**Software Project Management Plan**

Revision: Version 2.0

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Preface: Developing an NBA Roster Dashboard

**Table of Contents**

1. Introduction

1.1 Project Overview

1.2 Project Deliverables

1.3 Evolution of the SPMP

1.4 References Materials

1.5 Definitions and Acronyms

2. Project Organization

2.1 Process Model

2.2 Organizational Structure

2.3 Organizational Interfaces

2.4 Project Responsibilities

3. Managerial Process

3.1 Management Objectives and Priorities

3.2 Assumptions, Dependencies and Constraints

3.3 Risk Management

3.4 Monitoring and Controlling Mechanisms

3.5 Staffing Plan

4. Technical Process

4.1 Methods, Tools and Techniques

4.2 Software Documentation

4.3 Project Support Functions

5. Work Elements, Schedule, Budget

1. INTRODUCTION

1.1 Project Overview

Most NBA Roster Data can be found across the internet. However, they usually have a crowded interface, they are difficult to navigate, and they are often not as descriptive of certain stats and attributes that a fan, coach, scout, or analyst can find efficiently.

The goal of this project is to design an NBA Dashboard where all interested parties can rely on a single source of information that provides access to every active and non-active roster player including: live statistics, attributes, biography, and current schedule information.

The site will include:

* Home page
  + Landing page with introduction and site guide
* “Search” page
  + Includes all NBA attributes including: height, weight, combine stats, headshot (if available) position, and team
* “Statistics” page
  + A complete roster sheet that allows the user to sort by name, team, or average statistics per game (assists, points, rebounds, steals, and 3 point percentage)
* “Highlights” page
  + Feed page that includes weekly player news and highlights (updated weekly)
* “Schedule and Stream” page
  + Includes full season schedule with broadcast links and information
* Login and Registration
  + User will be able to sign up/log in to store favorite team, recent searches, and sort preferences

1.2 Project Deliverables

* Source Code
* Fully Functional Site
* Git Repository
* Use Cases
* Requirements
* SPMP
* Milestone Review
* System Test Procedure

1.3 Evolution of the SPMP

| Version | Primary Author(s) | Version Description | Date Expected |
| --- | --- | --- | --- |
| Draft | Brandon Bagby | Initial draft created for distribution and review comments | 6/30/2021 |
| Preliminary | Brandon Bagby | Second draft incorporating initial review comments, distributed for final review | 7/15/2021 |
| Final Draft | Brandon Bagby | First complete draft, which is placed under change control | 7/23/2021 |

1.4 References Materials

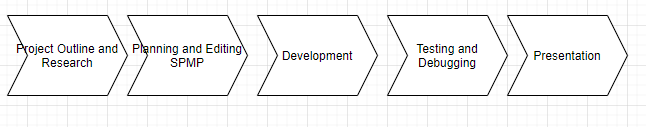
* <https://reactjs.org/docs/getting-started.html>
* <https://nodejs.org/en/docs/>
* <https://docs.mongodb.com/>
* <https://expressjs.com/>
* <https://getbootstrap.com/docs/4.1/getting-started/introduction/>

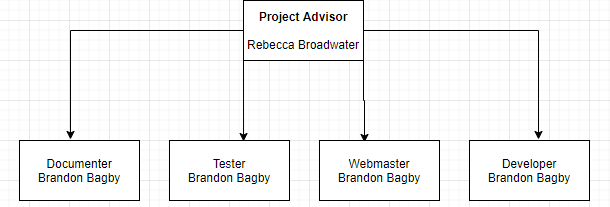
1.5 Definitions and Acronyms

* UI - User Interface
* SPMP - Software Project Management Plan
* MERN - Stack using MongoDB, Express, React JS, and Node JS

2. Project Organization

2.1 Process Model



2.2 Organizational Structure 

2.3 Organizational Interfaces

* Towson University
  + This project is student-ran and under surveillance of Prof. Broadwater who monitors and reviews all submissions
  + Prof. Broadwater will be monitoring and advising project
* Heroku
  + Web delivery software to export the page to the internet
* Github
  + Host for git repository and source for Heroku deployment

2.4 Project Responsibilities

2.4.1 Developer

* Research necessary information and create source code for webpage, database, and API used to build the site
* Continuously maintain system and fix all issues discovered by the tester
* Designing the front-end layout and UI
* Connect the API to the front end to display data

2.4.2 Tester

* Test all use cases to ensure that the site is fully functional
* Stress test the front-end and back-end to make sure it can handle an acceptable amount of requests
* Report and document all issues and bugs of any kind

2.4.3 Webmaster

* Ensure the front end layout remains smooth and efficient
* Update the site with new information if/when necessary
* Uploading any products or documents into the website

2.4.4 Documenter

* Continuously document all edits and reports
* Document test reports, bugs, patches, etc.
* Organize and upload all important documents throughout the project/organization

3. Managerial Process

3.1 Management Objectives and Priorities

* It is our responsibility to ensure all expectations and requirements of the organization are met and kept at the highest priority
* The budget is currently in review , however it will be ensured that the project will remain within the agreed amount
* The management prioritizes user-input, and our goals will not be considered met as long as the site provides any major/minor inconvenience to the user (within reason)

3.2 Assumptions, Dependencies and Constraints

* This site is expected to match every requirement and goal of the organization
  + The site will meet all IEEE standards
  + The site will up-to-date with all statistical updates and information
* There will be 5 weeks to complete the project and prepare a presentation to the client
* All software used will be open sourced or MIT licensed, the project is prohibited from using any stolen work/software

