**Iteration One**

**CIS 320**

**Team: Group A**

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**System Request – UofL Basketball Administration**

The UofL Basketball Administration needs a publicly hosted website that only permits certain users to access and store data regarding the UofL basketball teams' health, performance and players. The website should be accessible for staff, but only allow certain roles to access and record information within their responsibilities. While this website will be hosted publicly, security measures need to be implemented to only allow certain users from accessing the data on the hosted site. The Website should allow an easier method to compile and store data with limited user input while also allowing statistics to be easily viewed and analyzed. This website is needed to allow the UofL administration and staff to easily compile and analyze the data they collect to thoroughly assess their performance.

**Project Sponsor:** Professor Zara Hatami

**Business Need:**

* Centralize data
* Reduce the time it takes to compile data
* Consolidate player data from all departments
* Automate the trend analysis process

**Business Requirement:**

* Departmental data storage
* Game information
* Trend analysis/Data mining
* User security

**Business Value:**

* Increased security of information
* Increased efficiency of data gather
* Centralized data reporting process
* Ease of player trend analysis
* Portability of data

**Special Issues:**

* Standardized employee training
* Completed by 04/24/2023

**Narrative**

The University of Basketball Program was established in 1911 and has continued to evolve since. Justin Perez, Chief of Staff, is the main point of contact for any information regarding the data on the players that needs to be analyzed. As the team currently functions data from Devente Frazier (Director of Sports Medicine), Adam Petway (Head Strength and Conditioning Coach), and Tiffany White (Associate Director of Sports Nutrition) provide data through Excel spreadsheet and paper that are given to Justin. From there, Justin combs through data to form information that is understandable to coaches in order to create the best-case scenario to support the player. The current system lacks the ability to house data and information, limit human error and data inconsistencies, and form charts and graphs that allow for easy data analysis and comparisons.

Creating an independent and unique database and website of the University of Louisville (UofL) Men’s Basketball Team will allow all data and information to be streamlined and centralized to one secure yet easy to access location. Player information and analytics will be entered into a Microsoft Access Database where each person will have their own specific access point along with restrictions on how data is entered across the board. This data is integrated with the WordPress Database system which will then allow Justin and others with access to manipulate how the data is displayed.

**Technical Feasibility**

Since the foundations of the current system is Excel spreadsheets the idea is to keep the simplicity and allow spreadsheets to be both imported or directly input into the database if the requirements are met. The need to adapt is found with those who provide data using paper and the need to extend the IT Center in to managing both Access and WordPress.

The other new adaptation is the addition of WordPress. WordPress is a content management system (CMS) that allows the client to create a curated website without the need to learn how to code. The system easily allows the client to manipulate the look and content of the website. WordPress in our case is used to display the data in the Access Database in the form of charts, graphs, and easily displayed tabs. Using a new system will always come with its difficulties but designing the Website and Database in a way that is simple, all inclusive, and intuitive will limit the difficulties.

**Economic Feasibility**

Microsoft 365 Business Premium will run $22.00 per user monthly billed annually $2640.00 for all the users (this number can increase or decrease due to the number of people who need to enter data and the addition of IT members specifically dedicated to Access). WordPress Business Premium is $25.00 per month billed annually at $300.00 and can be maintained by IT without the additional per user cost.

**Organizational Feasibility**

As previously stated, the UofL Men’s Basketball teams have the foundations of a system that just needs cleaning for data inconsistencies and a place to be input, stored and displayed. All applications used in our system are picked for their ease of use and integration into the current one so that risk is limited, and organizational resources aren’t strained. The system would be very easy for Justin and the necessary coaches to use and navigate when both inputting, editing and seeing information displayed. The addition of an IT branch specifically for the maintenance of both WordPress and Access Database to correct errors, do updates, and cater to the questions and concerns the team has will be necessary for the system to run smoothly.

Process Model

As-Is: Data Gather Process

Diagram

Description automatically generated with low confidence

Process Model:

To-Be: Data Gather Process

Diagram

Description automatically generated

**UofL Basketball Team Website Project**

**Vision (Small Project)**

**Version 1.0**

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| <02/18/2023> | <1.0> | First submission of Vision document. | Group A |
|  |  |  |  |
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**Vision (Small Project)**

1. **Introduction**

The purpose of this document is to collect, analyze, and define high-level needs and features of the UofL Basketball team Website Project. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the website fulfills these needs are detailed in the use-case and supplementary specifications. The document will go in detail about the business problem (business need), stakeholders, users, and the final result of the project will be implemented for the UofL Basketball team.

