NBA ANALYSIS PROJECT REPORT

Version 1.0

Revision History

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 2018-07-24 | 1.0 | Initial Draft | Group21 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Table of Contents

1. Introduction 4

1.1 Purpose of this document 4

1.2 Intended Audience 4

1.3 Scope 4

1.4 Definitions and acronyms 4

1.4.1 Definitions 4

1.4.2 Acronyms and abbreviations 5

1.5 References 5

2. Background and Objectives 5

3. Organization 5

3.1 Project Manager 5

3.2 Project Group 5

3.3 Customer 6

4. Milestones 6

4.1 Remarks 7

5. Project Results 7

5.1 Requirements 7

5.1.1 Requirement Compliance Matrix 7

5.1.2 Requirements Compliance Summary 8

5.1.3 Remarks 9

5.2 Work Products and Deliverables 9

5.2.1 Remarks 10

6. Project Experiences 10

6.1 Positive Experiences 10

6.2 Improvement Possibilities 11

7. Financials 11

7.1 Project Cost Summary 11

7.2 Work per Member 11

8. Metrics 11

8.1 Milestone Metrics 11

8.2 Effort Metrics 12

# Introduction

The NBA analysis project has been developed majorly for National basketball association. The system is expected to improve the services of the association. The software has been developed by a group of 4 members.

## Purpose of this document

The purpose of the document is to clearly explain the main functionalities of the system and the measures that have been taken to come up with the system that meets the requirements of the stakeholders. We have also included the work experience of the gained from this project and the costs.

## Intended Audience

The system has been developed to offer services to a number of users that is to say the team managers, the NBA officials and the system administrator.

## Scope

The NBA analysis project has been developed in R programming language. The software consists of majorly seven functionalities that is to say login, making summaries about the data, making predictions, displaying relationships, making comparisons, help page and logout. The system is intended to provide a well friendly user interface that will ensure responsive interactivity between the users and the different functionalities.

## Definitions and acronyms

### Definitions

|  |  |
| --- | --- |
| **Keyword** | **Definitions** |
| National Basketball Association. | In charge of Basketball related affairs in the USA. |

### Acronyms and abbreviations

|  |  |
| --- | --- |
| **Acronym or**  **abbreviation** | **Definitions** |
| NBA | National Basketball Association |

## References

NBA analysis project document

# Background and Objectives

NBA has been facing a number of challenges such as the difficulties in describing and summarizing the data about players and the previous seasons. The association has also been facing a challenge in drawing relationships and making comparisons between players. We have come up with system that is capable of solving the above issues.

# Organization

## Project Manager

**Niyonsaba Alex** is the Manager of the group.

## Project Group

|  |  |
| --- | --- |
| **Name** | **Responsibility** |
| Niyonsaba Alex | Project manager, Analysis, Implementation, Documentation, DB Design |
| Okoth Brain | Implementation, Documentation, Analysis, DB Design |
| Chepkurui Jacob | Implementation, Documentation, Designing, Analysis |
| Samir Habib | Implementation, Analysis, Designing, Documentation |

## Customer

National Basketball Association

# Milestones

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Id** | **Milestone Description** | **Responsible Dept./Initials** | **Finished week** | | | | **Metr** | **Rem** |
| **Plan** | **Forecast** | | **Actual** |
| **Week** | **+/-** |
| M-001 | Project Description and Plan. (concept paper) |  | 21-05-2018 | 0 | 0 | 28-05-2018 | Y | Good |
| M-002 | Requirement Collection and definition. (software requirements specification) |  | 04-06-2018 | 0 | 0 | 04-06-2018 | Y | Good |
| M-004 | Project Design. (software design specification) |  | 11-06-2018 | 0 | 0 | 11-06-2018 | Y | Good |
| M-005 | Project implementation |  | 25-06-2018 | 0 | 0 | 25-06-2018 | Y | Good |
| M-006 | Project Status Presentation |  | 19-07-2018 | 0 | 0 | 20-07-2018 | Y | Good |
| M-007 | Final Presentation & delivery |  | 25-07-2018 | 0 | 0 | 25-07-2018 | Y | Excellent |

## Remarks

|  |  |
| --- | --- |
| **Remark Id** | **Description** |
| R-001 | It was good experience to give a Presentation in Distributed Environment. |
|  |  |
|  |  |
|  |  |

