**(XYZ BANK APPLICATION)**

**(JAVA FULL STACK)**

**Mid Term Project Report**

Submitted by

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Under the Supervision of

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**Project Details**

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| *Project Details* | | | | |
| **Project Title** | XYZ Banking Application | | | |
| Project Duration | 12 Weeks | Date of reporting | 16th January 2019 | |
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This is to certify that the above project is being carried out under my supervision and guidance



Place: Hyderabad \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: 1st April 2019 (Supervisor signature with Seal)

**1. Introduction**

Full stack development refers to the development of both front end and back end portions of an application. This web development process involves all three layer- Presentation layer (front end part that deals with the user interface), Business Logic Layer(back end part that deals with data validation) and the database Layer. It takes care of all the steps from the conception of an idea to the actual finished product.

A full stack developer has the functional knowledge and the ability to work on all aspects involved in building an application. He is proficient in

* Writing optimized front-end code in HTML, Java, JavaScript
* Creating and using APIs and writing backend code in Java
* Working with system infrastructure including hardware and OS
* Networking, Security
* Understanding, creating and querying databases
* Project management and Client coordination

Hence a full stack developer can develop strategies for every part of the web development process. He develops this deep knowledge of the systems through years of experience in working in this field. So a full stack developer is nothing less than a veteran who has high responsibilities. Such skills are difficult to gather and people who possess these skills are greatly in-demand in the industry.

*Here are some of the most common technologies that you will develop expertise in, under each segment.*

* Front end- HTML, HTML5, JavaScript, J Query, CSS3
* Backend- Ruby on Rails, Spring Framework
* Database- Oracle

*A full stack web developer* is someone who has both front end as well as backend knowledge. They are well versed with programming languages needed for client side development. They know how to write back end applications and APIs that power the website. They can work with databases, operating systems and they can also handle project management activities. Basically, they are comfortable working on all tiers of application development.

There are some essential technologies that you must learn in order to call yourself a full stack developer. You must have the knowledge of the following technologies in order to be a Full Stack Developer.

#### ***HTML, CSS, JavaScript, Bootstrap(Web Basics)-***

To begin your career in web development you must have the fundamental knowledge of HTML and CSS. They are the basic building blocks of web that enable you to add content and styles to your webpages. So start your journey of becoming a full stack developer by gaining a sound understanding of these front end concepts.

#### ***Backend programming languages (BDD, Testing)***–

After gaining a strong foothold in the front end arena next comes backend languages like Ruby, Python, PHP etc. which handle application logic, user authentication, and data operations.

#### ***Database& Web Storage (Oracle, JPA Hibernate)-***

In order to design and develop dynamic websites, one should surely know how database driven websites store and access data. Learn the benefits of relational database management system like SQL. Understand how to connect a backend language with a database. Gain knowledge about web storage so that you know how to store cookies, sessions and cached data in the browser.

#### HTTP and REST (Spring Framework)-

You must gain insights into HTTP- that is the protocol required to facilitate communication between the client and server. You must also know how REST is important to HTTP protocol and web applications. Knowledge of Chrome DevTools and SSL certificates would be advantageous.

#### ***Application Architecture (Layered Architecture)-***

Developing complex applications would require a deep knowledge of how the code should be structured, how the data needs to be structured in the database, how to separate files, where to perform computational tasks and where to host large media files. So a full stack web developer surely needs a deep knowledge of web application architecture.

**2. Motivation** *(not exceeding 100 words)*

* *Shortcomings in the previous work / reference paper*
* *Brief importance of the work in the present context*
* *Uniqueness of the methodology that will be adopted*
* *Significance of the possible end result*

**3. Literature Review** *(not exceeding 500 words)*

* *Present state / recent developments in the work area*
* *Brief background theory*
* *Literature Survey*

**4. Objective of the work** *(not exceeding 100 words)*

* *Main work objective*
* *Secondary objective if any*

**5. Target Specifications** *(not exceeding 100 words)*

* *Importance of the end result*

**6. Functional partitioning of project** *(max 5 bullet points)*

* Segregation of project into various components.

**7. Methodology** *(detailed)*

* *Detailed methodology that will be adopted*
* *Assumptions made*
* *Circuit Layouts (one line / block diagrams) if any*
* *Component / equipment specifications*
* *Justification for component / design specifications*

**8. Tools required**

* Detailed specifications of the various components, measuring devices, software tool box, data sheet references etc

**9. Results Analysis** *(detailed)*

* *Results in graphical plots (with axes quantity & its units of measurement) or tabular form (with notation & its units of measurement)*
* *Significance of the results obtained and its analysis*
* *Any deviation from the expected results and its justification*
* *Justification for further progress / investigation if any*

**10. Conclusions**

* General conclusions from the results and its analysis

**11. Project Work Schedule**

## (a) Jan 2019: Status – Completed

The Core Java module was undertaken which covered topics like OOPS (Abstraction, Inheritance and polymorphism), collections, Multithreading. JUnit Testing, Layered Architecture. A project was implemented in JAVA Framework using collections. .

The task assigned to us was:-

Create a payment wallet application for XYZ bank. Customers will be able to park their money in the wallet. Application should allow customers to check the balance, deposit money etc. The (XYZ Bank Application had to include the following modules.

* Create account
* Show balance
* Deposit
* Withdraw
* Fund transfer
* Print Transactions

(b) Feb 2019: Status – Completed

The same project(XYZ Bank Application) was implemented using JDBC in JAVA Framework.

The JAVA framework

(c) Mar 2019: Status – In progress

(d) Apr 2019: Status – Scheduled

**Overall Project Status: On Schedule**

**12. Technical References**

*Journal / Conference Papers*

[1] Name 1 and Name 2, “Paper Title”, Full Journal Name, volume no, publication year, page numbers

[2] Name 1 and Name 2, “Paper Title”, Proceedings of the International / National Conference on \_\_\_, Institution, Country, Date, page numbers

*Reference / Hand Books*

[1] Name 1, “Book Title”, Publication Name, Edition, ISBN number

*Web*

[1] Topic 1, website name (do not include long URL’s)

**General Guidelines (Delete this page when making the report submission)**

* Report be limited to maximum 20 - 25 pages
* Paper Size: A4; Left = Right = Top = Bottom Margins = 0.7”;
* 1.15 line spacing; Times New Roman Font with Normal Style and paragraph justified
* Paragraph Heading: Times New Roman Font, Bold, Font Size 14; Paragraph Matter: Times New Roman Font, Normal, Font Size 12;
* Sub-paragraphs be appropriately numbered as in 1.1, 1.2, 1.3 etc; Sub-paragraph Heading: Times New Roman Font, Italics, Font Size 12; Sub-paragraph Matter: Times New Roman Font, Normal, Font Size 12;
* Include figures / sketches / circuit / images only if necessary
* Figure captions below Figure with continuous numbering
* Tables captions above Table with continuous numbering
* All references must be quoted in ascending order (follow IEEE format for referencing)
* Spiral binding only
* Bullet markings in Italics on page 3 are general guidelines indicating what subject matter must be discussed under respective headings
* Project students are advised to discuss with their supervisor & guide regarding the contents of the mid-term project report
* 1 hard copy with supervisor signature & seal to be speed posted / couriered to the coordinator; soft copy (without signature & seal) to be emailed to coordinator & internal (department) guide
* **Kindly take permission from supervisor / guide before including his / her email address and mobile number**
* This report will be considered for acceptance only if signed by the supervisor with seal
* Project students should submit the hard/soft copy of the synopsis report to department project coordinator