**TY. B. Tech.**

**CS 303: Software Engineering Laboratory**

**Sports Academy**

!!br0ken!!***Version 1.0***



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB, PHP** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/Front End** |

**Approved By: Mahesh R. Dube**

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**TY. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 1

**Sports Academy**

**Project Statement of Work**

***14-08-2017***

!!br0ken!!***Version 1.0***



|  |  |  |  |
| --- | --- | --- | --- |
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**Academic Year: 2017-18 Semester: I**

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# TITLE

**Sports Academy** is an academy for sports enthusiasts where they can enjoy playing the sports they like and can get guidance as required.

* 1. This system will help amateurs to learn new sport skills as well as help regular sports players to practice and master their skills.
  2. Today’s youth tend to sit at home on their mobiles and television screens, and on the other hand interested individuals ,who want to play lack a good sports ground or field. This system will help them find a place to come together, play, interact as well as to become active and fit.

# BACKGROUND

Sports are a crucial part of a student’s growth and development. They help in the development of mental health and physical fitness of the body. Through participation in sports and games, an individual gains various skills, experience and confidence that are helpful for developing their personality.

* 1. Sports is all about teamwork. Sports Academies encourage team sports such as football, cricket, basketball etc. which gives an individual a sense of identity and belonging to a group. Such sports encourage children to showcase their talent and communicate with their team members.
  2. Students, working individuals , sports professionals and many others can make use of this academy. Apart from few sports, there is no age limit to who can join. Most services at the academy will be open to all while there may be a few premium features which can be accessed only upon paying for those services.
  3. The system will have its own website for various member services. The product will use web engineering process to project the output.
  4. The need for this system has increased recently. Sports enthusiasts are finding it harder and harder to find a place to meet and play or train.
  5. The Sports Academy should be located at an ideal place so that most members can access it with ease, without having to travel a lot.

# OBJECTIVE

The objective of this proposal is to provide a fun and healthy environment for sports enthusiasts to train and play with their fellow peers, and to learn teamwork, discipline and sportsmanship.

* 1. As a part of this proposal, we hope to achieve development of an individual, physically as well as mentally.
  2. The system shall be open to all interested sportsmen, regardless of their age or expertise in that sport.
  3. The academy aims to motivate and prepare individuals to overcome failures in the field of sports as well as in life.
  4. In the process of building this system, no external contractors will be involved.

# DEFINITIONS AND APPLICABLE DOCUMENTS

**Coach:**

Coaches are responsible for planning, organising and delivering an appropriate range of sports activities and programmes for individuals and teams.Typical responsibilities include teaching relevant skills, tactics and techniques required for that sport. They also help in monitoring and enhancing performance by providing tuition, encouragement and constructive feedback to the players. Coaches are great at identifying strengths and weaknesses of a player.

**Sports Committee:**

The sports committee will take care of various sports related decision. Their main purpose is to ensure that all sports, and its equipment is at par with international standards. They conduct regular meetings to see the same.

**Fitness Committee:**

This committee will ensure that the fitness of the players which are training at the academy are upto the mark and they are being given a proper diet. They will also have weekly sessions in which they will give personal attention to each of the member’s fitness.

**Staff management:**

Due to many staff at the academy, staff management is used to help organise jobs to all people working there, to ensure everyone works efficiently and are satisfied. The main purpose is to keep the staff motivated and to work as a team.

**Player Profile:**

A player profile is a document of all the player details. The details include personal as well as their sports profile. Players and coaches will have access to it in order to see the development of respected individual during their time at the academy and they can even modify the contact details in case the previous ones are lost.

# BUSINESS AND TECHNICAL ENVIRONMENT

The System requires the following Business and Technical Environment to successfully commence in the stipulated time and resources.

* 1. The hours of operation will be independent as that of the organisation with weekly feedback given during the reporting time.
     1. The team will work Monday to Friday, 2.5 hours per day.
* This time will be utilised to work on completing the project documentation which will take up a major role in the initial weeks of the project.
* Later weeks will have more time invested in project planning and implementation with the documents having a lighter format.
* Time will be evenly utilised for Documentation, Planning , Execution, Testing & Debugging.
  + 1. Further work can be completed on weekends depending on the team/member’s convenience.
  1. The system will be delivered in two formats either as a web engineered product or as a downloadable computer system. In each case the system should not utilise a very high specification which will make the system difficult to run on certain systems.
     1. Internet connection will be required for the smooth functioning of the system. (in case of web system)
     2. RAM greater than 8GB (Minimum Requirement)
     3. Libraries with open source licenses will be used.

# 

# 

# 

# DESCRIPTION AND SCOPE OF WORK

The work that is to be done under **‘Sports Academy’** involves multiple steps:

1. Acquiring statistical data about players from public data sources.
2. To purchase proper equipment for the sports which are being provided by the academy.
3. To educate the coaches with latest sports rules, techniques and tactics.
4. Feature engineering so as to create useful features from the data.
5. Developing a web-based front-end so as to ease the usage.

**‘Sports Academy’** will be made to only provide fair and healthy training to all interested sportsmen. It will not discriminate any student based on their weaknesses. It will provide a good environment for talented players to showcase and master their skills. It will not consider any personal relations of the player with the clubs and also will not consider other abstract notions about the player and internal club issues. The academy will make sure that all it’s players are fit and will provide diet plans to them.

The organisation reserves the right to amend the Scope of Work as the situation permits depending on the feasibility and limitations of the scope.

# DELIVERABLES

The system is in the initial stage of development and some of the deliverables may vary as the system continues to develop into a product. Amongst the contract deliverables are the core concepts of the project which will not change in any case. The system will stay true to its vision and the only changes may be seen are the ones in the User Interface.

These are some of the deliverables that team can outlie at this stage of development. Each stage has its own challenges and will be given apt importance by the contractor.

|  |  |
| --- | --- |
| No. | Details |
| 1 | Statement of Work |
| 2 | Feature Set |
| 3 | SRS Document |
| 4 | Feasibility Study and Project Plan using AGILE |
| 5 | Sprint level planning activity |
| 6 | Sprint Plan and Sprint Design |
| 7 | Software Configuration Management Plan (SCMP) |
| 8 | Sprint Execution |
| 9 | Sprint Review and Sign- offs |

# APPROACH AND METHODOLOGY

* 1. Preparing proper documentation and getting the views of the team and organisation by creating proper SOW, Feature Set Document and SRS Document.
  2. A Feasibility Study will be performed depending on the features discussed between the team and organisation and a Project Plan will be drawn up.
  3. The Project will follow the Agile model and all the necessary steps will be taken as per industry standards.
  4. A Sprint Execution will be carried out in phases to finish the project in the stipulated time, this will be done with the help of a Sprint Design and Plan.
  5. A Software Configuration Management Plan (SCMP) will be presented to ensure consistency of the product's performance, functional, and physical attributes with its requirements, design, and operational information throughout its life.
  6. At the end of each sprint, the team will have produced a coded, tested and usable piece of software.
  7. The System will be reviewed by the concerned organisation and all the issues will be presented to the team.
  8. Upon resolution of these issues a final and formal sign-off will be suggested.

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 2

**Sports Academy**

**Project Feature Set Description**

***29-08-2017***

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|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
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**Academic Year: 2017-18 Semester: I**

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# PROJECT VISION

To provide the best training from experienced coaches, and to instil the value of sportsmanship in an athlete.

# PROJECT MISSION

The Mission Statement summarises the aim of this project and what it is trying to achieve. This is our Project Mission:

1. The Sports academy is an institute mainly to Identify, Nurture and promote players using the best possible resources and platform.
2. We truly aim to touch skies in our respective sports and work towards constructing an environment which not only initiates a player's passion but also motivates him/her to nurture their sports abilities.
3. To help players to participate in tournaments, becoming their second nature when they are trained under latest techniques which utilize top of the line infrastructure constructed with a whopping investment. An arena which is world class, well maintained and paves the way for rigorous training.

# PROJECT SCOPE

**‘Sports Academy’** aims to provide excellent opportunities for sports enthusiasts and also promote a healthy lifestyle among people by organizing sports events. It will provide a challenging environment to develop players’ mental and physical abilities. The system will provide various sports activities which uplift youth participation in sports and in turn helps them to build a positive attitude. Money to buy equipment and raw materials to create it are sometimes scarce. There also may not be appropriate playing surfaces, funding to support coaches and local knowledge on sport science and other relevant subjects.

These are our project goals as defined by the team:

1. Developing sports careers.
2. Teaching students importance of sports.
3. Providing ideal sports nutritional diet
4. Showing players importance of sportsmanship.
5. Forming a sports community.
6. Individual player development in all aspects of life .

# GOALS

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 1 | 1 | Developing sports careers |
| Target Audience | Youngsters |
| Driver | To develop careers |
| Description | Build player careers from scratch |
| Response | The goal is to train youngsters and coach them to improve their sports skills. |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 1 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Coaching youngsters in sports | To help players compete at higher levels | Sports enthusiasts | State and National level sports competitions | Skilled Trainers and equipment |

|  |  |  |
| --- | --- | --- |
| Goal 1 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| Player careers statistics will improve | Career statistics of sportsmen | Players are trained till they master the sport |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 1 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| This is the most major or building block for the whole system | Expert coaches train even the weakest of players | To some extent, if the players are weak | It is motivating because it is a main part of a system |

|  |  |  |
| --- | --- | --- |
| Goal 1 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| This forms the crucial part of the system and hence solves a problem that the organization faces | By using the sprint execution method, we can achieve this goal. | In terms of sports equipments, team needs to acquire more resources. |

|  |  |  |
| --- | --- | --- |
| Goal 1 Description: | | |
| TIME BOUND TEST | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| Players are trained till they master the sport | Focus of this goal is to train the players till they master the sport | It is the most important part of the system. |

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 2 | 2 | Teaching students importance of sports |
| Target Audience | Students |
| Driver | To impart sports knowledge |
| Description | Explaining the students about advantages of playing sports |
| Response | To spread awareness of sports |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 2 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Explaining importance of sports | To make the students better sportsman | Sports players | At the sports academy | Detailed knowledge about sports rules and regulations |

|  |  |  |
| --- | --- | --- |
| Goal 2 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| Students can play sports fairly with sportsman spirit | It can be measured on basis of how much players appreciate sports | Till players truly appreciate sports |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 2 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| This goal is the answer of how we will distinguish students of our academy from others | It’s realistic and achievable | No, it is basic component of enjoying sports | It is motivating as one wants to achieve highest rank in particular sport |

|  |  |  |
| --- | --- | --- |
| Goal 2 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| This forms the crucial part of the system and hence helps attain a problem that the organization faces | By using the sprint execution method, we can achieve this goal. | The resources we need should be sufficient to achieve goal. |

|  |  |  |
| --- | --- | --- |
| Goal 2 Description: | | |
| TIME BOUND TEST | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| Till players truly appreciate sports | Focus of this goal to tell students importance of playing sports in life | It’s really important for players to enjoy the sports, to master it |

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 3 | 3 | Providing ideal sports nutritional diet |
| Target Audience | Academy members |
| Driver | Providing players with right diet plans |
| Description | Nutrition is an important part of any sportsmen |
| Response | Keeping players fit and healthy |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 3 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Planning diets for players | Maintaining player fitness and health | Academy players and staff | At sports academy | Health and nutrition statistics of players as well as a nutritionist |

|  |  |  |
| --- | --- | --- |
| Goal 3 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| Player fitness improves over time | Based on their fitness test results | Players becoming fit and healthy . |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 3 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| This will be one of the main goals to be achieved in this system. | Statistics can be very useful in such scenarios so it is not too far-fetched. | To some extent, but it is not too far-fetched as health of players increase over time. | It is motivating because it is a main part of a system that aims to solve a important problem. |

|  |  |  |
| --- | --- | --- |
| Goal 3 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| This forms the crucial part of the system and hence helps attain a problem that the organization faces | By using the sprint execution method, we can achieve this goal. | The resources required include hiring a nutritionist and conducting health check ups of members |

|  |  |  |
| --- | --- | --- |
| Goal 3 Description: | | |
| TIME BOUND Test | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| goal achieved depends on individual player fitness | The focus of this goal is clear: to provide healthy diets to ensure player fitness. | In the initial stages, it would be less important as primary goals need to be cleared first, after that it would have medium to high priority. |

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 4 | 4 | Showing players importance of sportsmanship. |
| Target Audience | Academy players |
| Driver | To teach players good sports values. |
| Description | Teaching players importance of teamwork and fair play |
| Response | Training players to play with integrity and to lose gracefully. |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 4 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Teaching sportsmanship to players | Good sportsmanship encompasses many aspects of a man’s character, the most fundamental being respect | Every player of the academy | During sports matches . | Experienced sports coaches |

|  |  |  |
| --- | --- | --- |
| Goal 4 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| Depends on every individual player | It can be measured on the how well players accept defeat | This goal must be accomplished before competitive matches. |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 4 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| This will be one of the main goals to be achieved in this system. | Once the earlier goal is achieved, it is very realistic. | Depends on individual player attitude. | It is motivating because it is a main part of a system that aims to inculcate a valuable lesson. |

|  |  |  |
| --- | --- | --- |
| Goal 4 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| This forms the crucial part of the system that teaches players to lose gracefully. | By using the sprint execution method, we can achieve this goal. | The coaches and trainers need to be taught important life values |

|  |  |  |
| --- | --- | --- |
| Goal 4 Description: | | |
| TIME BOUND TEST | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| The goal will need to be achieved before player participates in professionals tournaments. | The focus of this goal is clear: Academy players learn to be humble and graceful | In the initial stages, it would be less important as input goals need to be cleared first, after that it would have medium to high priority. |

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 5 | 5 | Forming a sports community. |
| Target Audience | Local public |
| Driver | Sports activities play an important role in communities |
| Description | People both with and without disabilities are involved together in recreation, leisure and sports activities. |
| Response | To bring sportsmen together |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 5 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Bringing like minded sports players together | Promoting the development of sports communities | The local people in the region. | Nearby areas surrounding the academy | Skilled sports advisors and promoters |

|  |  |  |
| --- | --- | --- |
| Goal 5 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| With time the sports community spreads | The size of the community increases gradually | The goal completion will go hand in hand with the project completion. |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 5 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| The goal is achievable because many people are interested in sports | Yes, because it is based on common interests of the public. | Spreading awareness of sports is no bother. | Yes, the academy get different opinions and views |

|  |  |  |
| --- | --- | --- |
| Goal 5 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| Yes, it is an important objective | There is no time limit. | Yes, as we only need good promoters |

|  |  |  |
| --- | --- | --- |
| Goal 5 Description: | | |
| TIME BOUND Test | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| The goal is achieved when a sufficiently large community is formed | The focus is clear: to form a large sports community. | Yes. It is on medium priority as the size of the community is important. |

|  |  |  |
| --- | --- | --- |
| Goal-ID | Priority | Factors Addressed |
| 6 | 6 | Individual player development in all aspects of life . |
| Target Audience | Academy players |
| Driver | Becoming better players as well as humans |
| Description | Imparting valuable life lessons in players |
| Response | Improving overall character of players |
| Open Issues | Discussion and Revision |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Goal 6 Description: | | | | |
| Specific Test | | | | |
| Is ‘What’ identifiable? | Is the ‘Why’ clear? | Can ‘Who’ be identified? | ‘Where’ will it be performed? | ‘Which’ resources are needed? |
| Teaching important life lessons | Discipline is an important aspect of life | All players at the academy. | Sports academy | The player profiles collected in the input stage. |

|  |  |  |
| --- | --- | --- |
| Goal 6 Description: | | |
| Measurable Test | | |
| Is the end result quantifiable? | ‘Figure’ of Measurement | Has the goal a clear end date/point? |
| The end result will be fixed values and it will directly impact the success of the project. | The player value be estimated taking into consideration all the statistics. | The goal has a clear end point but the process will have to be constantly monitored and updated. |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal 6 Description: | | | |
| ATTAINABLE Test | | | |
| What is your reaction to goal? | Does it feel realistic? | Is it overwhelming? | Do you find it motivating? |
| It is very much achievable as the statistics are available. | Yes, because it is based on the performance and statistics of the player. | The task plays an important role in the success of the project aim. | Yes, as teams need to know about the player’s attitude and behaviour. |

|  |  |  |
| --- | --- | --- |
| Goal 6 Description: | | |
| RELEVANT Test | | |
| Does it fit into the overall team / organization objective? | Taking overall fit is the timing appropriate? | Do you have sufficient resources / budget to succeed? |
| Yes, as individual player attitude is important | There is no specific time limit. | Yes , as we only need player behaviour statistics. |

|  |  |  |
| --- | --- | --- |
| Goal 6 Description: | | |
| TIME BOUND Test | | |
| Does it have a clear end date/point? | Is the focus clear so you can create an action plan? | Is its position on an Urgency/Importance grid clear? |
| The goal achieved is subjective to every player | The focus is clear: Imparting clear and prized life lessons to players | Yes. It is high on priority because it is necessary for the players to improve themselves. |

