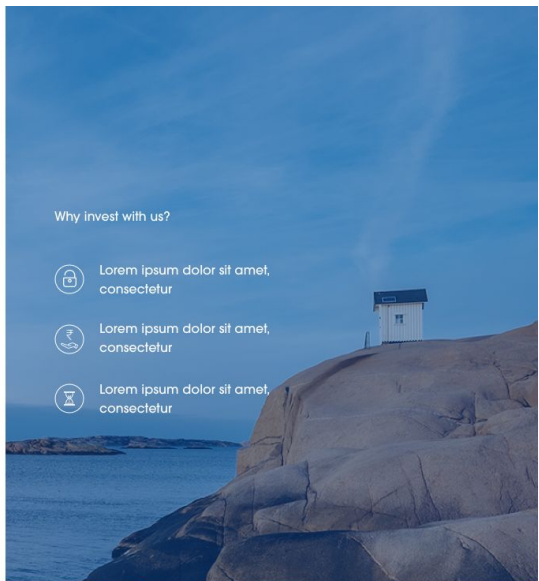

- **Forgot Password Portal**

 Allows user to reset password in case he forgot the original password. Involves usage of OTP to reset the password.
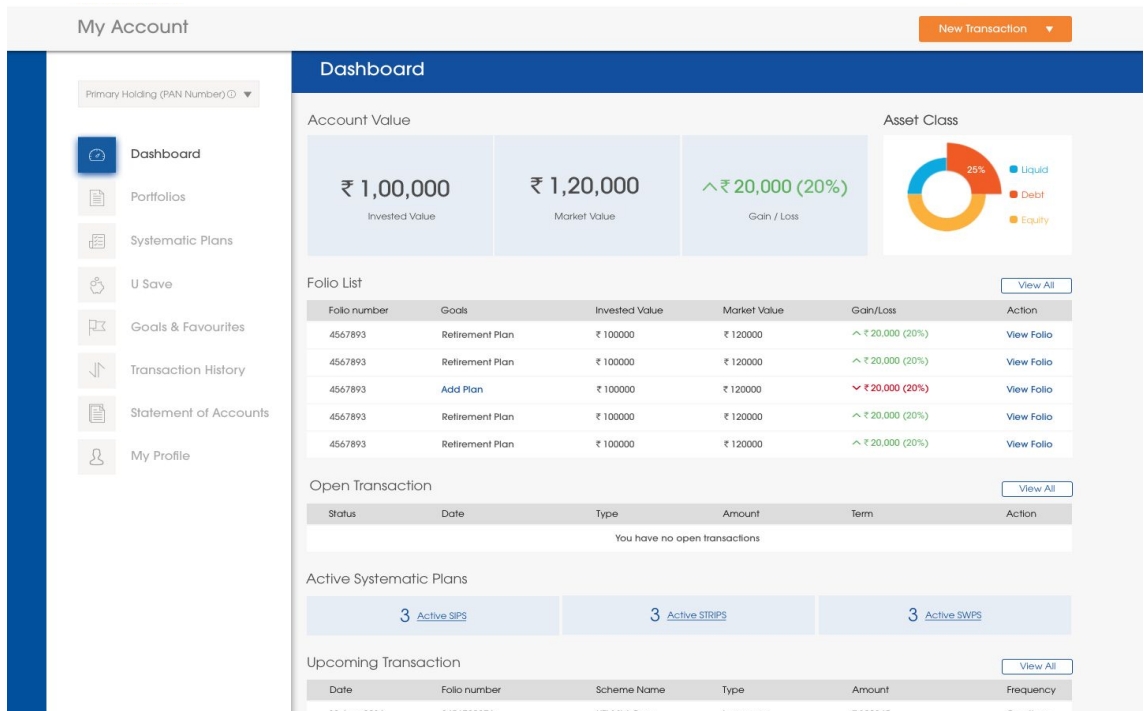
- **Sign Up Portal**

