HOCHSCHULE SRH HEIDELBERG

Analysis of Solution Data

Master Thesis
by

Rajkumar Elango

July 2015

SRH University Heidelberg

School of Informatics

Primary supervisor	Prof. Dr. Peter Misch
Secondary supervisor	Matthaeus Martynus, SAP

HOCHSCHULE SRH HEIDELBERG

Analysis of Solution Data

Master Thesis

von

Rajkumar Elango

July 2015

SRH Hochschule Heidelberg

Fakultät für Informatik

Erstgutachter/in	Prof. Dr. Peter Misch
Zweitgutachter/in	Matthaeus Martynus, SAP

Affidavit

Herewith I declare:

- that I have independently composed the chapters of the Master Thesis for which I am named as the author.
- that i did not use any other sources and additives but the ones specified.
- that I did not submit this work for any other examination procedure.

Heidelberg, _____

Eidesstattliche Erklärung

Ich versichere, dass ich die Kapitel der Arbeit, für die ich als Verfasser genannt werde, selbständig verfasst habe, dass ich keine anderen, als die angegebenen Quellen und Hilfsmittel benutzt habe und dass ich diese Arbeit bei keinem anderen Prüfungsverfahren vorgelegt habe.

Heidelberg, _____

Contents

I Introduction **1**

1 About SAP **1**

2 Concept and Motivation **1**

3 Brief Introduction about the Chapters that follow **1**

II Background **2**

4 Overview **3**
- 4.1 Need for a tool . . . 3
- 4.2 Improvements and Increase of use in Mobile Technology . . . 3
- 4.3 Development of cloud based systems . . . 3
- 4.4 Advancement in In-memory databases . . . 3
- 4.5 Web Analytics . . . 3

5 Solutions / Products Used **3**
- 5.1 Solution Explorer . . . 3
- 5.2 BSR Authoring Tool . . . 3
- 5.3 Tracker API . . . 3
- 5.4 WARP API . . . 3
- 5.5 Data Explorer . . . 3
- 5.6 Piwik . . . 3

6 Objectives **3**

III Requirement Analysis **3**

7 Use Case - Coordinators **3**

8 Dashboards Block Diagram **3**

IV Approach **3**

9 Data Vizualization **3**
- 9.1 Charts - SAP Viz library . . . 3

10 Responsive Web Design **3**
- 10.1 SAP UI5 . . . 3

11 MVC Architecture **3**
11.1 Model . . . 3
11.2 View . . . 3
11.3 Controller . . . 3

V Development Environment 3

12 Eclipse with SAP UI5 plugin **3**

13 SAP HANA Web IDE **3**

14 Monsoon Cloud Computing **3**

VI Technologies Used 3

15 SAP UI5 **3**
15.1 Overview . . . 3
15.2 Architectural Overview . . . 3
15.3 Advantages of using SAP UI5 . . . 3

16 SAP HANA Database **3**
16.1 Overview . . . 3
16.2 XSJS . . . 3

17 Monsoon Cloud Computing **3**
17.1 Overview . . . 3
17.2 Chef Recipe . . . 3

18 Git **3**
18.1 Overview . . . 3
18.2 Common Git commands . . . 3

19 Build automation **3**
19.1 Overview . . . 3
19.2 Bamboo . . . 3

VII Development Phase 3

20 Detailed Requirement for Dashboards **3**

21 Development using the WARP API **3**

22 Deployment in the productive system **3**

VIII Conclusion and Outlook 4

IX End Material 5

Material 5

List of Figures 6

List of Tables 7

Abbreviations 9

Glossary 10

Bibliography 10

Abstract

Part I

Introduction

1 About SAP

This is a section about SAP AG. Will fill this later..

2 Concept and Motivation

My Idea for a thesis started when I came to know about the BSR coordinators where still using the good old Microsoft Excel to create Charts and Figures to calculate and distribute the monthly visitor statistics of the SAP Solution Explorer home page.

It was during this time I was working on the SAP UI5 framework and the HANA Cloud Platform, building web pages with an ability to view it also on smart phones, tablets and also regular computers without the loss of information or the usability.

I approached my manager and gave this idea that I would build dashboards for the users with the data extracted from the Solution Explorer tool. The advantages of this would be the on the fly statistics creation of the different Vistors from any location using a smart phone or a laptop.

3 Brief Introduction about the Chapters that follow

Part II

Background

4 Overview

4.1 Need for a tool

4.2 Improvements and Increase of use in Mobile Technology

4.3 Development of cloud based systems

4.4 Advancement in In-memory databases

4.5 Web Analytics

5 Solutions / Products Used

5.1 Solution Explorer

5.2 BSR Authoring Tool

5.3 Tracker API

5.4 WARP API

5.5 Data Explorer

5.6 Piwik

6 Objectives

Part III

Requirement Analysis

7 Use Case - Coordinators

8 Dashboards Block Diagram

Part IV

Part VIII

Conclusion and Outlook

Part IX

End Material

List of Figures

List of Tables

List of Theorems

References