# FEATURE SET

These are the features that make academy unique.

|  |  |
| --- | --- |
| Feature-ID | Feature Description |
| 1 | **Fair training is provided to player in order to improve their talent and worth.** |
| 2 | **Adequate diet plan to maintain physical fitness** |
| 3 | **Exposure to professional tournaments** |
| 4 | **Front-end that enables quick and useful operation** |
| 5 | **Portability since the proposed front end can be accessed on any platform.** |
| 6 | **Weekly progress statistics** |

# STAKEHOLDERS

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Concerns | Quadrant | Strategy/ Benefits |
| Sponsors | Should get timely benefits and returns | Minimal Effort | Communicate project specifications as required and can make key decisions in future |
| Coaches and Staff | Resource and scheduling of the training of sports | Key Player | Solicit stakeholder as member of steering committee and obtain feedback on project planning. Frequent communication and addressing concerns are imperative |
| Resource Management  Team | Ensuring on proper management of resources | Minimal Effort | All of the available resources should be used efficiently. |
| Academy Players | Guidance and training must meet or exceed expectations | Key Player | Becoming better sportsmen and individual through the feedback provided by the academy.Provide frequent status reports and updates. |
| Design and Marketing teams | Concerns regarding resources to assist project team with product design | Keep Satisfied | Communicate applicable resource requirements early and ensure resources are released back to engineering when they’re no longer required |
| Suppliers | Requires list of equipment needed for all of the sports provided by the academy | Keep Informed | Allow technical staff to work with stakeholder to answer questions and address concerns. |

# ACCEPTANCE CRITERIA

1. Since the model will be trained on a large data set of players, it will be able to generalise and predict values properly. The values predicted can be cross validated by querying for a player that has been followed by the club and its scouts and whose worth is known.
2. The Project Manager has set these tasks for achieving successful delivery of the project:
   1. As discussed earlier the objectives of the project have been discussed with the customer and these will be satisfied when delivering the project.
   2. The team’s project manager will review the project before its handing over also an external group will be assigned to check that the team has stayed true to its promises.
   3. Any changes that the customer wishes after the product completion will be addressed in 1-2 weeks of the initial written application by the customer.
   4. The following is a deliverables acceptance document.

|  |  |  |
| --- | --- | --- |
| Item | Concerns | Accepted / Rejected |
| Vision Definition | **Complexity** | **Accepted** |
| Mission Definition | **Relation with Deliverables** | **Accepted** |
| Goals | **Description and structure** | **Accepted** |
| Feature Definitions | **Readability for non-technical stakeholders** | **Accepted** |
| Deliverables definition | **Consistency** | **Accepted** |

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 3

**Sports Academy**

**System Requirement Specification**

**12-09-2017**

**Version 1.0**



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB, PHP** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **php/Front End** |

**Approved By: Dr. M. R. Dube**

**Academic Year: 2017-18 Semester: I**

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# 1. INTRODUCTION

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete **Sports Academy** software system by defining the problem statement in detail. Nevertheless, it also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features.

|  |  |
| --- | --- |
| Item | Description |
| Purpose | **To jot down the System Requirement Specifications of the Sports Academy. The purpose of the SRS to give a complete technical background of our system and its likely implementation.** |
| Audiences | **Developers, Clients and other concerned audiences.** |
| SRS Scope | **This SRS is also aimed at specifying requirements of software to be developed but it can also be applied to assist in the selection of in-house and commercial software products. The standard can be used to create software requirements specifications directly or can be used as a model for defining a organization or project specific standard. It does not identify any specific method, nomenclature or tool for preparing an SRS.** |
| Project Scope | **‘Sports Academy’ will be made to only provide fair and healthy training to all interested sportsmen. It will not discriminate any student based on their weaknesses. It will provide a good environment for talented players to showcase and master their skills. It will not consider any personal relations of the player with the clubs and also will not consider other abstract notions about the player and internal club issues. The academy will make sure that all it’s players are fit and will provide diet plans to them.** |

**References:**

1. Statement of Work
2. Feature Set
3. Standard Sports Academy Model

# TERMS OF REFERENCE

1. **Background**
   1. The sports industry is an ever expanding field.
   2. With increasing urban development, players have no place to train or play
   3. In such cases worthy sportsmen lack behind in their skill set and eventually fail to perform
   4. Even when players have a place to train, they lack the proper coaches and practice
   5. The sports academy aims to solve all these issues by bringing players to the right coaches and field
2. **Objectives**
   1. The Objective of the project is to train and help all sports enthusiasts in the region.
   2. Stage-wise objectives.

* Collecting Player Data
* Analysing Player Data
* Finding a pattern and plotting values for Player’s diets and sports plans
* Assigning players to their respective coaches and timings
* Providing regular life value and sportsmanship lessons to players
* Sending skilled players to professional tournaments
  1. Target Audience is
* Sports enthusiasts
* All interested people in the region
* Sports associations
  1. Resources required would be clearer along the course of the implementation but the basic necessities include player data, sports equipment and trained coaches.

1. **Issues**
   1. Efficiency – Efficiency of the training provided by coaches.
   2. Relevance – Proving relevant diets and training to payers.
   3. Effectiveness – Exact outputs of the project and realization of benefits.
   4. Impact – the market is ever growing and the product’s use will never cease to exist.
   5. Sustainability – The project if successful will have wide ranging benefits and will become self-sustainable soon after its initiation.
2. **Methodology**
   1. Data Acquisition, Filtering, Data Mining, Data Analysis, Data Sorting & Classification
   2. Stakeholder involvement at initial and final stages will ensure smooth implementation
   3. The planning and designing phase and implementation phase will each take about 1 month.
   4. The information collection tools to be used throughout the project for monitoring purposes are Media Reports and similar online resources
   5. Data analysis rules

1. **Expertise**

The expertise needed for doing a project defines a set of professional requirements for the individuals and teams involved in project implementation. It will be the basis for team building, including training and skill assessment.

The Expertise section of a Project Terms of Reference template should identify the following:

* 1. The type of work involved in the project is Data Analysis and Machine Learning along with UI development.
  2. The type of skills and abilities required to do project work are Machine Learning in Python, Data Processing, DBMS, UI development, etc.
  3. 4 students from T.Y, B. Tech will be involved in the development of the project.
  4. The period of engagement of each team member is about the same, roughly 3 months.
  5. A description of the duties and responsibility per teammate has been provided in earlier documents and will be further described in the succeeding documentation.
  6. The relationship between the team members, including leadership roles are specified in the following table.

|  |  |
| --- | --- |
| Name | Roles |
| Ajinkya Deshpande | Leader |
| Sagar Telangi | DB, php |
| Chinmay Patil | Python |
| Gourav Tagotra | PHP/Front End |

1. **Reporting**

Reports provide valued information about project performance over a certain period. Reporting is a process that starts once a project is launched and continues until the project is completed and its product is handed over. Reporting requirements will define how to write and submit project reports and what information to include. The Reporting Requirements section of a Terms of Reference template should clearly specify the requirements for the reporting process, and might include the details of:

* 1. Table of contents for project reports/ Rules for composing annexes
  2. Report templates/ The language to be used in reports
  3. Computer software programmes to be used/ Submission dates
  4. People responsible for reporting and approving

1. **Work Plan**

A work plan is a kind of strategy that aims to help solve problems throughout a project and boost employee drive and focus. It determines what actions need to be taken to start, implement, and complete the project within a specified time period and under defined budget. It is often used as a general guide for developing a project implementation plan. The Work Plan section of a Project Terms of Reference template should set out the activities and necessary resources required for achieving the project’s results and purpose. It should therefore include a summary of the anticipated work and time schedule, which are based upon the following:

* 1. An analysis of the issues, in terms of the evaluation criteria
  2. The proposed implementation methodology/ The reporting requirements
  3. It will be further covered in the Project Plan document.

# 3. PROBLEM DESCRIPTION

|  |  |
| --- | --- |
| The problem of | Keeping up with the pace of technological advancements |
| Affects | Academy, Coaches, Players |
| The impact of which is | * The current scenario is that players are heavily dependent on the equipments for training, so academy have to borrow money or get funding from sponsors to keep up with the advancement. * However, this isn’t sustainable, since not all sports require cutting-edge equipments to succeed and increased borrowing causes financial instability. * This causes for more physical as well as mental training to remain fit and active. |
| A successful solution would | * A successful solution will give an idea about training on only essential equipments and not give any financial stress. * As a result, physical fitness is of paramount importance and hence, nutritional diets play decisive role |

|  |  |
| --- | --- |
| For | Sports Academy |
| Who | Needs it for playing a sport or needs professional training |
| The ‘Sports Academy’ | is an academy for sports enthusiasts to train |
| That | helps player to develop skills, sportsmanship and help them to be a better players |
| Unlike | any other sport academy |
| Our product | Won’t have biases and will not have prejudices. |

# FUNCTIONAL HIERARCHY

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 1 | Developing sports careers | Description |
| Objective ID | 1 | Analyse player | |
| Process ID: 1 | Acquire Player Statistics |
| Process ID: 2 | Analyse Data |
| Objective ID | 2 | Train Player |  |
| Process ID: 1 | Coach Player |
| Process ID: 2 | Ensure increase in player career performance |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 2 | Teaching students importance of sports | Description |
| Objective ID | 1 | Train Coaches | |
| Process ID: 1 | Acquire valuable life lessons |
| Process ID: 2 | Teach coaches and trainers |
| Objective ID | 2 | Teach students |  |
| Process ID: 1 | Organise Life lesson courses |
| Process ID: 2 | Teach students importance of sports |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 3 | Providing ideal sports nutritional diet | Description |
| Objective ID | 1 | Pre-process Player Data | |
| Process ID: 1 | Associate Player Health Profiles |
| Process ID: 2 | Generate Player Diets |
| Objective ID | 2 | Recommend Diets | |
| Process ID: 1 | Arrange diet sessions |
| Process ID: 2 | Hand out diets |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 4 | Showing players importance of sportsmanship. | Description |
| Objective ID | 1 | Study player behaviour | |
| Process ID: 1 | Organise matches among students |
| Process ID: 2 | Pay attention to player attitude |
| Objective ID | 2 | Teach players | |
| Process ID: 1 | Organise personal sessions |
| Process ID: 2 | Educate players on sportsmanship |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 5 | Forming a sports community. | Description |
| Objective ID | 1 | Perform analysis of region | |
| Process ID: 1 | Find Regional sports Statistics |
| Process ID: 2 | Communicate Relevant Statistics |
| Objective ID | 2 | Increase community | |
| Process ID: 1 | Use promoters to spread awareness of sports |
| Process ID: 2 | Expand sports community with more admissions |

|  |  |  |  |
| --- | --- | --- | --- |
| Goal-ID | 6 | Individual player development in all aspects of life . | Description |
| Objective ID | 1 | Generate Player Data | |
| Process ID: 1 | Observe player attitude |
| Process ID: 2 | Create player profiles |
| Objective ID | 2 | Educate Players | |
| Process ID: 1 | Carry out talk sessions wit players |
| Process ID: 2 | Teach Players to develop and excel in all aspects of life |

# USER INTERFACES

5.1 Abbreviated UI, it is the junction between a user and a computer program. An interface is a set of commands or menus through which a user communicates with a program. A command-driven interface is one in which you enter commands. A menu-driven interface is one in which you select command choices from various menus displayed on the screen.

The user interface is one of the most important parts of any program because it determines how easily you can make the program do what you want. A powerful program with a poorly designed user interface has little value. Graphical user interfaces (GUIs) that use windows, icons, and pop-up menus have become standard on personal computers.

GUI is a program interface that takes advantage of the computer's graphics capabilities to make the program easier to use. Well-designed graphical user interfaces can free the user from learning complex command languages. On the other hand, many users find that they work more effectively with a command-driven interface, especially if they already know the command language.

Graphical user interfaces, such as Microsoft Windows and the one used by the Apple Macintosh, feature the following basic components:

* Pointer: A symbol that appears on the display screen and that you move to select objects and commands. Usually, the pointer appears as a small angled arrow. Text -processing applications, however, use an I-beam pointer that is shaped like a capital I.
* Pointing device: A device, such as a mouse or trackball, that enables you to select objects on the display screen.
* Icons: Small pictures that represent commands, files, or windows. By moving the pointer to the icon and pressing a mouse button, you can execute a command or convert the icon into a window. You can also move the icons around the display screen as if they were real objects on your desk.
* Desktop: The area on the display screen where icons are grouped is often referred to as the desktop because the icons are intended to represent real objects on a real desktop.
* Windows: You can divide the screen into different areas. In each window, you can run a different program or display a different file. You can move windows around the display screen, and change their shape and size at will.
* Menus: Most graphical user interfaces let you execute commands by selecting a choice from a menu.

In addition to their visual components, graphical user interfaces also make it easier to move data from one application to another. A true GUI includes standard formats for representing text and graphics. Because the formats are well-defined, different programs that run under a common GUI can share data. This makes it possible, for example, to copy a graph created by a spreadsheet program into a document created by a word processor.