# Project Results

## Requirements

### Requirement Compliance Matrix

|  |  |  |  |
| --- | --- | --- | --- |
| **Id** | **Requirement Description** | **completed** | **Rem** |
| NBA-1.0 | System Administration Requirements | Yes |  |
| NBA-1.1 | Administrator should be able to adjust system features. | Yes |  |
| NBA-1.2 | Administrator should be able to add new member, modify details of existing members and also delete system members. | Yes |  |
| NBA -2.0 | Project leader Requirements. | Yes |  |
| NBA -2.1 | Project leader should be able to define baseline plan. | Yes |  |
| NBA -2.2 | Project leader should be able to manage the project group. | Yes |  |
| NBA-2.3 | Project leader should be able to monitor individual work by the help of Github. | Yes |  |
| NBA -3 | Project members should be able to submit weekly improvements on the system. | Yes |  |
| NBA -4 | The system should make summaries about the NBA data. | Yes |  |
| NBA -5 | The system should be able predictions basing on the NBA datasets. | Yes |  |
| NBA-6 | The system should be able to make relationships such as plotting graphs that display the trends in the NBA datasets. | Yes |  |
| NBA-7 | The system should be able to make Comparisons between the different players in the NBA data. | Yes |  |
| NBA-8 | The system should have help page | Yes |  |
| NBA-9 | Signup, any new member should be able to sign up in the database by the help of the system admin. | Yes |  |
| NBA-10 | All members should be able to login in order to access the system features. | Yes |  |
| NBA-11 | Any logged in member should be able to logout |  |  |

Completed: Yes (completely implemented)

No (not implemented at all)

Partially (partially implemented, more description under Remarks subsection)

Unknown (completion status not known)

Dropped (requirement was dropped during the course of the project)

### Requirements Compliance Summary

|  |  |
| --- | --- |
| Total number of requirements | 11 |
| Number of requirements implemented | 11 |
| Requirements partially fulfilled | 0 |
| Requirements not fulfilled | 0 |
| Requirements dropped | 0 |

### Remarks

|  |  |
| --- | --- |
| **Remark Id** | **Description** |
|  |  |
|  |  |

## Work Products and Deliverables

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **To** | **Output** | **Planned week** | **Promised week** | **Late +/-** | **Delivered week** | **Rem** |
| Mr. Mbabazi Isaac | Concept paper | **W27** | **W27** | No | **W27** |  |
| Mr. Mbabazi Isaac | Software requirements specifications | **W28** | **W28** | No | **W28** |  |
| Mr. Mbabazi Isaac | Software design specification | **W29** | **W29** | No | **W29** |  |
| Mr. Mbabazi Isaac | Project report | **W31** | **W31** | No | **W31** |  |
| Mr. Mbabazi Isaac | Project Status Presentation | **W32** | **W32** | No | **W32** |  |
| Mr. Mbabazi Isaac and  Mr. Kange Noah | Final Presentation & delivery | **W33** | **W33** | No | **W33** |  |

### Remarks

|  |  |
| --- | --- |
| **Remark Id** | **Description** |
|  |  |
|  |  |
|  |  |
|  |  |

# Project Experiences

## Positive Experiences

The main experience we learnt from the NBA Project is to work in group.

We have also learnt to use new software like SQlite manager and how to use Git.

We have also obtained an experience in creating better software documentations.

## Improvement Possibilities

We have experience that if we will organize our resource according to requirements then we can make project more successful.

# Financials

## Project Cost Summary

|  |  |
| --- | --- |
| Planned Cost | 10000 Uganda shillings |
| Actual Cost | 12000 Uganda shillings |

## Work per Member

|  |  |
| --- | --- |
| Member | Task |
| Niyonsaba Alex | Relationships, predictions, documentation, user interface. |
| Okoth Brain | Summaries, documentation, user interface, login and logout. |
| Chepkurui Jacob | Comparisons, documentation, user interface. |
| Samir Habib | User interface, help, documentation. |

# Metrics

## Milestone Metrics

|  |  |  |
| --- | --- | --- |
| Completed as planned or earlier | Total | Timeliness |
| 11 | 11 | Achieved |

## Effort Metrics

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Actual Effort** | **Planned Effort** | **Deviation (%)** |
| Requirements Gathering | 140 | 168 | -16.67 |
| Concept paper | 120 | 168 | -28.57 |
| SQlite database design | 60 | 96 | -37.5 |
| User interface | 200 | 336 | -40.48 |
| Implementation | 336 | 420 | -20 |
| Testing | 168 | 120 | 40 |
| **Total** | **1024** | **1308** | **-103.22** |

|  |  |
| --- | --- |
| **Effort estimation accuracy (%)**  *(100\*(1 - abs(Actual – Planned)/Actual))* | 72.27% |