1. **Positioning**
2. **Problem Statement**

|  |  |
| --- | --- |
| Effects | Justin Perez, UofL Basketball Staff/Administration |
| The impact of which is | Limited and time-consuming process of compiling Team and player statistics and compiling them into usable data. |
| A successful solution would be | A customized website that allows data entry for Team and player statistics that automatically compiles and converts statistics into usable data. |

1. **Product Position Statement**

|  |  |
| --- | --- |
| For | UofL’s Basketball Staff and Administration. |
| Who | Are charting information pertaining to the Players’ performance, Health and nutrition. |
| The (product name) | WordPress |
| That | Eliminates the need to manually gather and compile basketball statistics into one record. |
| Unlike | Synergy |
| Our product | Will be accessible and customized to the specific needs of the staff submitting documentation. |

1. **Stakeholder and User Descriptions**

To effectively produce products and services that meet our stakeholders’ and user’s needs, its necessary to identify and involve all our stakeholders as part of the Requirements Modeling Process. These tables identify the users of the system and ensure that the stakeholder community adequately represents them. With this section, it provides a profile for the stakeholders and users involved in the project, and the key problems that they perceive to be addressed by the proposed solution. However, it does not describe their specific requests or specific requirements as these are captured in a separate stakeholder request artifact. Instead, it provides the background and justification for why the requirements are needed.

1. **Stakeholder Summary**

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Justin Perez | Chief of Staff of the UofL Men’s Basketball Team | One of Justin’s primary roles it to go over and input data he receives from other members of the management team. With some using excel for their data and others writing it down on paper, as well as no one centralized place to keep the data, Justin is interested in a website that can be used to centralize all data, streamline data input, and format its output. |

1. **User Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Coaches  Sports Medicine Directors  Strength and Conditioning Coaches  Sports Nutrition Directors | Those who use the data to make decisions about the team. Full access to all data.  Those who record, input, and make decisions based on sports medicine data. Access limited to sports medicine, nutrition, and strength training data.    Those who record, input, and make decision based on strength training data. Access limited to nutrition and strength training data.  Those who record, input, and make decisions based on nutrition data. Access limited to nutrition data. | Input data, format data, and coordinates work.  Input data, format data, analyze data, and produce reports.  Input data, format data, analyze data, and produce reports.  Input data, format data, analyze data, and produce reports. | Justin Perez  Justin Perez  Justin Perez  Justin Perez |

1. **User Environment**

Currently, data is compiled using a combination of excel spreadsheets, CSV files, and writing it on paper. Justin receives data from many different sources and inputs the data manually. Inputting, sorting, and formatting are a problem. The goal of this project is to have a website where the basketball management team can each input their data separately and have it all in one place. This makes it easier to input data, as it doesn’t have to be sent to Justin beforehand, and it greatly improves the ability to analyze data through the use of formatting tools.

1. **Summary of Key Stakeholder or User Needs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Data Input Streamlining  Data Output Formatting  Security | High  High  High | There isn’t a place for all of the relevant people to input their data  It’s difficult to view all relevant data easily  Player data is vulnerable | Sending the data to Justin and having him put the data in excel spreadsheets  Looking at multiple different files at the same time  Have data in files only accessible to the creators | | Being able to input your relevant data directly into the website where anyone with the right access and view it  Having all relevant data viewable from a single page, as well as being able to format that data to view only what you need  Have data secured in the website only available to the basketball management team, as well as having different levels of access within the team |

1. **Alternatives and Competition**

One alternative is to maintain the status quo. This means Justin would continue to receive data through many different mediums and input it all manually himself. This wouldn’t require any additional training as it is the current system, but it is very inefficient.

1. **Product Overview**

Another alternative is to improve the current use of excel. By using excel and access in tandem, it could improve the current system and provide the needed database. It would be cost-effective and relatively simple. However, it wouldn’t have as many formatting tools as the project, and it wouldn’t be as simple to format data for analyzing.

1. **Product Perspective**

The website we’re designing is self-contained. It will take the information from the already existing excel sheet and CSV files into the new database and completely replace the existing system.

1. **Assumptions and Dependencies**

This product assumes the use of website design and content management systems. We also assume Justin and the management team will be capable of paying any required monetary requirements, as well as utilizing and maintaining the website.

1. **Product Features**

WordPress Business Features

* Open source
* Drag and drop interface customization
* Automated back-up and restoration
* Plugins and extended functionality
* Hosted by WordPress
* Customer service through live chat and email

Microsoft Business Premium Access Features

* Large data storage capacity
* Data templates and entry forms
* Excel spreadsheets can be imported
* Data can be secured down to record level

Website Specific Features

* Login button
* Navigation bar
* Player Information and Statistics, Health, Nutrition and Hydration, Strength and Conditioning, Practice, and Data Comparison
* Search bar

**Other Product Requirements**

Our product will be the integration of WordPress and Microsoft Access. It will need to be highly customizable to incorporate the existing roster as well as roster changes in the future. It will also need to be extremely intuitive for those viewing information, entering data, and managing the backend of both the website and database. The largest risk is the learning curve of the Access database. Microsoft Access is a powerful tool but can be difficult to use if not trained properly. To mitigate the risk, it would be beneficial to provide both a training session and a step-by-step guide on how to properly input information while also maximizing the use of the tools within Access to create data validation rules and accompanying error messages.