5.2 Characteristics of Successful User Interfaces

* **Clear**: Clarity is the most important element of user interface design. Indeed, the whole purpose of user interface design is to enable people to interact with your system by communicating meaning and function. If people can’t figure out how your application works or where to go on your website they’ll get confused and frustrated.
* **Concise**: Clarity in a user interface is great, however, you should be careful not to fall into the trap of over-clarifying. It is easy to add definitions and explanations, but every time you do that you add mass. Your interface grows. Add too many explanations and your users will have to spend too much time reading through them. Keep things clear but also keep things concise. When you can explain a feature in one sentence instead of three, do it.
* When you can label an item with one word instead of two, do it. Save the valuable time of your users by keeping things concise. Keeping things clear and concise at the same time isn’t easy and takes time and effort to achieve, but the rewards are great.
* **Familiar**: Many designers strive to make their interfaces ‘intuitive’. But what does intuitive really mean? It means something that can be naturally and instinctively understood and comprehended. But how can you make something intuitive? You do it by making it ‘familiar’. Familiar is just that: something which appears like something else you’ve encountered before. When you’re familiar with something, you know how it behaves – you know what to expect. Identify things that are familiar to your users and integrate them into your user interface.
* **Responsive**: Responsive means a couple of things. First of all, responsive means fast. The interface, if not the software behind it, should work fast. Waiting for things to load and using slaggy and slow interfaces is frustrating. Seeing things load quickly, or at the very least, an interface that loads quickly (even if the content is yet to catch up) improves the user experience. Responsive also means the interface provides some form of feedback. The interface should talk back to the user to inform them about what’s happening. Have you pressed that button successfully? How would you know? The button should display a ‘pressed’ state to give that feedback.
* **Consistent**: Consistent interfaces allow users to develop usage patterns – they’ll learn what the different buttons, tabs, icons and other interface elements look like and will recognize them and realize what they do in different contexts. They’ll also learn how certain things work, and will be able to work out how to operate new features quicker, extrapolating from those previous experiences.
* **Attractive**: This one may be a little controversial but I believe a good interface should be attractive. Attractive in a sense that it makes the use of that interface enjoyable. Yes, you can make your UI simple, easy to use, efficient and responsive, and it will do its job well – but if you can go that extra step further and make it attractive, then you will make the experience of using that interface truly satisfying. When your software is pleasant to use, your customers or staff will not simply be using it – they’ll look forward to using it. There are of course many different types of software and websites, all produced for different markets and audiences. What looks ‘good’ for any one particular audience will vary. This means that you should fashion the look and feel of your interface for your audience. Also, aesthetics should be used in moderation and to reinforce function. Adding a level of polish to the interface is different to loading it with superfluous eye-candy.
* **Efficient**: A user interface is the vehicle that takes you places. Those places are the different functions of the software application or website. A good interface should allow you to perform those functions faster and with less effort. Now, ‘efficient’ sounds like a fairly vague attribute – if you combine all of the other things on this list, surely the interface will end up being efficient? Almost, but not quite. What you really need to do to make an interface efficient is to figure out what exactly the user is trying to achieve, and then let them do exactly that without any fuss. You have to identify how your application should ‘work’ – what functions does it need to have, what are the goals you’re trying to achieve? Implement an interface that lets people easily accomplish what they want instead of simply implementing access to a list of features.
* **Forgiving**: Nobody is perfect, and people are bound to make mistakes when using your software or website. How well you can handle those mistakes will be an important indicator of your software’s quality. Don’t punish the user – build a forgiving interface to remedy issues that come up. A forgiving interface is one that can save your users from costly mistakes.
* For example, if someone deletes an important piece of information, can they easily retrieve it or undo this action? When someone navigates to a broken or non-existent page on your website, what do they see? Are they greeted with a cryptic error or do they get a helpful list of alternative destinations?

|  |  |  |  |
| --- | --- | --- | --- |
| UI-ID | UI Name | Type | Scope |
| 1 | Collect Data | Input | Players are added to the database. |
| 2 | Examine Data | Input | Clarify the data, collecting only the useful information. |
| 3 | Acquire statistics | Input | System acquires statistics of the selected player. |
| 4 | Diet Plans | Command | User asks for diet in order to achieve a certain condition. |
| 5 | Display Features | Navigation | The features provided by the sport academy. |
| 6 | Append data | Command | Enter data which is left to insert to insert in database. |
| 7 | Estimate Sports | Command | The player will get a list of sports in which he is most likely to succeed. Feedback mechanism will be triggered after this. |
| 8 | Search Staff | Form | View of the database with search functionalities |
| 9 | Transmit Statistics | Form | Selecting a player and choosing file format in which user needs to transmit |
| 10 | Modify Player Details | Form | Update Player details such as contact details |
| 11 | Generate Statistical Graphs | Graphs | Visualizing player’s attributes for better understanding of condition of Player |
| 12 | View Player Stats | Command | Acquire existing academy player’s details to view the improvement status |
| 13 | Feed Data Model | Input | Filling players data through client’s machine |
| 14 | Transmit Value | Command | Calculating player’s value using data acquired by API or User |
| 15 | Display Recommended Diet | NL | Showing the result of the prediction model and setting the base price of the player |
| 16 | Value Feedback | NL | The form will gather feedback about the correctness of the value. |
| 17 | Feedback Analysis | Input | The Feedback will be analysed and analysed to improve the results of the system. |
| 18 | Navigation Bar | Navigation | It will appear on each page from where users can switch to any option. |
| 19 | Main Page | Menu | Users can navigate to different parts of the website using the main page. |

# HARDWARE INTERFACES

|  |  |
| --- | --- |
| Profile | Description (minimum requirements) |
| Processor | **Intel 5th Generation** |
| RAM | **8 GB RAM** |
| Server-Side Technology | * **Database storage space: 1 GB** * **Monitor of resolution 1024 x 768** |
| Client-Side Technology | * **Monitor of resolution 1024 x 768** * **Working Internet Connection and Port** |
| External Devices | * **Monitor** * **Mouse** * **Keyboard** |

# SOFTWARE INTERFACES

|  |  |
| --- | --- |
| Profile | Description |
| Front-end Capabilities | **Browser, HTML 5 support** |
| Back-end Capabilities | **PHP** |
| Programming Languages | **Python, PHP** |
| Operating Environment | **Any** |
| Software Platform | **Browser** |
| Database Servers | **MySQL** |
| Framework Resources | **NA** |
| API (If Any) | **NA** |
| Other Services/Resources | **NA** |
| Communication Interfaces | **Email** |

# LOGICAL DATABASES

|  |  |  |
| --- | --- | --- |
| Database Name | Parameter | Scope |
| Player Details | All the basic details of player registered with academy | Input Data |
| Player Stats | Player Statistics | Input Data |
| Sports Offered | All sports offered by the academy | Input Data |
| Diet Plans | Predicted Diet of Players | Calculated Data |
| Staff and Coaches | Names of working staff and coaches | Updatable Record |
| Equipments | All equipments available for each of the sports available | Updatable Record |

# NON-FUNCTIONAL REQUIREMENTS

* Reliability: Specify the factors required to establish the required reliability of the software system at time of delivery. If you have MTBF requirements, express them here. This doesn’t refer to just having a program that does not crash. This has a specific engineering meaning.
* Availability: Specify the factors required to guarantee a defined availability level for the entire system such as checkpoint, recovery, and restart. This is somewhat related to reliability. Some systems run only infrequently on-demand (like MS Word). Some systems have to run 24/7 (like an e-commerce web site). The required availability will greatly impact the design. What are the requirements for system recovery from a failure? “The system shall allow users to restart the application after failure with the loss of at most 12 characters of input”.
* Security: Specify the factors that would protect the software from accidental or malicious access, use, modification, destruction, or disclosure. Specific requirements in this area could include the need to:
  + Utilize certain cryptographic techniques
  + Keep specific log or history data sets
  + Assign certain functions to different modules
  + Restrict communications between some areas of the program
  + Check data integrity for critical variables
* Maintainability: Specify attributes of software that relate to the ease of maintenance of the software itself. There may be some requirement for certain modularity, interfaces, complexity, etc. Requirements should not be placed here just because they are thought to be good design practices. If someone else will maintain the system
* Portability: Specify attributes of software that relate to the ease of porting the software to other host machines and/or operating systems. This may include:
  + Percentage of components with host-dependent code
  + Percentage of code that is host dependent
  + Use of a proven portable language
  + Use of a particular compiler or language subset
  + Use of a particular operating system
* Correctness - extent to which program satisfies specifications, fulfills user’s mission objectives
* Efficiency - amount of computing resources and code required to perform function
* Flexibility - effort needed to modify operational program
* Interoperability - effort needed to couple one system with another
* Reliability - extent to which program performs with required precision
* Reusability - extent to which it can be reused in another application
* Testability - effort needed to test to ensure performs as intended
* Usability - effort required to learn, operate, prepare input, and interpret output

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **Characteristic** | **H/M/L** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| 1 | Correctness | H |  | 2 |  |  |  |  |  |  |  |  |  |  |
| 2 | Efficiency | L |  |  |  |  |  |  |  |  |  | 10 |  |  |
| 3 | Flexibility | L |  |  |  |  |  |  |  |  |  |  | 11 |  |
| 4 | Integrity/Security | H |  |  |  |  |  | 6 |  |  |  |  |  |  |
| 5 | Interoperability | M |  |  |  |  |  |  |  |  | 9 |  |  |  |
| 6 | Maintainability | H |  |  |  |  | 5 |  |  |  |  |  |  |  |
| 7 | Portability | M |  |  |  |  |  |  | 7 |  |  |  |  |  |
| 8 | Reliability | H | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 9 | Reusability | L |  |  |  |  |  |  |  |  |  |  |  | 12 |
| 10 | Testability | M |  |  |  |  |  |  |  | 8 |  |  |  |  |
| 11 | Usability | H |  |  | 3 |  |  |  |  |  |  |  |  |  |
| 12 | Availability | M |  |  |  | 4 |  |  |  |  |  |  |  |  |

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 4

**Sports Academy**

**Feasibility Study Report**

**19-09-2017**

**Version 1.0**



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB,php** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/Front End** |

**Approved By: Dr M. R. Dube**

**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

|  |  |
| --- | --- |
| Item | Description |
| Scope of Study | 1. Acquire all the required statistics of the player. 2. Provide a proper sports training for the player. 3. Give a good diet as per the requirement of the player. |
| Audiences | 1. Any sports club looking for the players. 2. Agents of professional players. 3. Sports Fans and Professional Trainers. 4. News & Media Companies |
| Project Type | Medium Scale |
| Platform Details | Existing Domain Platforms   1. Funngage - a curated platform for sports   Existing Technology Usage  Front End –   1. HTML 2. CSS 3. JS   Back End –   1. MySQL 2. PHP 3. Python |

# DESCRIPTION OF SERVICES

|  |  |  |  |
| --- | --- | --- | --- |
| Service -ID | Service Name | Audience | Scope |
| S-1 | Collect Player Data | Stakeholder | Detailed information about player. |
| S-2 | Illustrate Statistics | User | Graphical representation of player’s statistics. |
| S-3 | Display Sports Available | End User | The User will be able to see all sports available for the given player. |
| S-4 | Coaches and Staff | User | All coaches and staff can be searched in the database to find information about them. |
| S-5 | Diet Plan | End User | The players can get complete information about the diet in order to maintain fitness. |
| S-6 | Examine Feedback | End User | The feedback about the system will be considered and processed. |

# TECHNOLOGY CONSIDERATIONS

|  |  |  |
| --- | --- | --- |
| Current Technology | | |
| Type | **Parameter** | **Description** |
| Hardware | CPU | Intel Core i5-6200U, 2.3 Ghz Clock Speed |
| RAM | 8GB |
| GPU | GeForce GTX 1060 (For tensor Flow) |
| Software | IDE’s | Visual Studio Code, Jupyter, PHPmyadmin, Notepad++ |
| Local Server | XAMPP (PHP) |
| Browser | Mozilla or Chrome |

|  |  |  |
| --- | --- | --- |
| Deployment Technology | | |
| Type | **Parameter** | **Description** |
| Software | Browser | Mozilla or Chrome |
| Support | HTML5, CSS, BOOTSTRAP, JavaScript, jQuery |
| Hardware | Device | Desktop, Laptop, Tablet, Mobile |
| Screen | Screen with minimum 1024×576 resolution |

# FEASIBILITY STUDY RESULTS

|  |  |  |  |
| --- | --- | --- | --- |
| Option | Outcome | Ranking | Discussion |
| Collect Player Statistics | Expected | H | The player statistics are available and are successfully retrieved and sent for processing. |
| Unexpected | L | Player statistics aren’t available. This is unlikely since data about most players is available |
| Illustrate Statistical  Graphs | Expected | M | The statistics will be represented with appropriate graphs to make it attractive for the user. |
| Unexpected | L | The statistics will be too inconsistent to be illustrated with the help of graphs. |
| Display Sports Available | Expected | H | The sports mapped for the player will be displayed correctly. |
| Unexpected | L | Sports displayed will be displayed incorrectly because of   1. Database issue 2. Prediction issue |
| Coaches and Staff | Expected | H | Staff available are specific to the sports provided by the academy. Coaches have skills required to train the players. |
| Unexpected | L | If any staff of the academy is unable to stand-up to the expectations, then appropriate measures will be taken. |
| Diet Plan | Expected | M | Required diet for the player is available and displayed correctly**.** |
| Unexpected | L | Player diet unavailable and displaying is not possible. |
| Process feedback | Expected | M | Feedback is positive. The value generated are precise and consistent. |
| Unexpected | M | Feedback is negative. In such case model is retrained with correct parameters that generate positive feedback. |

# 

# REFERENCES

1. Statement of Work
2. Feature Set
3. System Requirement Specifications
4. Funngage- a curated platform for sports
5. jhs.ac.in
6. targetjobs.co

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 5

**Sports Academy**

**Project Plan Outline**

**25-09-2017**

**Version 1.1**



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB, PHP** |
| 69 | **161122** | **Chinmay Patil** | **python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/ Front End** |

**Approved By: Dr M. R. Dube**

**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

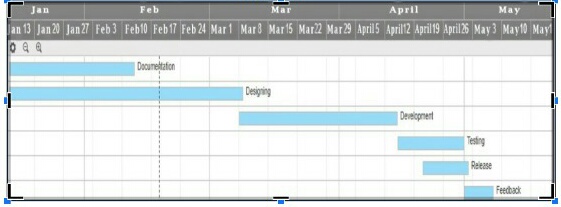
|  |  |
| --- | --- |
| Deliverables | Benefits |
| 1. SOW | Gives an idea of what the system is. |
| 2. Feature Set | Provides the set of features the system will provide. |
| 3. SRS | Specifies the requirements for the system. |
| 4. Feasibility Study | Gives an account of how feasible it is to use the system. |
| 5. Project Plan | Will provide information on how the project will be executed. |
| 6. Sprint Level Planning Activity | Planning will help in easy execution of the system. |
| 7. Sprint Level Design Activity | Preparing the design will make the implementation faster because a blueprint will be available. |
| 8. Software Configuration Management Plan | It will make the execution of the software much easier as there is a plan in place. |
| 9. Sprint Execution | The system will be available to use as early as possible. |
| 10. Sprint Review | Fast review of the system so that so that errors can be removed as early as possible. |

# PROJECT MILESTONES

|  |  |  |
| --- | --- | --- |
| Milestones | Phase | Description |
| 1 | Inception | Delivering Statement of Work document |
| 2 | Inception | Delivering Feature Set document |
| 3 | Elaboration | Feasibility study and Project Plan using AGILE |
| 4 | Elaboration | Sprint level planning activity |
| 5 | Construction | Sprint Plan and Sprint Design |
| 6 | Construction | Software Configuration Management Plan (SCMP) and Sprint Execution |
| 7 | Transition | Sprint Review and Sign- offs |
| 8 | Transition | Feedback |

# WORK BREAKDOWN STRUCTURE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WBS ID | WBS Package | Role | Description | Delivery Date |
| 1 | Documentation | Inception | Creation of SOW, FRS, SRS | 10 Feb 2019 |
| 2 | Designing | Elaboration | Making Prototypes | 01 Mar 2019 |
| 3 | Development | Construction | Development of Real System using appropriate languages | 12 Apr 2019 |
| 4 | Testing | Construction | Testing of System for Defects and checking for correctness | 26 Apr 2019 |
| 5 | Product Release | Transition | Marketing, Managing of the System in live environment | 30 Apr 2019 |
| 6 | Feedback | Transition | Taking user experience as feedback and modifying System | 3 May 2019 |

**GANTT CHART**

# PROJECT COMMUNICATION

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Communication Type | Description | Frequency | Format | Participants/ Distribution | Deliverable | Owner |
| Weekly Status Report | Email summary of project status | Weekly | In Person | Project Guide,  Project Team | Status Report | Project Manager |
| Weekly Project Team Meeting | Meeting to review action register and status | Weekly | In Person | Project Team | Updated Action Register | Project Manager |
| Project Monthly Review (PMR) | Present metrics and status to team and sponsor | As Needed | In Person | Project Guide, Team, and Stakeholders | Status and Metric Presentation | Project Manager |
| Project Gate Reviews | Present closeout of project phases and kick-off next phase | As Needed | In Person | Project Sponsor, Team and Stakeholders | Phase completion report and phase kick-off | Project Manager |
| Technical Design Review | Review of any technical designs or work associated with the project | As Needed | In Person | Project Team | Technical Design Package | Project Manager |