  In signup module, if user don't have credentials for login and he has to first signup and only he can access the website. For signup user must has his pan card no after entering his pan number the server will validate whether the entered pan no is valid or not if it is valid then he has to fill the other details related to his.
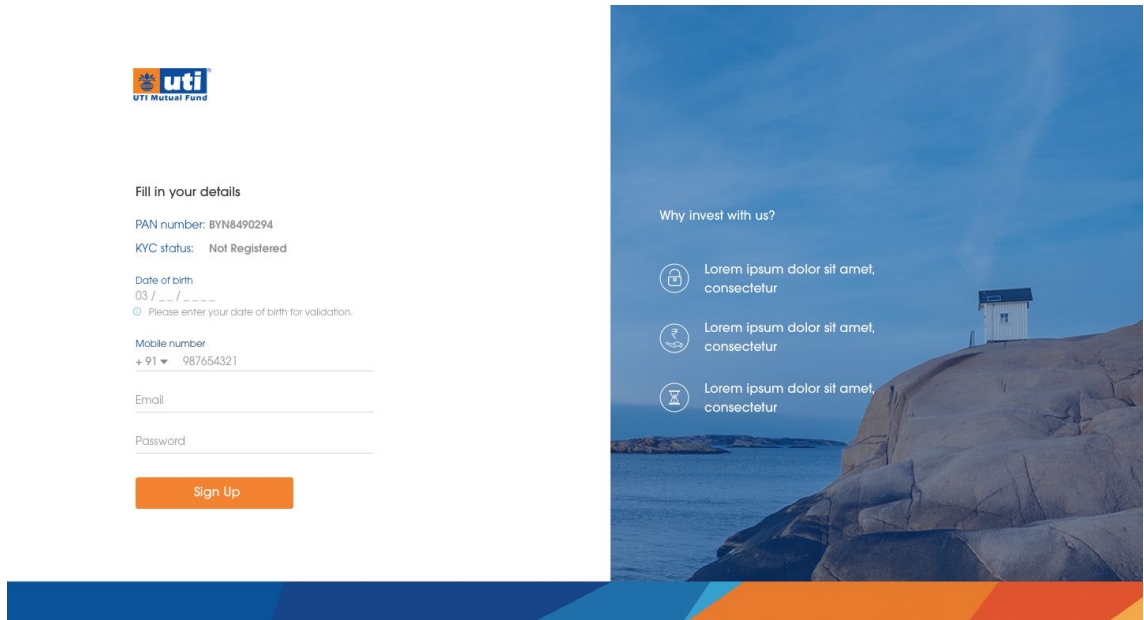
- **Dashboard**

- **Profile Details Page**

- **Merge Folio Page**
  Allows user to merge multiple folios into one, and combine their product lists and bank details in the process

