



MANIPAL INSTITUTE OF TECHNOLOGY
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A Constituent Institution of Manipal University

Synopsis

Risk Management System

**SUBMITTED
BY**

Sonali Agarwal 130905236 sonali17061995@gmail.com

Under the Guidance of:

Internal Guide

Mr. Siva Selvan
Assistant Professor,
Department of Computer Science and Engg.
Manipal Institute of Technology,
Manipal University
Manipal-576104

External Guide

Mr. Akhilesh Verma
Associate,
PMT-IS-CT-RA&R-Real Estate,
BlackRock Services India Pvt. Ltd

DETAILS OF THE ORGANIZATION:

BlackRock Services India Pvt. Ltd,
Building #14, 14th Floor, DLF Building, Tower C, DLF Cyber City Phase-III,
Gurugram, Haryana, 122002, India

NAME OF EXTERNAL GUIDE WITH CONTACT DETAILS:

Mr. Akhilesh Verma,
Associate,
APG-PMT-IS-CT-RA&R-Real Estate,
BlackRock Services India Pvt. Ltd

Phone No: +911246780976
Email ID: akhilesh.verma@blackrock.com

DATE OF COMMENCEMENT OF THE PROJECT:

16th January, 2017

PROJECT DURATION:

24 Weeks


Signature of External Guide



BlackRock Services India Private Limited
CIN No.: U74140HR2004PTC037490
www.blackrock.co.in

CONFIDENTIAL

September 28, 2016

Sonali Agarwal
Manipal Institute of Technology
Manipal.

Dear Sonali

We are pleased to offer you internship with BlackRock Services India Pvt. Ltd ("the Company") as an Intern from **January 16, 2017 until July 14, 2017**. This letter, together with the enclosed written statement of terms and conditions, constitutes our offer to you.


This offer is confidential and should not be disclosed to others. It will remain open for ten working days, after which time it will be deemed to have been withdrawn if you have not accepted by then.

Please signify your acceptance of this offer by signing and return one copy of the written statement of terms and conditions of internship, along with the documents listed in the attachment using the BlackRock envelope provided.

If you have any queries regarding this letter or the enclosures or if you wish to receive copies of the various policies and schemes referred to in the written statement of terms and conditions, please contact email contactHR@blackrock.com.

We are very excited about you joining the Company as an intern and hope you would benefit substantially from your learning at BlackRock.

Yours sincerely


28/9/2016

Ramneesh Mohan
Director
Human Resources
For and on behalf of
BlackRock Services India Pvt. Ltd



Sonali Agarwal

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Regd. Office: 14th & 15th Floor, Tower C & D, DLF Building No-14, DLF Cyber City Phase III, Gurgaon - 122002, Haryana, India
Branch Office: Unit No 403, 4th Floor, Building 03, Nesco IT Complex, Western Express Highway, Goregaon (EAST), Mumbai - 400053 Maharashtra, India

1. Introduction:

1.1 Topic

Risk Management System is used to provide and analyze analytics and data for BlackRock to use internally when making investment decisions. Financial models are generated which are then analyzed for the existing and new fixed income clients. Also it manages and amends client accounts as needed.

1.2 Organization



BlackRock is an American multinational asset management firm founded in 1988, which has over \$4.5 trillion in assets under management. It is by far the world's largest asset manager besides which it also provides advisory to clients (Financial Management Advisory) being under the BlackRock Solutions (BRS). BlackRock firmly believes in the following principles: We are "one BlackRock", we are fiduciary to our clients, we are passionate about our performance and we are Innovators. BlackRock consists of various units which function interdependently. One major department is the APG (Aladdin Product Group). Aladdin (Asset Liability and Debt and Derivative Investment Network) is the platform on which BlackRock runs its complete business. The Aladdin Product Group's mission is to build the best investment management system in the world. The team is organized to provide scalable investment and client systems which are built on a resilient technical infrastructure. The APG group mainly focusses on providing the best technology platform for investment management by developing and building BlackRock's core platform and supporting all the various units of BlackRock.

2. Need for the project:

Risk Analysis tools are used by portfolio managers and clients so as to monitor and analyze risks in the assets values so as to take investment decisions. Hence it is important that such tools are able to provide correct and appropriate information seamlessly and in real-time to the user. The tool must be bug-free. Also, as new features are added into the tools, they should be tested sufficiently to ensure that the newly added feature is in line with the existing features, and does not hamper the working of the tool.

3. Objective:

- Fully understand BlackRock's business and services
- Learn various technologies used by the PMT(portfolio management) department
- Develop technical and organizational and be capable of handling real time problems
- Accomplish client side customization as per the company's requirement
- Understand Aladdin platform that is used by the organization
- Provide and analyze analytics and data for BlackRock to use internally when making investment decisions

4. Methodology:

The project is carried out in into following parts

- **Understanding of WPF fundamentals**
 - Learning basics of the language including syntax.
 - Getting familiar with Visual Studio environment and developing basic applications using C# and XAML.
- **Highly Available Commercial Real Estate Data**
 - Commercial Real estate data available in highly customizable self-serving form.
 - Contribute towards enhancements in the current .Net based risk management application and carving out the functionalities applicable for the web.

- **Workflow Automation for Monthly CMBS updates and new Deal Setup**
 - Understanding the existing tool used in the risk management system.
 - Partner with the collateral team in building an efficient solution to facilitate the data management process.
 - Contribute towards the scripting and integration of process to the pipelining tool.
- **Model re-estimation and visualization**
 - Partner with the Financial Modeling Group to build the visualization framework.
 - Contribute towards visualization framework and model re-estimation.

5. Project Schedule:

Jan 2017: Induction and Internal Java Development Certification Module-1.

Feb 2017: Internal Java Development Certification Module-2 and Module-3. Project scoping (Setting project objectives).

March 2017 – June 2017:

- Working on customization's as per the team requirements.
- Complete understanding of the risk management system and all the frameworks related to it.
- Complete understanding of commercial mortgage backed securities and securitization process.

6. References:

- BlackRock Internal Documents and Documentation
- APRESS Beginning ASP.NET 4.5 In C#
- Financial Markets course
- WPF tutorial
- www.blackrock.com
- www.stackoverflow.com

Project Details

Student Details			
Student Name	Sonali Agarwal		
Register Number	130905236	Branch / Roll No	CSE D - 21
Email Address	sonali17061995@gmail.com	Phone No (M)	9958856480
Project Details			
Project Title	Risk Management System		
Project Duration	24 weeks	Date of reporting	16/01/2017
Organization Details			
Organization Name	BlackRock Inc.		
Full postal address with pin code, telephone number, Fax and email	DLF Building No. 14, 14th Floor, Tower C DLF Cyber City Phase-III, Gurugram-122002, Haryana, India Phone: +91 124 6780000 Email: contact.us@blackrock.com		
Website address	https://www.blackrock.com/investing/		
External Guide Details			
Supervisor Name	Akhilesh Verma		
Designation	Associate		
Full contact address with pin code	Building #14, 15th Floor, DLF Building, Tower C, DLF Cyber City Phase-III, Gurgaon, Haryana 122002, India		
Email address	akhilesh.verma@blackrock.com	Phone No (M)	911246780976
Internal Guide Details			
Faculty Name	Siva Selvan		
Full contact address with pin code	Dept. of Computer Science & Eng., Manipal Institute of Technology, Manipal University, Manipal. 576104		
Email address	siva.selvan@manipal.edu		