# ACTIVITY REGISTER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity Number** | **Activity Name** | **Activity description** | **Responsibility** | **Comments** |
| 1 | Prepare  Documentation | * Create Project Initiation Documents | * Ajinkya Deshpande is responsible for coordinating with the team. | * Meet Deadlines |
| * Documents: SOW, Feature Set and SRS | * WBS Package 1 |
| 2 | Conceptualise Design | * Evaluate Feasibility | * Ajinkya Deshpande is responsible for execution of project planning phase. | * Quick Execution Required |
| * Develop Project Plan | * WBS Package 2 |
| 3 | Collect Data | * Acquire Data from Sources on the Internet | * Chinmay Patil is responsible for acquiring correct data | * WBS Package 2 |
| * Important phase for smoot development |
| 4 | Developing System | * Develop Machine Learning Model | * Sagar Telangi is responsible for delegating everyone with instructions for development. | * Development in Sprints |
| * Implement Model to Predict Values | * WBS Package 3 |
| 5 | Design UI | * Create User Interface | * Gourav Tagotra will oversee the UI creation activity. | * WBS package3 |
| * Design UI to appropriately display the statistics | * The phase execution will have to run parallelly with development stage |
| 6 | Checking for bugs | * Unit and System Testing | * Chinmay Patil will be in charge of creating test cases and checking for bugs. | * Preparing Test Cases * WBS Package 4 |
| * Debugging |
| 7 | Releasing Product | * Advertising System | * Sagar Telangi will be responsible for the marketing of the product. * Gourav Tagotra will also share the responsibility. | * Good Marketing Strategies * WBS Package 4 |
| * Finding Clients |
| 8 | Feedback of System | * Taking reviews from customers * Implementing new features | * Ajinkya Deshpande will oversee the feedback and update activities. | * Understanding what changes are needed * WBS Package 6 |

# TASKS PRIORITIZATION

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Task is of high importance, with high urgency factor.***  *Must be done today & to high standard.*  *Action ASAP* |  | ***High Importance*** | ***Low Importance*** | ***Task is of low importance, with high urgency factor.***  *These tasks need to be completed on time.*  *ONLY spend sufficient time on them as not important.*  *Don’t be diverted* |
| ***High Urgency*** | 1. **Collect Player Statistics** 2. **Initiation Documentation** 3. **Create algorithm to predict sports suitable** 4. **Create Project Repository** | 1. **Build Player Profiles** 2. **Finding Sports APIs** 3. **Study Similar Projects** 4. **Study Legality Issues** |
| ***Task is of high importance, but has low urgency factor.***  *By nature long-term so need to:*   1. *Set target if none exists.* 2. *Break-up into chunks of work* | ***Low Urgency*** | 1. **Create UI** 2. **Determine System’s Accuracy** 3. **Classify Players** 4. **Display Diet Plans** 5. **Version Control Mechanism** | 1. **Integrate Feedback** 2. **Create Graphs for Acquired Data** | ***Task is both low in importance & urgency.***  *Discard as many of these tasks as possible because they cause great harm to your productivity.*  *Delegate if they develop another’s KSA’s.* |

# RISK REGISTER

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **Risk Description** | **Likely Cause of Risk Occurring** | **Effect on Project** | **Phase Affected** | ***Severity Level*** | **Ability to Detect** | **Risk Rank** |
| **1** | **Player statistics not available** | 1. **Not enough data available** 2. **Data not available for open use** | **Failure to make prediction** | **Transition** | **High** | **Moderate** | **Serious** |
| **2** | **Player statistics aren’t correct** | 1. **Data source might have anomalies** | **Statistics need to be fetched again** | **Construction** | ***Med*** | **Moderate** | **Modest** |
| **3** | **Player statistics outdated** | 1. **The player statistics were not updated for the next season** | **predictions oblivious of current scenario** | **Transition** | ***Med*** | **Moderate** | **Serious** |
| **4** | **Diet Plans are anomalous** | 1. **The user entered wrong player information** 2. **Required information for sport is missing** | **Prediction cannot be made** | **Transition** | ***Low*** | **Easy** | **Trivial** |
| **5** | **Wrong coaches selected/dropped** | 1. **Lack of domain knowledge** 2. **Improper model selection** | **Biased or High variance model** | **Construction** | ***Med*** | **Moderate** | **Serious** |
| **6** | **Insufficient data** | 1. **The data available is insufficient for generalization** | **Overfitting** | **Construction** | ***High*** | **Complex** | **Critical** |

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 6

**Sports Academy**

**Project Backlog**

**07-11-2017**

**Version 1.0**



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | Gr. No. | Name | Roles |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB,PHP** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/Front End** |

**Approved By: Dr M. R. Dube**

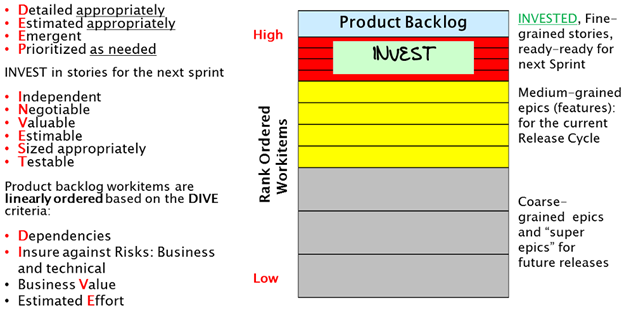
**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

*A product backlog stores, organizes and manages all work items that you plan to work on in the future. The key characteristics of a well-organized and managed product backlog are summarized in the image below. DEEP, INVEST and DIVE are meaningful words.*



*Figure 1: Characteristics of a Managed Product Backlog*

*The* ***granularity*** *or size of work items should be determined based on how far into the future you are planning a product, i.e., the planning horizon. It is the observation that the longer or shorter the planning horizon, the larger or smaller the work items. This makes sense as it takes a lot more effort to develop, specify and maintain a large number of small-grain work items compared to developing, specifying and maintaining a small number of large-grain work items. Smaller work items, stories, are typically developed by breaking down larger work items, epics. Stories are the unit of software design, development and value delivery.*

***DEEP product backlog***

*A product backlog may have several hundred or more work items, hence the acronym DEEP. Work items can be comprised of stories, defects and test sets. DEEP is acronym capturing the essence of the logical structure of product backlog.*

* ***Detailed appropriately****: Work-items in the backlog are specified at an appropriate level of detail.*
* ***Estimated appropriately****: Work-items in the product backlog are estimated appropriately.*
* ***Emergent****: Product backlog is not frozen or static; it evolves or emerges on an on-going basis in response to product feedback, and changes in competitive, market and business. New backlog items are added, existing items are groomed (revised, refined, elaborated) or deleted or re-prioritized.*
* ***Prioritized as needed****: Work-items in the backlog are linearly rank-ordered as needed.*

# 2. SPRINT PLANNING AND WORK-ITEM GRANURALITY

*If the planning horizon is the next, i.e., upcoming sprint or iteration (typically 2 to 4 weeks), each Work-items is small enough to fit in a single sprint, and is 100% ready (“ready-ready”) to be worked on, as indicated in Figure 1 – see the top red-color region. A ready-ready story has already been analyzed with clear definition (User Role, Functionality, and Business Value) and associated Acceptance Criteria. Work-items planned for the next sprint are stories, defects and test sets. The Work-items in the next sprint have the highest rank order compared to Work-items in later sprints or later release cycles. I will soon explain how this rank ordering is done.*

*The rank order information is used to decide the order in which the team will undertake work on Work-items in a sprint backlog, and also decide which incomplete Work-items to push out to the release or product backlog at the end of a sprint time-box.*

*Work-items in the next sprint collectively satisfy the well-known INVEST criteria; it is a meaningful English word, as well as an interesting acronym coined by Bill Wake. Its letters represent important characteristics of Work-items in the next sprint backlog. Stories in the next sprint backlog should be:*

* ***Independent of each other****: At the specification level stories are independent; they offer distinctly different functionality and don’t overlap. Moreover, at the implementation level these stories should also be as independent of each other as possible. However, sometimes certain implementation-level dependencies may be unavoidable.*
* ***Negotiable****: Stories in the next sprint are always subject to negotiations and clarifications among product owner (business proxy) and the members of agile development team.*
* ***Valuable****: Each story for the next sprint offers clear value or benefit to either external users or customers (outside the development team), or to the team itself, or to a stakeholder. For most products and projects, most stories offer value to external users or customers.*
* ***Estimable****: From the specification of story itself, an agile team should be able to estimate the effort needed to implement the story; this estimate is in relative size terms (story points), and optionally, it can also be in time units (such as ideal staff-hours or staff-days for the whole team). Thus, stories are estimated in story points, and also often in ideal time units.*
* ***Sized Appropriately****: A simpler interpretation of this criterion is that each story is Small enough to be completed and delivered in a single sprint. The letter “S” can be taken to mean Sized Appropriately; specifically, each story should take no more than N/4 staff-weeks of team effort for an N-week long sprint. Thus, for a 2-week sprint, each story should take no more than 2/4 staff-week = 0.5 staff-week = 20 staff-hours of effort. A story substantially larger than 20 staff-hours of total effort should be treated as an epic and be broken down into smaller stories. For a 4-week sprint, each story should take no more than 4/4 staff-week = 1 staff-week = 40 staff-hours of effort. If a sprint backlog has a mix of stories that are small, medium or large size stories (their average far exceeds N/4 staff-weeks), the average cycle time across all stories will increase dramatically reducing the team velocity.*
* ***Testable****: Each story specification is very clear to be able to develop all test cases from its acceptance criteria (which is part of the specification).*

*Stories may be broken down into implementation tasks, such as Analysis, Design, Code Development, Unit Testing, Test Case Development, On-line Help, etc. These tasks need to be SMART:*

* + *S: Specific*
  + *M: Measurable*
  + *A: Achievable*
  + *R: Relevant*
  + *T: Time-boxed (typically small enough to complete in a single day)*

*If a story needs to take no more than N/4 staff-week of team effort (ex. 20 staff-hours for 2-week sprints), all SMART tasks in a story should add up to no more than N/4 staff-week of team effort. If you have 5 tasks, each task on an average should take 4 hours of ideal time effort or less. Stories and its SMART tasks for the next sprint are worth INVESTing in, as the return on that INVESTment is high because they are scheduled to be worked on and delivered as working software in the next sprint itself.*

# 3. RELEASE PLANNING AND WORK GRANURALITY

*If the planning horizon is an upcoming release cycle (typically 8 to 26 weeks, or 2 to 6 months long – consisting of several sprints), Work-items are “medium-grain” as shown in the middle yellow color region of Figure 1. Typically, many of these Work-items are epics; however, they should be still small enough to fit in a release cycle and can be completed over two or more sprints in a release cycle. These epics are typically called features or feature-epics. These feature-epics should still be specified with User Role, Action, Value and Acceptance Criteria formalism that is often used for specifying stories, but now you are capturing a larger functionality represented by a feature-epic. Feature-epics are divided into stories – small enough to fit in a sprint – before the sprint in which a story will be implemented.*

*Over the time horizon of an entire release cycle, INVESTing in stories for an entire release cycle has poor returns, because it takes a lot of effort to ensure that the INVEST criteria is being satisfied correctly for a large number of stories covering an entire release cycle, and those stories are much more likely to change over the release cycle spanning several sprints; so this kind of INVESTment may not yield expected results as stories will very likely change during an entire release cycle after they have been specified.*

***Feature-epics*** *in a release cycle can and should be estimated in relative size terms, but without expending the effort needed to break down all feature-epics in a release cycle into individual stories. This epic-level estimation can be done by comparing relative sizes of epics.*

*It still makes sense to rank order feature-epics in a release cycle to decide which ones will be scheduled in Sprint 1, 2, 3, and so on. However, this assignment may change as each sprint is completed and more information and learning emerge.*

# 4. PRODUCT PLANNING AND WORK-ITEM GRANURALITY

*If the product planning horizon is over multiple release cycles (typically 6 to 24 months) going beyond the current release cycle, Work-items are “****coarse-grain****” as shown in the bottom gray color region of Figure 1. These large epics or super epics require two or more release cycles to complete. These super epics may be described in plain English (bulleted text) or with screen mock-up or video or prototype or with any form of expression suitable to express the intent and value of super epics. These super epics are divided into feature-epics – small enough to fit in a single release cycle – before the release cycle in which that feature-epic will be implemented.*

*Over the time horizon of multiple release cycles, INVESTing in stories has even poorer returns compared to INVESTing in stories for a single release cycle. This kind of INVESTment will not yield expected results as stories are very likely to change over much longer duration of multiple release cycles.*

*Large epics or super epics that need multiple release cycles to be implemented can and should be estimated in relative size terms, but without expending the effort needed to break down large epics into feature-epics, and breaking those, in turn, into stories.*

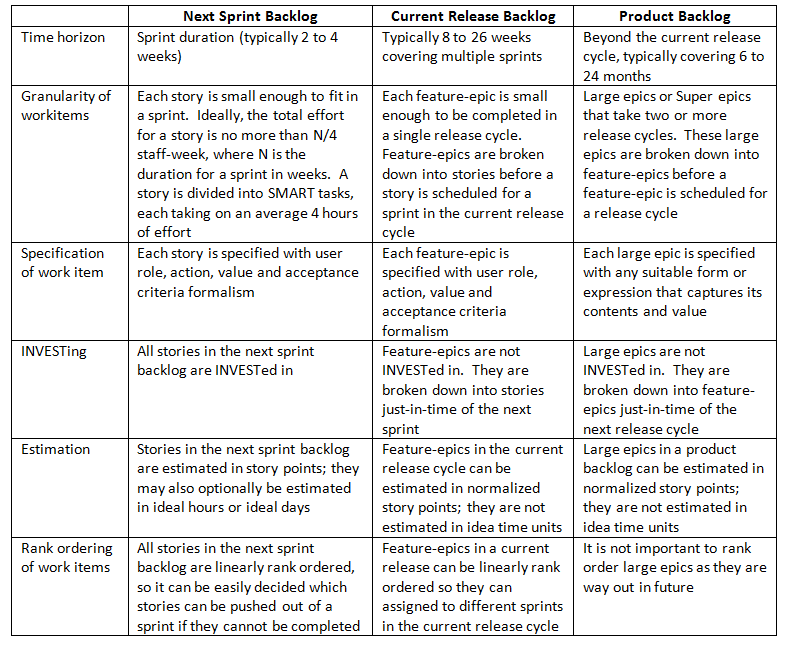
*DIVE the product backlog carefully*

*There is rarely enough time or resources to do everything. Therefore, agile teams must prioritize (rank-order, to be more precise) which stories to focus on and which lowest rank-order stories could be pushed out of scope when close to the end of a sprint. For agile development projects, you should linearly rank-order the backlog, rather than do coarse-grain prioritization where stories and epics are lumped into a small number of priority buckets, such as Low, Medium, High, Critical priorities. Linear rank ordering (i.e., 1, 2, 3, 4 ….n) avoids inflation of priority, keeps everyone honest, and forces decisions on what is really important. It discourages the “kid-in-a-candy-shop” behaviour when the business side clamours that everything is of high-priority or of equal importance.*

*Note that epics and stories are conceptually different, and should not be mixed or aggregated while developing a rank order. An epic rank order is separate from a story rank order.*

*The responsibility of agile rank ordering is shared among all members of a team; however, the rank ordering effort is led by the product owner. Similar to DEEP, INVEST and SMART, DIVE is a meaningful English word, and also an acronym. Product backlog items should be linearly ordered based on the DIVE criteria, which requires careful consideration of all four factors captured in the DIVE acronym:*

* *Dependencies: Even after minimizing the dependencies among stories or epics (which is always a good thing to do), there may still be few unavoidable dependencies and they will have an impact on rank ordering. If Work-item A depends on B, B needs to be rank-ordered higher than A.*
* *Insure against Risks: Business as well as technical risks*
* *Business Value*
* *Estimated Effort*