3.3 Risk Management

* Contractual Risk: If the client were to go bankrupt the project is to be suspended immediately until the contractual agreements are met.
* Size: If the project seems too large or small the organization will immediately consider new solutions/methods that can meet the client’s expectations within the time constraints
* Complexity: As the project develops, requirements are expected to shift and/or multiply. The project will make sure that the product remains in the scope of the client goals, this includes increasing/lowering the size of the project in order to minimize such complexities
* Client Acceptance: If the prototype does not meet the requirements of the client we will ensure to go back into development and ensure that the client is satisfied with our product
* Staff: This is an individual project that is managed and developed solely by Brandon Bagby

3.4 Monitoring and Controlling Mechanisms

* All deliverables are to be pushed to the organization’s github and submitted to Prof. Broadwater (Advisor/Client) to be reviewed for any possible editing and/or fixing of the product
* The changes and commits will be updated and available on a weekly basis at minimum
* All documents to be submitted through Blackboard (Towson University)

3.5 Staffing Plan

* The project is to be staffed and ran solely by Brandon Bagby while being overseen/advised by Prof. Broadwater

4. Technical Process

4.1 Methods, Tools and Techniques

Methods and Techniques:

* The website will be built using MERN stack development tools
* The development technique will use the Agile approach that ensures that the building and testing phases occur at the same time.

Tools:

* Languages: Javascript, HTML, CSS
* API and Database: MongoDb, Express.js, React js, Node.js
* Layout/UI: Bootstrap Grid System
* Web Delivery: Heroku
* IDE: Visual Studio Code

4.2 Software Documentation

* SPMP
* Tool Selection
* Requirements
* Use Cases
* Milestone Review
* System Test Procedure

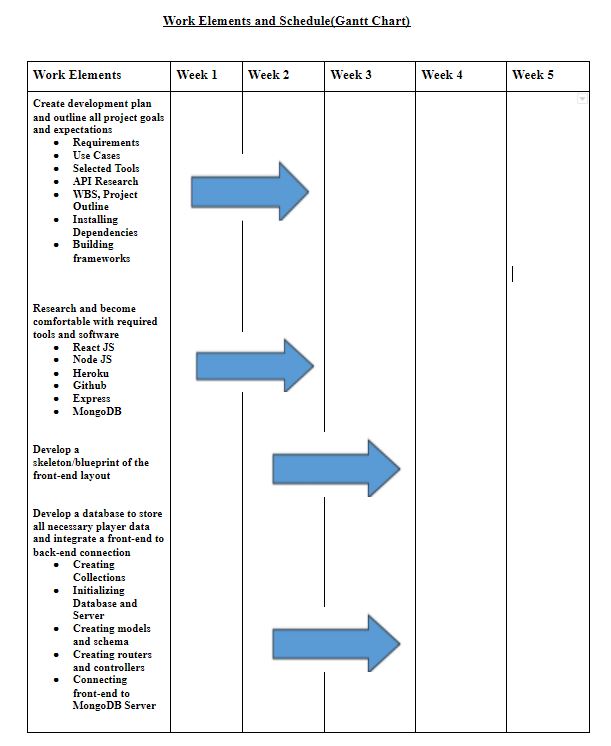
All documentation will be pushed to the Github repository and submitted to Blackboard for further review

4.3 Project Support Functions

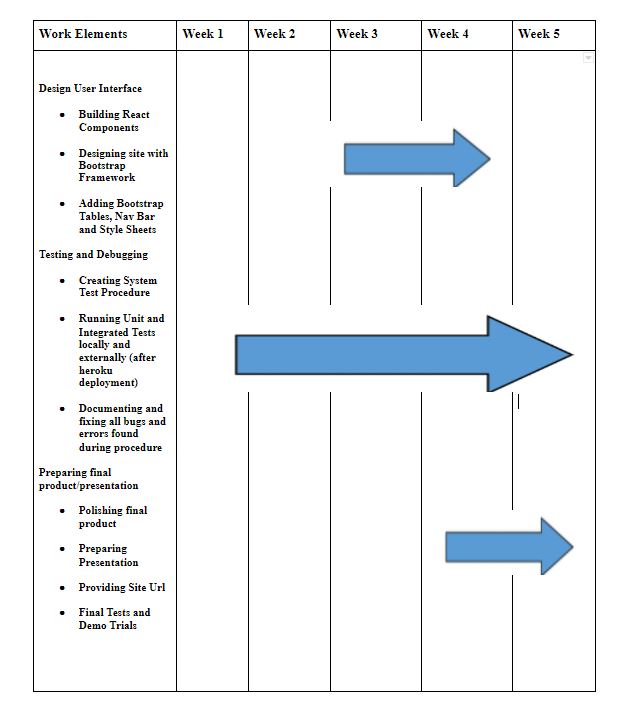
**Quality Assurance Plan**

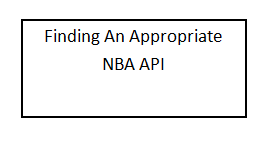
* + Test and Monitor product consistently
  + Report any bugs or issues with any portion of the product
  + Continuously update product using up-to-date software tools
  + Send all necessary quality documentation to the project advisor
  + Testing after any edit/update to the source code and/or data pull

**All changes will verified and validated by the project advisor before being accepted as the final product**

5. Work Elements, Schedule and Budget

**WBS**





**WBS**