● **Alert and Subscription Page**

● **Transaction Flows**

Transactions are of various types, like-

- Purchase Transaction - For purchase of normal products. This is a multiple step process divided into 3 parts -
  ○ Product Selection
  ○ Folio Selection
  ○ Payment
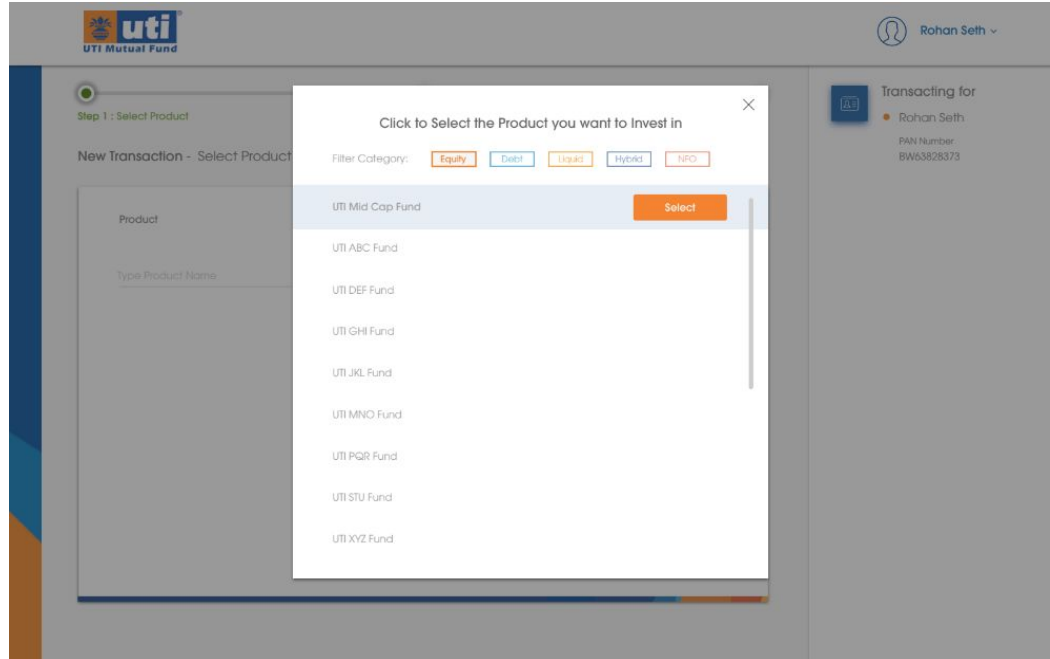
Step 1 - Selecting a product
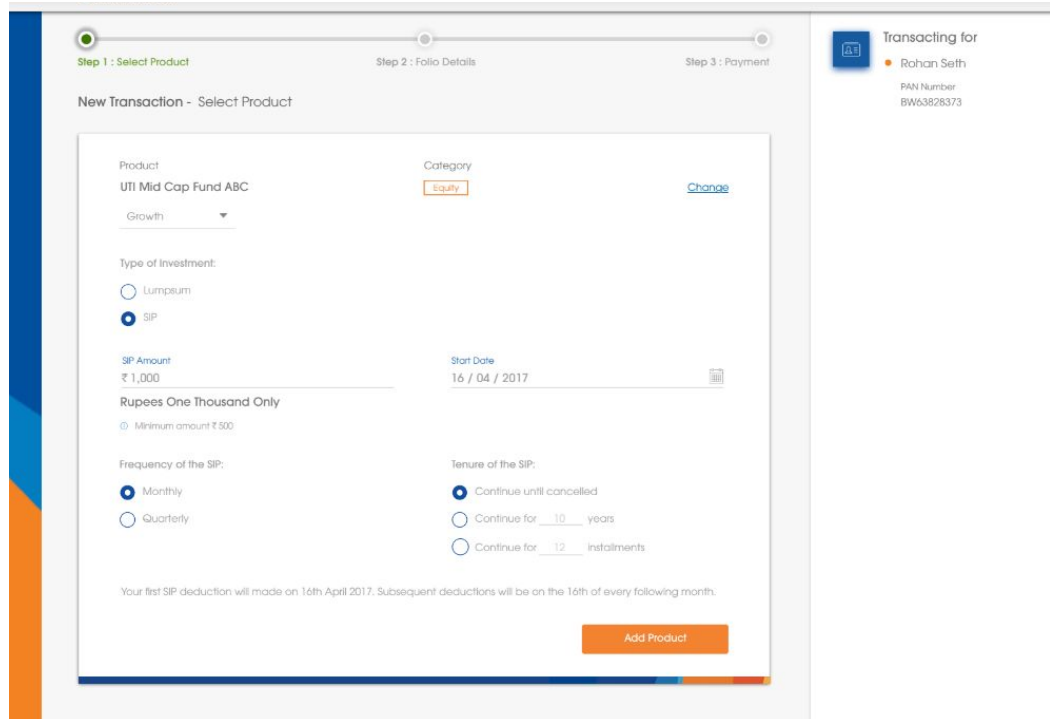
Step 2 - Entering product details

New Transaction - Choose from Existing Folio

Create New Folio

PAN Number
BW63828373

Product Details
- Mid Cap Fund
  SIP
  ₹ 10,000 per month

Folio Number
6539749164819460147
Goal - Buying a House

Primary Holders
Rohan Seth
Secondary Holder
Sandeep Kumar

Current Value
₹ 1,00,000

Folio Number
6539749164819460147
Goal - Buying a House

Primary Holders
Rohan Seth
Secondary Holder
Sandeep Kumar

Current Value
₹ 1,00,000

Folio Number
6539749164819460147
Goal - Buying a House

Primary Holders
Rohan Seth
Secondary Holder
Sandeep Kumar

Current Value
₹ 1,00,000

Folio Number
6539749164819460147
Goal - Buying a House

Primary Holders
Rohan Seth
Secondary Holder
Sandeep Kumar

Current Value
₹ 1,00,000

Step 1 : Select Product   Step 2 : Folio Details   Step 3 : Payment

New Transaction - Create New Folio   Transact for Minor   Choose Existing Folio

Primary Holder
- Rohan Seth
  PAN Number
  BW63828373

Product Details
- Mid Cap Fund
  SIP
  ₹ 1,000 per month

A. Personal Details   * All Fields are Mandatory

Occupation
Business

Tax Status
Sole Proprietorship

Gross Annual Income Range
5 Lacs - 10 Lacs

Net Worth (Optional)