# 5. PRODUCT BACKLOG: GOALS GRANURALITY

|  |  |
| --- | --- |
| Goal-ID-1 | Developing Sports Careers |
| Purpose | To help players compete at higher levels and increase their sports career statistics |
| Target Audience | Youngsters |
| Status | On-going |
| Task Description | 1. Collect player stats-S |
|  | 2. Ascertain Data Correctness -S |
|  | 3. Filter Data Sources -S |
|  | 4. Identify appropriate DBMS -S |
|  | 5. Analyse Data -S |
|  | 6. Extract Appropriate Data -S |
|  | 7. Help players compete at higher levels-S |
|  | 8. Provide Exposure to all sports-S |
|  | 9. Participation of players in tournaments-R |
|  | 10. Insert extracted data into resource database -R |
|  | 11. Clean Player Data Abnormalities -R |
|  | 12. Find Data Sources -R |
|  | 13. Create Cloud Backup of Database -R |
|  | 14. Segregate Databases -R |
|  | 15. Training players to compete-R |
|  | 16. Career enhancing sessions-R |

|  |  |
| --- | --- |
| Goal-ID-2 | Teaching students importance of sports |
| Purpose | Making them understand that sports is not all about winning |
| Target Audience | Students |
| Status | On-going |
| Task Description | 1. Life enriching sessions S |
|  | 2. Sportsmanship lectures to trainers S |
|  | 3. Trainer evaluation S |
|  | 4. Player personality analysis test S |
|  | 5. Personal mentoring sessions S |
|  | 6. Teaching art of sports S |
|  | 7. Teaching how to overcome failure S |
|  | 8. After game evaluations S |
|  | 9. Demonstrating failures are stepping stones R |
|  | 10. Detailed knowledge about sports rules R |
|  | 11. Mock competitive matches R |
|  | 12. Explaining importance of sports in life R |
|  | 13. Trainer evaluation R |
|  | 14. Teaching fair generous behaviour R |
|  | 15. Contesting players in friendly matches R |
|  | 16. Imparting good treatment to opponents R |

|  |  |
| --- | --- |
| Goal-ID-3 | Providing ideal sports nutritional diet |
| Purpose | Maintaining the physical fitness of player in order to play the sport efficiently |
| Target Audience | Academy Players |
| Status | On-going |
| Task Description | 1. Pre-Process Player Data -S |
|  | 2. Analyse the player requirements -S |
|  | 3. Generate Player Features -S |
|  | 4. Analyse requirement of particular sport -S |
|  | 5. Provide nutritionist with player data-S |
|  | 6. Provide sports available for current fitness S |
|  | 7. Generate monthly nutrition required S |
|  | 8. Performing a comprehensive nutrition assessment determining the nutrition diagnosis. S |
|  | 9. Optimise Choices -R |
|  | 10. Choose Statistical Model -R |
|  | 11. Individual outpatient counseling -R |
|  | 12. Associate Player Profiles -R |
|  | 13. Monitoring an individual's progress over subsequent visits with the RD-R |
|  | 14. Balanced Diet for all age groups R |
|  | 15. Weight Management R |
|  | 16. Regular health check-up R |

|  |  |
| --- | --- |
| Goal-ID-4 | Showing players importance of sportsmanship. |
| Purpose | Players are taught good sportsmanship values |
| Target Audience | Players |
| Status | On-going |
| Task Description | 1. Player childhood history data collection S |
|  | 2. Data analysis S |
|  | 3. Player attitude report formation S |
|  | 4. Generating player development plans S |
|  | 5. Proving players with daily schedule S |
|  | 6. Conducting Parent teacher meets S |
|  | 7. Regular mentor sessions S |
|  | 8. Player endgame evaluation S |
|  | 9. Coaching trainers R |
|  | 10. Good value sessions conduction R |
|  | 11. Educationary matches R |
|  | 12. Motivational lessons to students R |
|  | 13. Creation of humble game environment R |
|  | 14. Achieving runner up awards at tournaments R |
|  | 15. Playing with respect R |
|  | 16.Imparting knowledge through Sports stories R |

|  |  |
| --- | --- |
| Goal-ID-5 | Forming a sports community. |
| Purpose | People both with and without disabilities are involved together in recreation, leisure and sports activities. |
| Target Audience | Students |
| Status | On-going |
| Task Description | 1. Locating nearby sportsmen S |
|  | 2. Reaching out to interested people S |
|  | 3. Conducting advertise campaigns S |
|  | 4. Carrying out speeches in public S |
|  | 5. Organising get togethers for members S |
|  | 6.Improving player academy relationships S |
|  | 7. Gathering members for festivals S |
|  | 8. Sharing regular sport updates S |
|  | 9. Organising leisure and recreational events for locals R |
|  | 10. Giving advice regarding issues R |
|  | 11. Expanding Sports community R |
|  | 12. Hiring Good promoters R |
|  | 13. Conducting community service drives R |
|  | 14. Gathering current generation sports data R |
|  | 15. Analysing player interests R |
|  | 16. Organising handicap sports events R |

|  |  |
| --- | --- |
| Goal-ID-6 | Individual player development in all aspects of life . |
| Purpose | Becoming better players as well as humans |
| Target Audience | Members |
| Status | On-going |
| Task Description | 1. Check Player Data S |
|  | 2. Fetch Player Data S |
|  | 3 Generate Player personality charts S |
|  | 4. Assigning mentors to students S |
|  | 5. Conducting regular mentor sessions S |
|  | 6. Imparting valuable life lessons in players S |
|  | 7. Improving overall character of players S |
|  | 8. Teaching Discipline is an important aspect of life S |
|  | 9. Imparting clear and prized life lessons to players R |
|  | 10. Necessary for the players to improve themselves R |
|  | 11. Organizing clothes to charity events R |
|  | 12. Providing old sports equipment to needy R |
|  | 13. Analysing player development R |
|  | 14. Generating player evaluation reports R |
|  | 15. Presenting player personality awards R |
|  | 16.Sending reports to player guardians R |

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 7

**Player Value Analyser**

**User Story Cards**

**13-11-2017**

**Version 1.0**



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
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**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

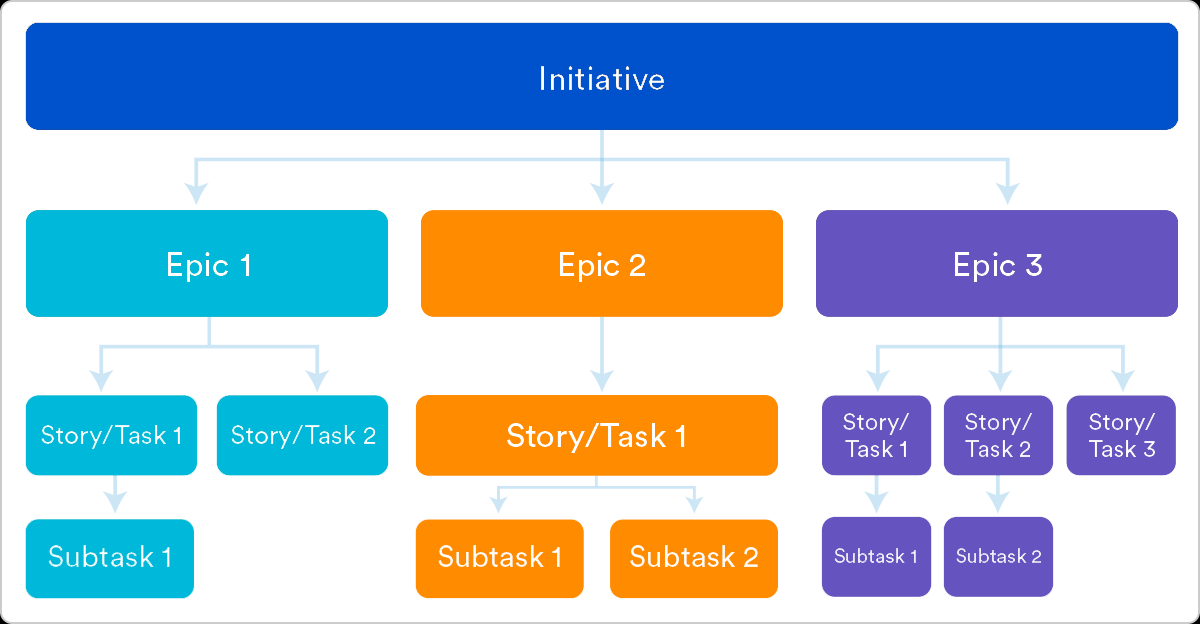
*What does defining customer problems look like in an agile world? The agile manifesto reminds us that we don’t always have to do it the “traditional” way. As product managers, we should be doing whatever is required to tell the story of the customer. Try different things: experiment, explore, then do what works best for you and your team in the context that you might be working in.*

* *If it means you can have several discussions and sketch something on a bit of paper – then do it.*
* *What if you could get everyone (including the customer) in a room and do a user story mapping exercise? If that communicates the problems well, then you don’t need to go much further.*
* *Or what if you can visit the customer and watch them use your product in context? Could you get your engineers and designers to sit next to the customer to listen to and observe their problems?*
* *Instrumenting your product with analytics hooks give you aggregate, concrete data about how customers as a whole are using your product.*
* *Another option would be to grab the product triad (a product manager, engineer and a designer) for a quick stand-up to sketch, discuss and make some quick decisions on the spot.*
* *Need to explore some more? Try running a workshop where you gather key stakeholders and do lots and lots of white-boarding or even paper prototyping to dive deep into understanding the problems you are trying to solve and how you could solve those problems.*

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| --- | --- | --- | --- |
| **Epic** Large body of work, contains stories | **Story** Smallest unit of work, also known as a task | **Version** The release of software to the customer | **Sprint** Iteration where team does the work |

# EPICS AND USER STORIES

*Epics are larger bodies of work that stories roll up into. An epic can span across multiple sprints and versions. Versions are different from epics, because they are a point in time where software is released to the customer. A version might contain multiple epics. Epics help teams create hierarchy and structure. Stories help teams keep track of specific details for the task at hand and can be broken down into sub-tasks.*



* *An* ***epic*** *is a large body of work that can be broken down into a number of smaller stories. For example, performance-related work in a release. An epic can span more than one project, if multiple projects are included in the board to which the epic belongs.*
* *Unlike sprints, epics often change in scope over time as a natural aspect of agile development. Epics are almost always delivered over a set of sprints. As a team learns more about an epic through development and customer feedback, user stories will be added and removed to optimize the team's release time.*
* ***Burndown******charts*** *can also be used to visualize epics, which keep teams motivated and the executive stakeholders informed. A good epic burndown chart shows the agile nature of development. It's clear how the team is progressing as well as where the product owner added and removed user stories. Having these data points clearly visible keeps everyone on the same page and facilitates open conversation about the evolution of the product and completion forecasts. Not to mention that transparency builds trust!*
* *A story or* ***user story*** *is the smallest unit of work in an agile framework. It is a software system requirement that is expressed in a few short sentences, ideally using non-technical language.*
* *The goal of a user story is to deliver a particular value back to the customer. Note that "customers" don't have to be external end users in the traditional sense, they can also be internal customers or colleagues within your organization who depend on your team.*
* ***User stories*** *are a few sentences in simple language that outline the desired outcome. They don't go into detailed requirements.*
* ***Versions*** *are the actual releases of software out to customers. Remember, at the end of each sprint the team should be able to ship the software to customers. Versions are the curated changes the product owner actually ships.*
* ***Versions*** *are often developed over a set of sprints, much like epics. Savvy product owners may choose to deliver an epic over several versions. An epic does not have to be fully contained within a version. By delivering an epic over several versions, the product owner can learn how the market is responding to that epic and make calculated decisions about its future direction rather than doing one giant release.*
* *A* ***sprint*** *is a short period in which the development team implements and delivers a discrete and potentially shippable application increment, e.g. a working milestone version. If you haven't run sprints before, we recommend using a fixed two-week duration for each sprint. It's long enough to get something accomplished, but not so long that the team isn't getting regular feedback.*
* *In* ***scrum****, teams commit to complete a set of user stories during a fixed time period. Generally speaking, sprints are one, two, or four weeks long. It's up to the team to determine the length of a sprint. Once a sprint cadence is determined, the team perpetually operates on that cadence. Fixed length sprints reinforce estimation skills and enable the ability to predict the future* ***velocity*** *for the team once they have the data from several completed sprints.*

*Once a team commits to a set of user stories for the sprint, and the sprint is started, the scrum master is in charge of fending off changes to the user stories. This keeps the team focused and combats "s****cope creep****" (adding work to the sprint after the sprint starts). Adding work mid-sprint compromises the team's ability to forecast and estimate accurately.*

*At the end of each sprint, the team is required to deliver a working piece of software. In scrum, that's called a* ***potentially shippable increment*** *(PSI). The product owner ultimately decides when the PSI gets released to customers, but the work should be complete enough to be suitable for release at the end of the sprint.*

*In agile development,* ***work in progress*** *(WIP) limits set the maximum amount of work that can exist in each status of a workflow. Limiting the amount of work in progress makes it easier to identify inefficiency in a team's workflow. Bottlenecks in a team's delivery pipeline are clearly visible before a situation becomes dire.*

# USER STORIES: GOAL-1: BUILD PLAYER PROFILE

|  |  |  |
| --- | --- | --- |
| Objective-1 | Developing sports careers | |
| Purpose | To help players compete at higher levels and increase their sports career statistics | |
| Target Audience | Youngsters | |
| Status | On-going | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Request creation of Player Profile | use it to do further analytics. |
|  | 2. Find Player Data Sources | build player profiles. |
|  | 3. Create a preliminary database | can store the acquired player data. |
|  | 4. Create a Player Data Spyder | get updated player data. |
|  | 5. Formulate database structure | start creating profiles. |
|  | 6. Populate Player Database | meet the preliminary objective. |
|  | 7. Generate a backup | retrieve data in case of loss of files. |
|  | 8. Share backup with Project Team | expect team to perform assigned tasks. |
|  | 9. Assign database privileges | monitor the changes made to the database. |
|  | 10. Launch Player Profile Page | fulfil project deliverables. |
|  | 11. Find professional competitions | apply in it to provide exposure to the players |
|  | 12. Find all essential equipments for mastering the particular sport | give better training to the players |
|  | 13. Create log file | keep track of progress. |
|  | 14. Decide appropriate sorting for database | create a relative rating index |
|  | 15. Commit changes on player’s performance | render the changes to the team. |
|  | 16. Search for spikes in player’s performance | rectify the errors |

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| Process-1 | Acquire Player Statistics | |
| Purpose | Collect Player Statistics for creating player ranking index | |
| Target Audience | Internal Stakeholders | |
| Status | Completed | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Set up a mandatory field set | maintain consistency of database. |
|  | 2. Research Player statistics | make system as accurate as possible. |
|  | 3. Set statistics fields in database | add player statistics. |
|  | 4. Accept Player Profile inputs | add new players. |
|  | 5. Register Player Profiles into database | store new players. |
|  | 6. Set Statistic limits and bounds | keep the data relative and realistic. |
|  | 7. Populate Player statistics | compare players. |
|  | 8. Update Database structure | accommodate statistics in player profiles. |

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| Process-2 | Analyse Data | |
| Purpose | To keep the data relative and precise. | |
| Target Audience | Customers | |
| Status | On-going | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Validate Player Profile Format | verify that database is consistent. |
|  | 2. Plot graph of all values | sieve abnormalities. |
|  | 3. Search for spikes in player’s performances | identify abnormalities. |
|  | 4. SWOT analysis of player | identify strengths and weakness |
|  | 5. Show the correct, improvised techniques | resolve the abnormality issue. |
|  | 6. Correct the found weakness | refine the player’s techniques. |
|  | 7. Check if data has been already used | rollback the incorrect data operations. |
|  | 8. Notify team about changes | ensure consistency in the system. |