**Agile Stories**

ID: 1030

Title: Manager

As: part of the team management

Workflow (I want to): make sure all players overall health is up to date with the necessary requirements and that I am knowledgeable about the health issues of any player, in the case I need to inform an individual of higher management

Benefitted (so that): the players can perform at peak performance.

*<When I>* fulfill this role and accomplish my task, *<event happens>* the team can perform to peak performance and records of each players health is recorded properly with no issues

ID: 1036

Title: Nutritionist

As: part of team management

Workflow (I want to): ensure all players' diets are healthy and up to date with health codes. Ensuring to record any flaw within a player's diet

Benefitted (so that): players won’t be sluggish due to faulty diet

*<When I>* fulfill this role and accomplish my task, *<Event happens>* the team's performance is not affected due to their diets, and each player's diet is recorded properly and reported to Coaches/Managers.

ID: 1102

Title: Coach

As: part of team management

Workflow (I want to): run practices and ensure each player is practicing safe and responsibly to avoid injuries

Benefitted (so that): players are kept in top shape and prepared to compete in competitive games

*<When I>* fulfill this role and accomplish my task, *<Event happens>* the team will run plays in competitive games and perform to their best ability with plays they’ve continuously practiced.

ID: 1390

Title: Game Coordinator

As: part of scheduling management

Workflow (I want to): schedule games for the team with reasonable gaps to practice and prepare for each game.

Benefitted (so that): players can work on mistakes and improve their performance between each game.

*<When I>* fulfill this role and accomplish my task, <*Event happens>* the team will be capable of competing in the college league, along with train before the season, during the season, and after the season.

Team Charter

Our team, Group A, aims to provide our client, the University of Louisville’s men’s basketball team, with a web service to organize their player information. Currently, the program has a convoluted system that consists of various excel sheets and paper. Information from different sectors of the team is sent to one person, Justin. He is then responsible for manually inputting all this data into one excel sheet, and when asked to pull specific pieces of data, it takes hours to cherry-pick through the excel sheets to find what he is looking for. This inorganization is inefficient, time-consuming, and prone to missed information and inaccurate data pulls. To accomplish the program’s mission of fostering NBA-ready athletes, they need a robust and secure system to support their needs. Our team is prepared to do just that. We have completed research on content management systems to find a platform that would best support their needs. We also plan to work together on completing our iterations and deliverables efficiently. Lastly, we are to be in constant communication with each other and our project sponsor to ensure the needs of our clients are fully met.

As stated previously, our team aims to transform our client’s process from their scattered as-is process to a smooth, centralized to-be process. Player information comes from multiple sources, and one person is responsible for compiling it. Practice and training information is held at the Kueber Center and poses the issue of not having that data accessible when traveling. Therefore, the program needs security measures, with the data being handled containing secure information. We plan to create a web database that allows different program sectors to import their data so that Justin can quickly generate trends and analysis reporting by simply using filters. We also want access limited to only those on the security list provided. So far, our team understands what we each need to do for this project to be successful.

For a team to be successful, there must be clear communication. Our team utilizes our class time every Tuesday and Thursday to debrief each assignment and assign parts. We also ensure that each step correctly aligns with or end goal of the project. We also use a text message group chat for reminders about assignments to clarify what is expected of each part and ensure everyone is on the same page. Regarding meetings, we will schedule them around each team member’s availability. These meetings can be conducted via Microsoft Teams or in person. We strive to cover everything in class since we individually are busy with other responsibilities. We complete our parts and place them on our Microsoft Teams page for documentation. Once we are done with our parts, we will communicate with the team that it has been saved on the Team’s page so it can be compiled together.

Our team has handled decision-making well. We will each speak on our ideas of how the project should be. We will then compile our ideas into one to make a centralized decision. We strive to include everyone’s opinions because each has a unique perspective, and the combination will produce a well-rounded decision. As for conflicts, we have not encountered any disagreements just yet. But we feel that our current level of communication will allow us to talk through any disputes that may arise. Overall, we believe our team is well-equipped to complete our goal of providing the men’s basketball team with a web database that allows for secure, centralized data that enables automated trend analysis. The increased efficiency of data compilation will allow them to focus less on the functionality of their data processing and more on their mission of producing top-tier athletes.