Place of Birth
Bangalore

Country of Birth

Address Type (as in PAN)
Residential

Do you pay or file tax in any country other than India?
○ Yes
● No

Please select the statement that is applicable:
○ Investor is a politically exposed person
○ Investor is related to a politically exposed person
● Neither of the above apply to the investor

Add Holder
(Optional)   +

Add Nominee
(Optional)   +

Step 3 - Select Existing Folio/Create New Folio

Step 4 - Enter Payment Details

Step 5 - Confirmation

- Switch Transactions - For purchase of switch products. It is very similar to product purchase transaction in it's flow.

- Redeem Transaction - For refund of a product

- SWP Transactions - For Periodic Redemption of Plans i.e. Systematic Withdrawal Plans. It is very similar to Redeem transaction in it's flow.

Chapter 5

Software Development

This part will depict probably the most usually utilized software development forms and examine how these procedures will influence the achievement rate of a venture and which are reasonable for software development. Since it is vital to think about software development keeping in mind the end goal to look at the changed procedures that are appropriate in software development ventures.

5.1   Software development processes

As per a software project is an arrangement of exercises that prompts the creation of a software item. It exists a wide range of software procedures however they all have four things in like manner:

1. They contain a software detail where the usefulness of the software and limitations on its operations are characterized.

2. The software is composed and executed to meet the detail.

3. The software must be approved to guarantee that it has the right conduct.

4. Development of the software where it advances to meet evolving prerequisites. A software model is a unique portrayal of a software procedure. Each model portrays ways to deal with various undertakings or exercises that happen amid that procedure. There are numerous software development forms accessible and the accompanying segments will portray some of them with a specific end goal to perceive how reasonable they are for Software ventures.

5.1.1 The Waterfall process Model

In this project, we followed the Waterfall Process Model. The Waterfall model is a successive procedure in which the development is advanced downwards like a waterfall. The model comprises of five stages and each of them must be totally completed before the venture can advance to the following one. The distinctive stages in the waterfall show.

- Requirements

- Design

- Implementation

- Verification

- Maintenance
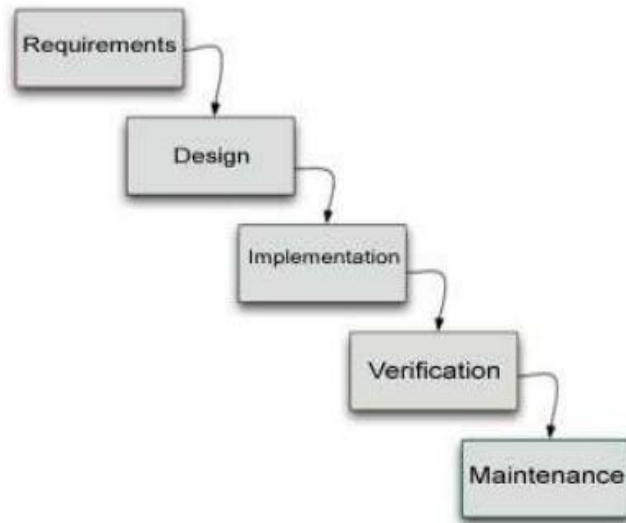
Waterfall Process Model

5.1.2 Iterative processes Model

The prerequisites regularly change when managing substantial software ventures. This influences the outline and the usage. Iterative procedures address this issue by routinely rehash errands in cycles, where the detail is produced in conjunction with the software. The emphasis procedure is separated in four noteworthy stages:

- Inception

- Elaboration

- Construction

- Transition

Chapter 6

Testing & Validation

6.1　Introduction

Software testing is more than just error detection. Testing software is operating the software under controlled conditions to verify that it behaves "as specified", to detect errors, and to validate that what has been specified is what the user actually wanted.

We can state that verification is the checking or testing of things, including software, for conformance and consistency by assessing the outcome against pre indicated necessities. In mistake location, testing ought to purposefully endeavor to make things turn out badly to decide whether things happen when they ought not or things don't occur when they ought to. Approval takes a gander at the framework rightness i.e. is the way toward watching that what has been determined is the thing that the client really needed.