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| Objective-2 | Train Player | |
| Purpose | To improvise the performance of the player | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Get all equipments | train the players on those equipments |
|  | 2. Design exercises | train the players on those equipments |
|  | 3. Design schedule | manage time efficiently |
|  | 4. Prioritise the important parameters | produce accurate results. |
|  | 5. Draw a map for the shortlisted attributes | formalize the observations. |
|  | 6. Organise the parameters | simplify analysis process. |
|  | 7. Record formulated observations | discuss with the analysis team. |
|  | 8. Correspond with Analysis team | refine the observations |
|  | 9. Consolidate outline of analysis process | systemize procedure. |
|  | 10. Construct final analysis methodology | begin development process. |
|  | 11. Mentor personally | analyse mindset of the individual |
|  | 12. Get weekly updates of player | help improve the skills of player |
|  | 13. Find player’s current ability | find where he fits in the team |
|  | 15. Career enhancing sessions | to motivate the players |
|  | 16. Get best coaches | to ensure that players get best training |

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| --- | --- | --- |
| Process-1 | Coach Player | |
| Purpose | The purpose is to coach the player in order to improve skill set | |
| Target Audience | Customers | |
| Status | On-going | |
| Role: | **As a coach** | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Find a certain player | view player relevant data |
|  | 2. Identify current skill set of player | analyse player |
|  | 3. Identify versatility of the player | analyse which tasks can be performed better |
|  | 4. Find similar players playing in same position | compare player quality. |
|  | 5. Prioritize players by rating | get best deal for the club. |
|  | 6. Give player personal mentoring | motivate player |
|  | 7. Demonstrating a particular task | show player how a particular task is done |
|  | 8. Display player’s current team | know the chance of buying. |

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| Process-2 | Ensure increase in player career performance | |
| Purpose | This will ensure that player is improving over period of time | |
| Target Audience | Customers | |
| Status | On-going | |
| Role: | **As an**analyst | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Get correct player data | check previous stats |
|  | 2. Receive exact information | verify the information |
|  | 3. Get updated info of player | analyse stats |
|  | 4. Use Player Data | Ask Club to scout player. |
|  | 5. Get correct analysis of player over period of time | To ensure if player is improving |
|  | 6. Make a precise database | Use it to display on third party portals. |
|  | 7. Track validation process | Verify data. |
|  | 8. Run background checks | Ascertain data correctness. |

# USER STORIES: GOAL-2: Teaching students importance of sports

|  |  |  |
| --- | --- | --- |
| Objective-1 | Train Coaches | |
| Purpose | Making them understand that sports is not all about winning | |
| Target Audience | Staff Members | |
| Status | On-going | |
| Role: | **As a** *sport enthusiast* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Life enriching sessions | Make individuals realise life is not all about winning |
|  | 2. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 3. Trainer evaluation | To ensure that trainers posses all required knowledge |
|  | 4. Trainer personality analysis test | Keep track of player progression. |
|  | 5. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 6. Teaching art of sports | Understand the sport from all perspectives |
|  | 7. After game evaluations | how to analyse matches played |
|  | 8. Pre-match evaluation | how to analyse other teams |
|  | 9. Detailed knowledge about sports rules | Expect transparency. |
|  | 10. Mock matches | get familiar with match environment |
|  | 11. Imparting good treatment to opponents | fair play in matches |
|  | 12. Trainer evaluation | check progress of trainers |
|  | 13. Teaching fair generous behaviour | be impartial no matter anyone |
|  | 14. Guidance sessions | external experts can give seminar |
|  | 15. Get list of all fields of all sports | can manage coaches for all sports |
|  | 16. Verify data | validate coaches |

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| Process-1 | Acquire valuable life lessons | |
| Purpose | It will ensure that in life failures are stepping stones for success. | |
| Target Audience | External Stakeholders | |
| Status | On-going | |
| Role: | **As a**human being | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Imparting good treatments to others | Help others if they have a problem |
|  | 2. Life enriching sessions | Make individuals realise life is not all about winning |
|  | 3. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 4. Guidance sessions | external experts can give seminar |
|  | 5. Trainer evaluation | check progress of trainers |
|  | 6. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 7. Investigate trainer value | Decide which coaches are best for academy. |
|  | 8. Teaching fair generous behaviour | be impartial no matter anyone |

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| --- | --- | --- |
| Process-2 | Teach coaches and trainers | |
| Purpose | It will ensure that in life failures are stepping stones for success. | |
| Target Audience | Coaches | |
| Status | Completed | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Acquire trainer attributes and data | Identify trainer data |
|  | 2. .Examine coaches relation with each other | can communicate with one another if needed |
|  | 3. Detailed knowledge about sports rules | Ensure correct data is used in future processes. |
|  | 4. Survey form | Give feedback |
|  | 5. Extract coach skill values | Find out coach strengths. |
|  | 6. Find coach weaknesses | Can overcome difficulty |
|  | 7. Find coach injury record | Be aware of physical condition of coach. |
|  | 8. Compare coach abilities | See head to head matchup. |

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| --- | --- | --- |
| Objective-2 | Teach Students | |
| Purpose | Making them understand that sports is not all about winning | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a**Trainer | |
|  | **I want to** *<perform some task>* | **I want to** *<perform some task>* |
| Task Description | 1.Life enriching sessions | Make individuals realise life is not all about winning |
|  | 2.Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 3. Player evaluation | To ensure that players poṣsess all required knowledge. |
|  | 4. Player personality analysis test | Keep track of player progression |
|  | 5. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 6. Teaching art of sports | Understand the sport from all perspectives |
|  | 7. After game evaluations | how to analyse matches played |
|  | 8. Pre-match evaluation | how to analyse other teams |
|  | 9. Detailed knowledge about sports rules | Expect transparency. |
|  | 10. Mock matches | get familiar with match environment |
|  | 11.Imparting good treatment to opponents | fair play in matches |
|  | 12. Player evaluation | check progress of players |
|  | 13. Teaching fair generous behaviour | be impartial no matter anyone |
|  | 14. Guidance sessions | external experts can give seminar |
|  | 15. Get list of all fields of all sports | can manage coaches for all sports |
|  | 16. Verify data | validate players |

|  |  |  |
| --- | --- | --- |
| Process-1 | Organise life lesson courses | |
| Purpose | It will ensure that in life failures are stepping stones for success. | |
| Target Audience | Customers/ Stakeholders | |
| Status | On-going/ Completed | |
| Role: | **As a**human being | |
|  | **I want to** *<perform some task>* | **I want to** *<perform some task>* |
| Task Description | 1. Imparting good treatments to others | Help others if they have a problem |
|  | 2. Life enriching sessions | Make individuals realise life is not all about winning |
|  | 3. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 4. Guidance sessions | external experts can give seminar |
|  | 5. Trainer evaluation | check progress of trainers |
|  | 6. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 7. Investigate trainer value | Decide which coaches are best for academy. |
|  | 8. Teaching fair generous behaviour | be impartial no matter anyone |

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| --- | --- | --- |
| Process-2 | Teach students importance of sports | |
| Purpose | Students would appreciate small wins | |
| Target Audience | Academy Players | |
| Status | On-going/ Completed | |
| Role: | **As a**trainer | |
|  | **I want to** *<perform some task>* | **I want to** *<perform some task>* |
| Task Description | 1. Acquire player attributes and data | Identify player data |
|  | 2. .Examine players relation with each other | can communicate with one another if needed |
|  | 3. Detailed knowledge about sports rules | Ensure correct data is used in future processes. |
|  | 4. Survey form | Give feedback |
|  | 5. Extract player skill values | Find out player strengths. |
|  | 6. Find player weaknesses | Can overcome difficulty |
|  | 7. Find player injury record | Be aware of physical conditions of player. |
|  | 8. Compare player abilities | See head to head matchup. |

# USER STORIES: GOAL-3: Providing ideal sports nutritional diet

|  |  |  |
| --- | --- | --- |
| Objective-1 | Pre-process Player Data | |
| Purpose | Perform pre-processing on player data such as: Health check ups | |
| Target Audience | Customers/ Stakeholders | |
| Status | On-going/ Completed | |
| Role: | **As a*n analyst*** | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Verify raw player data | ensure data correctness. |
|  | 2.Evaluate player data | identify outliers. |
|  | 3.Dispose irrelevant attributes | eliminate unnecessary information. |
|  | 4.Group and compare attributes | examine data distribution. |
|  | 5.Get expert nutritionist to advice | get detailed knowledge of nutritions |
|  | 6.Schedule player fitness chart plan | help improve fitness |
|  | 7.Standardize player features | ensure equal importance to each feature |
|  | 8.Evaluate data dimensionality | detect problems with high dimensionality |
|  | 9.Use different nutrition selection strategies | fix dimensionality problems |
|  | 10. Consolidate final data with features | use it to train statistical models |
|  | 11. Compare attributes by age | should not exhaust the player |
|  | 12. Get BMI index of player | analyse current fitness of player |
|  | 13. Assess individual nutrition needs | get best fitness for each individual |
|  | 14. Provide education including practical tips to meet your nutrition needs | spread awareness among players |
|  | 15. Promote your body's potential towards health, wellness and disease prevention | remain fit |
|  | 16. Tabulate player data | easy to analyse fitness stats |

|  |  |  |
| --- | --- | --- |
| Process-1 | Associate Player Health Profiles | |
| Purpose | Improve health and fitness of players | |
| Target Audience | Customers/ Stakeholders | |
| Status | On-going/ Completed | |
| Role: | **As a** *nutritionist* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Fetch formatted player data | use it for further training process. |
|  | 2.List available raw player attributes | choose attributes to be considered. |
|  | 3.Verify consistency | prevent problems affecting further process. |
|  | 4.Transform physical condition | help players to be more fit |
|  | 5.Compare attributes between players | decide what attributes are important. |
|  | 6.Inspect attributes by player positions | analyse importance of player position. |
|  | 7.Compare stats by age | analyse importance of age. |
|  | 8.Associate insights gained with data | decide better statistical models. |

|  |  |  |
| --- | --- | --- |
| Process-2 | Generate Player Diets | |
| Purpose | Improve diets of players | |
| Target Audience | Internal Stakeholders | |
| Status | On-going | |
| Role: | **As a** *nutritionist* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Tabulate player data | prototype features to generate. |
|  | 2.Verify whether generated diets are enough | improve the current physical condition |
|  | 3.Recommend the diet | player can remain fit |
|  | 4.Visualize transformed condition | verify transformations |
|  | 5.Scale features | ensure valid scaling for statistical methods. |
|  | 6.Analyse time needed if there is an injury | verify similar scale in features. |
|  | 7.Evaluate different strategies for diet | choose appropriate strategy. |
|  | 8.Integrate generated features and methods | apply them to new data in the future. |

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| Objective-2 | Recommend Diets | |
| Purpose | To make players fit | |
| Target Audience | Customers/ Stakeholders | |
| Status | On-going | |
| Role: | **As a** *nutritionist* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Access data in proper format | Use it to choose a model. |
|  | 2.Access different statistical models | Utilise them for making predictions. |
|  | 3.Show players which diets are better | maintain best results |
|  | 4.Cross-validate and analyse models | Select them based on their quality. |
|  | 5.Verify if any allergies with given diet | Select appropriate diet |
|  | 6.Assess medical history | Establish if any contradictions |
|  | 7.Modify the parameters | Analyse the changes caused by them. |
|  | 8.Cross-validate changed parameter results | Choose the optimal parameters. |
|  | 9.Use different scoring methods | Analyse the model and establish optimality. |
|  | 10.Finalize on the model and parameters | Use the model in further processes. |
|  | 11.identify the strengths and weaknesses present in an individual's diet. | overcome weakness |
|  | 12.Maintain those necessary dietary changes | balancing diet |
|  | 13.To improve nutrition and health outcomes | Choose the optimal parameters |
|  | 14.Get BMI index of player | analyse current fitness of player |
|  | 15.Recommend the diet | improve the current physical condition |
|  | 16. Compare stats by age | get best details |

|  |  |  |
| --- | --- | --- |
| Process-1 | Arrange Diet Awareness Sessions | |
| Purpose | Perform pre-processing on player data such as: Health check ups | |
| Target Audience | Internal Stakeholders | |
| Status | On-going | |
| Role: | **As a** *nutritionist* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Improve health and fitness of players | Use them for making predictions. |
|  | 2.Verify consistency | prevent problems affecting further process. |
|  | 3.Transform physical condition | Test diets properly. |
|  | 4.Use different statistical models | Compare their usefulness. |
|  | 5.List available plans | Access them in further assessment. |
|  | 6.Analyse results of different models | Keep only relevant models. |
|  | 7.Compare stats by age | Test their ability to generalize. |
|  | 8.Analyse cross-validation results for models | Select them based on their quality. |

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| Process-2 | Hand Out Diets | |
| Purpose | Select optimal model for player data. Selection is done by comparing results of models. | |
| Target Audience | Customers/ Stakeholders | |
| Status | On-going/ Completed | |
| Role: | **As a** *academy member* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Access the optimal model | Study it’s working and improve it. |
|  | 2.Prepare generic plans | Establish their use. |
|  | 3.Hand out the diet plans to the players | Check if there can be improvement |
|  | 4.Advice players to follow the diet plan | Compare results after use |
|  | 5.Cross-validate changed parameter results | Ensure their ability to generalize |
|  | 6.Analyse the cross-validation result | Select the optimal set of parameters. |
|  | 7.Train the model with optimal parameters | Achieve best performing model |
|  | 8.Test the model | Ensure accuracy. |

# USER STORIES: GOAL-4: Showing players importance of sportsmanship

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| Objective-1 | Studying player behaviour | |
| Purpose | Analyse player personality | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a**coach | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Conduct matches | analyse player statistics |
|  | 2. Collect player data | generate reports |
|  | 3. Extract player information | train them |
|  | 4. Conduct personal sessions | mentor players |
|  | 5. Hire professional help | refine reports |
|  | 6. Conduct personality tests | collect personal details |
|  | 7. Organise events | study player attitude |
|  | 8. Provide attitude tests | collecting more data |
|  | 9. Analyse tests | generate reports |
|  | 10. Organise coaching sessions | talk about reports |
|  | 11. Conduct parent meetings | communicate with guardians |
|  | 12. Question guardians regarding ward | collect more personal details |
|  | 13.Personally meet players | talk with students |
|  | 14. Conduct outdoor trips | study player behaviour |
|  | 15. Post match analysis | studying attitude |
|  | 16. Conduct student review | generate final student report |

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| Process-1 | Organise matches among students | |
| Purpose | Analyse player behaviour post-match | |
| Target Audience | Internal Stakeholders | |
| Status | On-going | |
| Role: | **As a**coach | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Make players participate | conduct friendly matches |
|  | 2. Conduct friendly matches | study player attitude |
|  | 3.Judge player’s attitude | Assess the quality of a player |
|  | 4. Organise professional tournaments | generate large scale report |
|  | 5. Conduct prize distribution | motivate players to win |
|  | 6. Bring players together | study player friendliness |
|  | 7.Rent stadiums | conduct tournaments |
|  | 8.Organise marathons | encourage athletics |

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| Process-2 | Pay attention to player attitude | |
| Purpose | Study player personality traits | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Attend player matches | Analyse player game |
|  | 2.Hire professional psychiatrists | judge player behaviour |
|  | 3.Conduct post match meets | Study player statistics |
|  | 4.Bring players together | Conduct player meets |
|  | 5. Interact with students | Learn personal problems |
|  | 6.Analyse player behaviour | Generate player reports |
|  | 7.Handing player reports | Self player analysis |
|  | 8.Personal mentoring | provide personal attention |

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| Objective-2 | Teach Players | |
| Purpose | Making them understand importance of sportsmanship | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Sportsmanship sessions | Make individuals realise life is not all about winning |
|  | 2. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 3. Trainer evaluation | To ensure that trainers posses all required knowledge |
|  | 4. Trainer personality analysis test | Keep track of player progression. |
|  | 5. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 6. Teaching art of sports | Understand the sport from all perspectives |
|  | 7. After game evaluations | how to analyse matches played |
|  | 8. Pre-match evaluation | how to analyse other teams |
|  | 9. Detailed knowledge about sports rules | Expect transparency. |
|  | 10. Mock matches | get familiar with match environment |
|  | 11. Imparting good treatment to opponents | fair play in matches |
|  | 12. Trainer evaluation | check progress of trainers |
|  | 13. Teaching fair generous behaviour | be impartial no matter anyone |
|  | 14. Guidance sessions | external experts can give seminar |
|  | 15. Get list of all fields of all sports | can manage coaches for all sports |
|  | 16. Verify data | validate coaches |

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| Process-1 | Organise Personal Sessions | |
| Purpose | Personal Mentoring | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *Life Coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Improve health and fitness of players | Use them for making predictions. |
|  | 2.Verify consistency | prevent problems affecting further process. |
|  | 3.Transform physical condition | Test diets properly. |
|  | 4.Use different statistical models | Compare their usefulness. |
|  | 5.List available plans | Access them in further assessment. |
|  | 6.Analyse results of different models | Keep only relevant models. |
|  | 7.Compare stats by age | Test their ability to generalize. |
|  | 8.Analyse cross-validation results for models | Select them based on their quality. |

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| Process-2 | Educate Players on sportsmanship | |
| Purpose | Spread knowledge of sportsmanship | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *Coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Imparting good treatments to others | Help others if they have a problem |
|  | 2. Life enriching sessions | Make individuals realise life is not all about winning |
|  | 3. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 4. Guidance sessions | external experts can give seminar |
|  | 5. Trainer evaluation | check progress of trainers |
|  | 6. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 7. Investigate trainer value | Decide which coaches are best for academy. |
|  | 8. Teaching fair generous behaviour | be impartial no matter anyone |

# USER STORIES: GOAL-5: Forming sports community

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| Objective-1 | Perform analysis of region | |
| Purpose | To collect regional data | |
| Target Audience | Locals | |
| Status | On-going | |
| Role: | **As a** *promoter* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.visiting nearby regions | spreading awareness |
|  | 2.collecting data | analyse data |
|  | 3.analysing data | generating reports |
|  | 4.hire travel agents | learning about regions |
|  | 5.hire statistics people | generate region statistics |
|  | 6.visit nearby sports center | study other academics |
|  | 7.visit tournaments | analyse sports crowd |
|  | 8.meet youth | find latest sports trends |
|  | 9.travel nearby sport events | study regional sports |
|  | 10.travel to rural areas | studying rural sports |
|  | 11.travel to urban areas | studying urban sports |
|  | 12.generate charts | study statistics |
|  | 13.visit local schools | learn school sports |
|  | 14.visit outdoor marathons | find new players |
|  | 15.visit other local academies | increase network |
|  | 16.meet local coaches | increase contacts |

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| --- | --- | --- |
| Process-1 | Find regional sports statistics | |
| Purpose | Collect regional data | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *collector* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Generate region Statistics | Use it for modelling region profiles |
|  | 2. Find region Statistics | Sort and categorize data |
|  | 3. Communicate Relevant statistics | Remove unnecessary statistics |
|  | 4. Sort relevant region data | Categorize Accordingly |
|  | 5. Remove data abnormalities | Display only correct data |
|  | 6. Make different categories of data | Search region statistics easily |
|  | 7. Consider only relevant region statistics | Remove all unnecessary statistics |
|  | 8. Add statistics to region profile | Display region Profile |

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| Process-2 | Communicate relevant Statistics | |
| Purpose | tell about statistics | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *collector* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Generate region Statistics | Use it for modelling region profiles |
|  | 2. Find region Statistics | Sort and categorize data |
|  | 3. Communicate Relevant statistics | Remove unnecessary statistics |
|  | 4. Sort relevant region data | Categorize Accordingly |
|  | 5. Categorize region statistics | Search region statistics easily |
|  | 6. Choose relevant region Statistics | Remove all unnecessary statistics |
|  | 7. Arrange data suitable for creating graphs | Create statistical graphs easily |
|  | 8. Generate statistical graphs | Add them to region profiles |

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| Objective-2 | Increase community | |
| Purpose | spread awareness | |
| Target Audience | Locals | |
| Status | On-going | |
| Role: | **As a** *promoter* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.visiting nearby regions | spreading awareness |
|  | 2.collecting data | analyse data |
|  | 3.analysing data | generating reports |
|  | 4.hire travel agents | learning about regions |
|  | 5.hire statistics people | generate region statistics |
|  | 6.visit nearby sports center | study other academics |
|  | 7.visit tournaments | analyse sports crowd |
|  | 8.meet youth | find latest sports trends |
|  | 9.travel nearby sport events | study regional sports |
|  | 10.travel to rural areas | studying rural sports |
|  | 11.travel to urban areas | studying urban sports |
|  | 12.generate charts | study statistics |
|  | 13.visit local schools | learn school sports |
|  | 14.visit outdoor marathons | find new players |
|  | 15.visit other local academies | increase network |
|  | 16.meet local coaches | increase contacts |

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| --- | --- | --- |
| Process-1 | Use promoters to spread awareness of sports | |
| Purpose | Collect regional data | |
| Target Audience | Members | |
| Status | On-going | |
| Role: | **As a** *collector* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Generate Player Statistics | Use it for modelling player profiles |
|  | 2. Find player Statistics | Sort and categorize data |
|  | 3. Communicate Relevant statistics | Remove unnecessary statistics |
|  | 4. Sort relevant Player data | Categorize Accordingly |
|  | 5. Remove data abnormalities | Display only correct data |
|  | 6. Make different categories of data | Search Player statistics easily |
|  | 7. Consider only relevant player statistics | Remove all unnecessary statistics |
|  | 8. Add statistics to Player profile | Display Player Profile |

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| Process-2 | Expand sports community with more admissions | |
| Purpose | increase academy community | |
| Target Audience | Members | |
| Status | On-going | |
| Role: | **As a** *collector* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Generate Player Statistics | Use it for modelling player profiles |
|  | 2. Find player Statistics | Sort and categorize data |
|  | 3. Communicate Relevant statistics | Remove unnecessary statistics |
|  | 4. Sort relevant Player data | Categorize Accordingly |
|  | 5. Categorize player statistics | Search Player statistics easily |
|  | 6. Choose relevant Player Statistics | Remove all unnecessary statistics |
|  | 7. Arrange data suitable for creating graphs | Create statistical graphs easily |
|  | 8. Generate statistical graphs | Add them to player profiles |

# USER STORIES: GOAL-6: Individual player development in all aspects of life

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| --- | --- | --- |
| Objective-1 | Generate player data | |
| Purpose | Collect player data | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *developer* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Check his basic details | Append in database if its rights |
|  | 2.Scape player’s data from respected source | Append in database for more info |
|  | 3.Check details filled by End user | Be sure about the data |
|  | 4.Delete all anomalies | Have clean database |
|  | 5.Call database admin for big mistakes | Have solution for those entries |
|  | 6.Append each player category in their own table | Have faster searching |
|  | 7.Archive all player who are not playing | Clear Clutter |
|  | 8.Make a good structure | Parse data easily |
|  | 9.Attend player matches | Analyse player game |
|  | 10.Hire professional psychiatrists | judge player behaviour |
|  | 11.Conduct post match meets | Study player statistics |
|  | 12.Bring players together | Conduct player meets |
|  | 13.Interact with students | Learn personal problems |
|  | 14.Analyse player behaviour | Generate player reports |
|  | 15.Handing player reports | Self player analysis |
|  | 16.Personal mentoring | provide personal attention |

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| --- | --- | --- |
| Process-1 | Observer player attitude | |
| Purpose | Fetching player data | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *collector* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Take data from End User | Have one more source for player’s data |
|  | 2.Take data from web scraping | Have reliable data source |
|  | 3.Append data by admin | Have initial database |
|  | 4.Take data from dataset repositories | Have huge database for head start |
|  | 5.Parse data from different API | Have faster data gathering |
|  | 6.Ask sports officials for rating | Use those ratings in database |
|  | 7.Use Social Network for misc. data | Have Informal data about players |
|  | 8.Use news details for new discoveries | Use them for highlights |

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| Process-2 | Create player profiles | |
| Purpose | Analyse player data and create reports | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *Developers* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Insert basic details in main table | Use it frequently |
|  | 2.Insert Players in different category | Sort them out easily |
|  | 3.Insert rankings in another table | Show manager player’s skill |
|  | 4.Insert links about player | User can see them for more info |
|  | 5.Insert picture, videos in database | Show user who is the player |
|  | 6.Update Current details in database | Use the newest numbers |
|  | 7.Use only stats which will affect prediction | Have better prediction |
|  | 8.Have highest R square value for the data model | Have Highest accuracy |

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| Objective-2 | Educate players | |
| Purpose | Tell players about their report | |
| Target Audience | Students | |
| Status | On-going | |
| Role: | **As a** *Coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1. Imparting good treatments to others | Help others if they have a problem |
|  | 2. Life enriching sessions | Make individuals realise life is not all about winning |
|  | 3. Sportsmanship lectures to trainers | Coaching staff should be convinced in order to convince the players |
|  | 4. Guidance sessions | external experts can give seminar |
|  | 5. Trainer evaluation | check progress of trainers |
|  | 6. Personal mentoring sessions | To prepare trainers for problems that could arise in foreseeable future |
|  | 7. Investigate trainer value | Decide which coaches are best for academy. |
|  | 8. Teaching fair generous behaviour | be impartial no matter anyone |
|  | 9.Improve health and fitness of players | Use them for making predictions. |
|  | 10.Verify consistency | prevent problems affecting further process. |
|  | 11.Transform physical condition | Test diets properly. |
|  | 12.Use different statistical models | Compare their usefulness. |
|  | 13.List available plans | Access them in further assessment. |
|  | 14.Analyse results of different models | Keep only relevant models. |
|  | 15.Compare stats by age | Test their ability to generalize. |
|  | 16.Analyse cross-validation results for models | Select them based on their quality. |

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| Process-1 | Carry out talk sessions with players | |
| Purpose | To educate players | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *Educator* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Plan schedule | meet players |
|  | 2.Organise meets | educate players |
|  | 3.Provide professional tals | exposure of players |
|  | 4. collect player reports | communicate with students |
|  | 5. Give player reports | report analysis |
|  | 6.Conduct mentor session | help students learn |
|  | 7.hire psychiatrists | professional advice |
|  | 8.meet guardians | increase guardian communication |

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| Process-2 | Teach players to develop excel and all aspects of life | |
| Purpose | Development of students | |
| Target Audience | Stakeholders | |
| Status | On-going | |
| Role: | **As a** *Coach* | |
|  | **I want to** *<perform some task>* | **so that I can** *<achieve some goal>* |
| Task Description | 1.Conduct life-enriching | sessions improve student |
|  | 2. Showing importance of lite | help students understand |
|  | 3.Imparting life-values | improve player attitude |
|  | 4.Hire life coaches | teach student lessons |
|  | 5.Organise sessions with coaches | providing professional advice |
|  | 6. Meet students personally | ensure personal growth |
|  | 7.Conduct personality test | collect student data |
|  | 8. Analyse student test data | generate final student report |

***Iteration Backlog***

# *User Stories Goal 1- Design Interactive User Interface*

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| ***Objective-1*** | ***Developing sports careers*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Request creation of Player Profile* | *13* | *I1=20* | *1* |
|  | *use it to do further analytics.* | *5* |
|  | *2. Find Player Data Sources build player profiles.* | *2* |
|  | *3. Create a preliminary database can store the acquired player data.* | *3* | *I2=20* | *2* |
|  | *4. Create a Player Data Spyder get updated player data.* | *8* |
|  | *5. Formulate database structure start creating profiles.* | *3* |
|  | *6. Populate Player Database meet the preliminary objective.* | *1* |
|  | *7. Generate a backup retrieve data in case of loss of files.* | *5* |
|  | *8. Share backup with Project Team expect team to perform assigned tasks.* | *8* | *I3=19* | *3* |
|  | *9. Assign database privileges monitor the changes made to the database.* | *8* |
|  | *10. Launch Player Profile Page fulfil project deliverables.* | *3* |
|  | *11. Find professional competitions apply in it to provide exposure to the players* | *13* | *I4=18* | *4* |
|  | *12. Find all essential equipment’s for mastering the particular sport give better training to the players* | *5* |
|  | *13. Create log file keep track of progress.* | *5* | *I5=18* | *5* |
|  | *14. Decide appropriate sorting for database create a relative rating index* | *5* |
|  | *15. Commit changes on player’s performance render the changes to the team.* | *8* |
|  | *16. Search for spikes in player’s performance rectify the errors* | *2* | *I6=15* | *6* |

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| ***Process-1*** | ***Acquire Player Statistics*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Set up a mandatory field set maintain consistency of database.* | *2* | *I1=20* | *1* |
|  | *2. Research Player statistics make system as accurate as possible.* | *5* |
|  | *3. Set statistics fields in database add player statistics.* | *13* |
|  | *4. Accept Player Profile inputs add new players.* | *5* | *I2=20* | *2* |
|  | *5. Register Player Profiles into database store new players.* | *8* |
|  | *6. Set Statistic limits and bounds keep the data relative and realistic.* | *3* |
|  | *7. Populate Player statistics compare players.* | *1* |
|  | *8. Update Database structure accommodate statistics in player profiles.* | *3* |

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| ***Process-2*** | ***Analyse Data*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Validate Player Profile Format verify that database is consistent.* | *8* | *I1=19* | *1* |
|  | *2. Plot graph of all values sieve abnormalities.* | *3* |
|  | *3. Search for spikes in player’s performances identify abnormalities.* | *8* |
|  | *4. SWOT analysis of player identify strengths and weakness* | *5* | *I2=19* | *2* |
|  | *5. Show the correct, improvised techniques resolve the abnormality issue.* | *5* |
|  | *6. Correct the found weakness refine the player’s techniques.* | *2* |
|  | *7. Check if data has been already used rollback the incorrect data operations.* | *2* |
|  | *8. Notify team about changes ensure consistency in the system.* | *5* |

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| ***Objective-2*** | ***Train Player*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Get all equipment’s train the players on those equipment’s* | *13* | *I1=20* | *1* |
|  | *2. Design exercises train the players on those equipment’s* | *5* |
|  | *3. Design schedule manage time efficiently* | *2* |
|  | *4. Prioritise the important parameters produce accurate results.* | *3* | *I2=20* | *2* |
|  | *5. Draw a map for the shortlisted attributes formalize the observations.* | *8* |
|  | *6. Organise the parameters simplify analysis process.* | *3* |
|  | *7. Record formulated observations discuss with the analysis team.* | *1* |
|  | *8. Correspond with Analysis team refine the observations* | *5* |
|  | *9. Consolidate outline of analysis process systemize procedure.* | *8* | *I3=19* | *3* |
|  | *10. Construct final analysis methodology begins development process.* | *8* |
|  | *11. Mentor personally analyse mind-set of the individual* | *3* |
|  | *12. Get weekly updates of player help improve the skills of player* | *13* | *I4=18* | *4* |
|  | *13. Find player’s current ability find where he fits in the team* | *5* |
|  | *15. Career enhancing sessions to motivate the players* | *5* | *I5=15* | *5* |
|  | *16. Get best coaches to ensure that players get best training* | *5* |

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| ***Process-1*** | ***Coach Player*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Find a certain player view player relevant data* | *8* | *I1=18* | *1* |
|  | *2. Identify current skill set of player analyse player* | *2* |
|  | *3. Identify versatility of the player analyse which tasks can be performed better* | *8* |
|  | *4. Find similar players playing in same position compare player quality.* | *5* | *I2=17* | *2* |
|  | *5. Prioritize players by rating get best deal for the club.* | *5* |
|  | *6. Give player personal mentoring motivate player* | *3* |
|  | *7. Demonstrating a particular task show player how a particular task is done* | *1* |
|  | *8. Display player’s current team know the chance of buying.* | *3* |