In the testing phase, complete testing of the system has been done with the intention of finding errors. For testing different possible test case has been prepared and applied to the application.

6.2　Testing Methods

There many software testing methods but traditionally divided into white and black box testing. Basically here for this project black box testing is used.

6.2.1　White box testing

White box testing is when the tester has access to the internal data structure and algorithm including the coding the code that implement these.
The following type of white box testing exists:

- API testing for testing of the application using public and private APIs.

- Code coverage for making tests to fulfill a few criteria of code coverage(e.g. the test planner can make tests to make all announcements in the program be executed at least once).

- Static testing

- Mutation testing

6.2.2 Black box testing

The testing method which is followed here is the black box testing. Black box testing treats the software as a "black box" without any knowledge of internal implementation. Black box testing method includes equivalence partitioning, boundary value analysis, all pair testing, model based testing, exploratory testing and specification based testing.
Specification based testing plans to test the usefulness of software as per the appropriate prerequisites. Subsequently, the tester inputs information into and just observes the yield from the test object. Either this level of testing more often than not requires intensive experiments to be given to the analyzer, who then can just check that for a given info, the yield esteem, "is" or "is not" the same as the normal esteem determined in the experiment.
With the rapid growth of mobile computing such as the iPhone, windows mobile and android devices, there has been a massive rise in the value of mobile application for many companies.

6.2.3 UI Testing

Web UI can be tested through conventional testing or by using software that can simulate of a responsive device on the computer. Testing the UI across different mobile formats helps ensure a consistent look and fell from device to device.
UI Testing is user interface testing. That is, testing how the software and the client interact. This incorporates how the software handles keyboard and mouse input and how is the presentation of screen content, pictures, buttons, menus, dialog boxes, symbols, toolbars and that's only the tip of the iceberg. Here we check whether the screens in that build is easily understandable to the user or not, test for the colour of the font, size of the font etc.

6.2.4 Regression Testing

After the first round of testing is finished, regression testing should be performed to guarantee that the revealed problems are actually settled. Testing also need to be performed to ensure that the fixed made to the application do not cause new errors to occur. The objective of regression testing is to check whether the change any functionality that was not to be impacted by that change. It is done with the intent of determining if bug fixes have been successful and they have not created any new problem.

6.2.5 Functionality testing

Functionality testing of testing of a cell phone incorporate controls, stockpiling media taking care of alternatives, and other operational perspectives. Functionality testing of a versatile application is a discovery sort of testing to guarantee that the application is working according to the business particulars.

6.3 Testing Results

The approach of web application testing embraces the essential guideline for all product testing and applies a methodology and strategies that have been prescribed for object oriented framework .the following steps shorten the approach -

- The content model for the web application is reviewed to uncover errors.

- The design model for the web application as looked into to reveal route mistakes. Use cases determined as a component of the expert action, permit a web engineer to practice every use situation against the compositional and navigational outline. These non executable test help reveal blunders in the route.

- Selected processing component and web page is unit tested.

- The architecture is constructed and integration tests are conducted.

- The assembled web application is tested for overall functionality and content delivery.

- The web application is implemented in an assortment of various environmental arrangements and is tried for similarity with every setup.

- The web application is tried by the controlled and checked populace of end users.

6.4 Maintainability

The system has been designed taking care of modularity. Faults in the system can be traced to modules.

6.5   Validation Checks

All things will be considered to keep data reliable and persistent on the web when more often than not the project needs to manage transfers so a minor blunder will down the image and reputation of the organization. In this manner, validation checks by software itself utilizing the types of JavaScript and PHP manual checks are likewise important as -

- Correct entry of data in the form.

- Correct updating of question and with the most suitable answer etc.

Conclusion

The UTI Mutual Funds website highly simplifies buying a mutual fund and other investment methods, allowing great return on investment and tax savings. The website is highly secure and databases managed by government verified data provider services like Karvy allows us to maintain a high level of physical and cyber security, thus protecting user data.

Along with this, separation of backend into two halves allows functional independence to be maintained as well as an ever more secure data management.

The backend based off Python Django Framework allows us to create a highly scalable backend which can handle a large number of transactions at a time without losing the basic transaction facilities like ACID functionalities.

An AngularJS based frontend means great stability on the client machine as well as great performance.

Overall, this website makes it much easier to invest in mutual funds, and is a significant improvement over websites provided by other major players.

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