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| ***Process-2*** | ***Ensure increase in player career performance*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Get correct player data check previous stats* | *8* | *I1=19* | *1* |
|  | *2. Receive exact information verify the information* | *3* |
|  | *3. Get updated info of player analyse stats* | *8* |
|  | *4. Use Player Data Ask Club to scout player.* | *5* | *I2=18* | *2* |
|  | *5. Get correct analysis of player over period of time To ensure if player is improving* | *5* |
|  | *6. Make a precise database Use it to display on third party portals.* | *1* |
|  | *7. Track validation process Verify data.* | *2* |
|  | *8. Run background checks Ascertain data correctness.* | *5* |

***User Stories Goal 2- Maintain Database of Images***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Objective-1*** | ***Train Coaches*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Life enriching sessions Make individuals realise life is not all about winning* | *5* | *I1=18* | *1* |
|  | *2. Sportsmanship lectures to trainers Coaching staff hould be convinced in order to convince the players* | *5* |
|  | *3. Trainer evaluation To ensure that trainers posses all required knowledge* | *8* |
|  | *4. Trainer personality analysis test Keep track of player progression.* | *8* | *I2=18* | *2* |
|  | *5. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *8* |
|  | *6. Teaching art of sports Understand the sport from all perspectives* | *2* |
|  | *7. After game evaluations how to analyse matches played* | *8* | *I3=16* | *5* |
|  | *8. Pre-match evaluation how to analyse other teams* | *8* |
|  | *9. Detailed knowledge about sports rules* | *8* | *I4=18* | *3* |
|  | *10. Mock matches get familiar with match environment* | *5* |
|  | *11. Imparting good treatment to opponents fair play in matches* | *5* |
|  | *12. Trainer evaluation check progress of trainers* | *8* | *I5=19* | *4* |
|  | *13. Teaching fair generous behaviour be impartial no matter anyone* | *8* |
|  | *14. Guidance sessions external experts can give seminar* | *3* |
|  | *15. Get list of all fields of all sports can manage coaches for all sports* | *5* | *I6=8* | *6* |
|  | *16. Verify data validate coaches* | *3* |

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| --- | --- | --- | --- | --- |
| ***Process-1*** | ***Acquire valuable life lessons*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Imparting good treatments to others Help others if they have a problem* | *8* | *I1=18* | *1* |
|  | *2. Life enriching sessions Make individuals realise life is not all about winning* | *5* |
|  | *3. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *5* |
|  | *4. Guidance sessions external experts can give seminar* | *8* | *I2=18* | *2* |
|  | *5. Trainer evaluation check progress of trainers* | *5* |
|  | *6. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *5* |
|  | *7. Investigate trainer value Decide which coaches are best for academy.* | *8* | *I3=16* | *5* |
|  | *8. Teaching fair generous behaviour be impartial no matter anyone* | *8* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Process-2*** | ***Teach coaches and trainers*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Acquire trainer attributes and data Identify trainer data* | *8* | *I1=18* | *1* |
|  | *2. .Examine coaches relation with each other can communicate with one another if needed* | *5* |
|  | *3. Detailed knowledge about sports rules Ensure correct data is used in future processes.* | *5* |
|  | *4. Survey form Give feedback* | *8* | *I2=18* | *2* |
|  | *5. Extract coach skill values Find out coach strengths.* | *5* |
|  | *6. Find coach weaknesses Can overcome difficulty* | *5* |
|  | *7. Find coach injury record Be aware of physical condition of coach.* | *8* | *I3=16* | *5* |
|  | *8. Compare coach abilities See head to head matchup.* | *8* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Objective-2*** | ***Teach Students*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Life enriching sessions Make individuals realise life is not all about winning* | *8* | *I1=18* | *1* |
|  | *2.Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *5* |
|  | *3. Player evaluation To ensure that players posses s all required knowledge.* | *5* |
|  | *4. Player personality analysis test Keep track of player progression* | *8* | *I2=18* | *2* |
|  | *5. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *5* |
|  | *6. Teaching art of sports Understand the sport from all perspectives* | *5* |
|  | *7. After game evaluations how to analyse matches played* | *13* | *I3=18* | *5* |
|  | *8. Pre-match evaluation how to analyse other teams* | *5* |
|  | *9. Detailed knowledge about sports rules Expect transparency.* | *8* | *I4=18* | *3* |
|  | *10. Mock matches get familiar with match environment* | *8* |
|  | *11.Imparting good treatment to opponents fair play in matches* | *2* |
|  | *12. Player evaluation check progress of players* | *8* | *I5=19* | *4* |
|  | *13. Teaching fair generous behaviour be impartial no matter anyone* | *8* |
|  | *14. Guidance sessions external experts can give seminar* | *3* |
|  | *15. Get list of all fields of all sports can manage coaches for all sports* | *5* | *I6=8* | *6* |
|  | *16. Verify data validate players* | *3* |

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| --- | --- | --- | --- | --- |
| ***Process-1*** | ***Organise life lesson courses*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Imparting good treatments to others Help others if they have a problem* | *8* | *I1=18* | *1* |
|  | *2. Life enriching sessions Make individuals realise life is not all about winning* | *5* |
|  | *3. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *5* |
|  | *4. Guidance sessions external experts can give seminar* | *8* | *I2=18* | *2* |
|  | *5. Trainer evaluation check progress of trainers* | *5* |
|  | *6. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *5* |
|  | *7. Investigate trainer value Decide which coaches are best for academy.* | *13* | *I3=18* | *5* |
|  | *8. Teaching fair generous behaviour be impartial no matter anyone* | *5* |

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| ***Process-2*** | ***Teach students importance of sports*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Acquire player attributes and data Identify player data* | *8* | *I1=18* | *1* |
|  | *2. Examine players relation with each other can communicate with one another if needed* | *5* |
|  | *3. Detailed knowledge about sports rules Ensure correct data is used in future processes.* | *5* |
|  | *4. Survey form Give feedback* | *13* | *I2=20* | *2* |
|  | *5. Extract player skill values Find out player strengths.* | *5* |
|  | *6. Find player weaknesses Can overcome difficulty* | *2* |
|  | *7. Find player injury record Be aware of physical conditions of player.* | *13* | *I3=18* | *5* |
|  | *8. Compare player abilities See head to head matchup.* | *5* |

***3. USER STORIES: GOAL 3– Catalogue Hotel and Resort Information and Selection***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Objective-1*** | ***Pre-process Player Data*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Verify raw player data ensure data correctness.* | *5* | *I1=20* | *1* |
|  | *2.Evaluate player data identify outliers.* | *13* |
|  | *3.Dispose irrelevant attributes eliminate unnecessary information.* | *2* |
|  | *4.Group and compare attributes examine data distribution.* | *5* | *I2=15* | *2* |
|  | *5.Get expert nutritionist to advice get detailed knowledge of nutritions* | *8* |
|  | *6.Schedule player fitness chart plan help improve fitness* | *2* |
|  | *7.Standardize player features ensure equal importance to each feature* | *5* | *I3=20* | *3* |
|  | *8.Evaluate data dimensionality detect problems with high dimensionality* | *8* |
|  | *9.Use different nutrition selection strategies fix dimensionality problems* | *5* |
|  | *10. Consolidate final data with features use it to train statistical models* | *2* |
|  | *11. Compare attributes by age should not exhaust the player* | *5* | *I4=18* | *4* |
|  | *12. Get BMI index of player analyse current fitness of player* | *8* |
|  | *13. Assess individual nutrition needs get best fitness for each individual* | *5* |
|  | *14. Provide education including practical tips to meet our nutrition needs spread awareness among players* | *8* | *I5=18* | *5* |
|  | *15. Promote your body's potential towards health, wellness and disease prevention remain fit* | *5* |
|  | *16. Tabulate player data easy to analyse fitness stats* | *5* |

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| ***Process-1*** | ***Associate Player Health Profiles*** |  |  |  |
|  | *1.Fetch formatted player data use it for further training process.* | *5* | *I1=20* |  |
|  | *2.List available raw player attributes choose attributes to be considered.* | *13* | *1* |
|  | *3.Verify consistency prevent problems affecting further process.* | *2* |
|  | *4.Transform physical condition help players to be more fit* | *5* | *I2=15* | *2* |
|  | *5.Compare attributes between players decide what attributes are important.* | *8* |
|  | *6.Inspect attributes by player positions analyse importance of player position.* | *2* |
|  | *7.Compare stats by age analyse importance of age.* | *8* | *I3=16* | *3* |
|  | *8.Associate insights gained with data decide better statistical models.* | *8* |

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| ***Process-2*** | ***Generate Player Diets*** |  |  |  |
|  | *1.Tabulate player data prototype features to generate.* | *13* | *I1=20* |  |
|  | *2.Verify whether generated diets are enough improve the current physical condition* | *5* | *1* |
|  | *3.Recommend the diet player can remain fit* | *2* |
|  | *4.Visualize transformed condition verify transformations* | *8* | *I2=18* | *2* |
|  | *5.Scale features ensure valid scaling for statistical methods.* | *5* |
|  | *6.Analyse time needed if there is an injury verify similar scale in features.* | *5* |
|  | *7.Evaluate different strategies for diet choose appropriate strategy.* | *13* | *I3=18* | *3* |
|  | *8.Integrate generated features and methods apply them to new data in the future.* | *5* |

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| ***Objective-2*** | ***Recommend Diets*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Access data in proper format Use it to choose a model.* | *5* | *I1=20* | *1* |
|  | *2.Access different statistical models Utilise them for making predictions.* | *13* |
|  | *3.Show players which diets are better maintain best results* | *2* |
|  | *4.Cross-validate and analyse models Select them based on their quality.* | *5* | *I2=15* | *2* |
|  | *5.Verify if any allergies with given diet Select appropriate diet* | *8* |
|  | *6.Assess medical history Establish if any contradictions* | *2* |
|  | *7.Modify the parameters Analyse the changes caused by them.* | *5* | *I3=20* | *3* |
|  | *8.Cross-validate changed parameter results Choose the optimal parameters.* | *8* |
|  | *9.Use different scoring methods Analyse the model and establish optimality.* | *5* |
|  | *10.Finalize on the model and parameters Use the model in further processes.* | *2* |
|  | *11.identify the strengths and weaknesses present in an individual's diet. overcome weakness* | *5* | *I4=18* | *4* |
|  | *12.Maintain those necessary dietary changes balancing diet* | *8* |
|  | *13.To improve nutrition and health outcomes Choose the optimal parameters* | *5* |
|  | *14.Get BMI index of player analyse current fitness of player* | *8* | *I5=18* | *5* |
|  | *15.Recommend the diet improve the current physical condition* | *5* |
|  | *16. Compare stats by age get best details* | *5* |

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| ***Process-1*** | ***Arrange Diet Awareness Sessions*** |  |  |  |
|  | *1.Improve health and fitness of players Use them for making predictions.* | *5* | *I1=20* |  |
|  | *2.Verify consistency prevent problems affecting further process.* | *13* | *1* |
|  | *3.Transform physical condition Test diets properly.* | *2* |
|  | *4.Use different statistical models Compare their usefulness.* | *5* | *I2=15* | *2* |
|  | *5.List available plans Access them in further assessment.* | *8* |
|  | *6.Analyse results of different models Keep only relevant models.* | *2* |
|  | *7.Compare stats by age Test their ability to generalize.* | *8* | *I3=16* | *3* |
|  | *8.Analyse cross-validation results for models Select them based on their quality.* | *8* |

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| ***Process-2*** | ***Hand Out Diets*** |  |  |  |
|  | *1.Access the optimal model Study it’s working and improve it.* | *13* | *I1=20* |  |
|  | *2.Prepare generic plans Establish their use.* | *5* | *1* |
|  | *3.Hand out the diet plans to the players Check if there can be improvement* | *2* |
|  | *4.Advice players to follow the diet plan Compare results after use* | *8* | *I2=18* | *2* |
|  | *5.Cross-validate changed parameter results Ensure their ability to generalize* | *5* |
|  | *6.Analyse the cross-validation result Select the optimal set of parameters.* | *5* |
|  | *7.Train the model with optimal parameters Achieve best performing model* | *13* | *I3=18* | *3* |
|  | *8.Test the model Ensure accuracy.* | *5* |

# *4. USER STORIES: GOAL 4- Process User Queries*

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| --- | --- | --- | --- | --- |
| ***Objective-1*** | ***Studying player behaviour*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Conduct matches analyse player statistics* | *13* | *I1=20* | *1* |
|  | *2. Collect player data generate reports* | *5* |
|  | *3. Extract player information train them* | *2* |
|  | *4. Conduct personal sessions mentor players* | *8* | *I2=20* | *2* |
|  | *5. Hire professional help refine reports* | *8* |
|  | *6. Conduct personality tests collect personal details* | *3* |
|  | *7. Organise events study player attitude* | *1* |
|  | *8. Provide attitude tests collecting more data* | *8* | *I3=20* | *3* |
|  | *9. Analyse tests generate reports* | *8* |
|  | *10. Organise coaching sessions talk about reports* | *3* |
|  | *11. Conduct parent meetings communicate with guardians* | *1* |
|  | *12. Question guardians regarding ward collect more personal details* | *8* | *I4=20* | *4* |
|  | *13.Personally meet players talk with students* | *5* |
|  | *14. Conduct outdoor trips study player behaviour* | *5* |
|  | *15. Post-match analysis studying attitude* | *2* |
|  | *16. Conduct student review generate final student report* | *3* | *I5=3* | *5* |

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| ***Process-1*** | ***Organise matches among students*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Make players participate conduct friendly matches* | *13* | *I1=20* | *1* |
|  | *2. Conduct friendly matches study player attitude* | *5* |
|  | *3.Judge player’s attitude Assess the quality of a player* | *2* |
|  | *4. Organise professional tournaments generate large scale report* | *13* | *I2=20* | *2* |
|  | *5. Conduct prize distribution motivate players to win* | *5* |
|  | *6. Bring players together study player friendliness* | *2* |
|  | *7.Rent stadiums conduct tournaments* | *8* | *I3=16* | *4* |
|  | *8.Organise marathons encourage athletics* | *8* |

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| ***Process-2*** | ***Pay attention to player attitude*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Attend player matches Analyse player game* | *13* | *I1=20* | *1* |
|  | *2.Hire professional psychiatrists judge player behaviour* | *5* |
|  | *3.Conduct post match meets Study player statistics* | *2* |
|  | *4.Bring players together Conduct player meets* | *13* | *I2=20* | *2* |
|  | *5. Interact with students Learn personal problems* | *5* |
|  | *6.Analyse player behaviour Generate player reports* | *2* |
|  | *7.Handing player reports Self player analysis* | *8* | *I3=16* | *3* |
|  | *8.Personal mentoring provide personal attention* | *8* |

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| ***Objective-2*** | ***Teach Players*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Sportsmanship sessions Make individuals realise life is not all about winning* | *13* | *I1=20* | *1* |
|  | *2. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *5* |
|  | *3. Trainer evaluation To ensure that trainers posses all required knowledge* | *2* |
|  | *4. Trainer personality analysis test Keep track of player progression.* | *8* | *I2=20* | *2* |
|  | *5. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *8* |
|  | *6. Teaching art of sports Understand the sport from all perspectives* | *3* |
|  | *7. After game evaluations how to analyse matches played* | *1* |
|  | *8. Pre-match evaluation how to analyse other teams* | *8* | *I3=20* | *3* |
|  | *9. Detailed knowledge about sports rules Expect transparency.* | *8* |
|  | *10. Mock matches get familiar with match environment* | *3* |
|  | *11. Imparting good treatment to opponents fair play in matches* | *1* |
|  | *12. Trainer evaluation check progress of trainers* | *8* | *I4=20* | *4* |
|  | *13. Teaching fair generous behaviour be impartial no matter anyone* | *5* |
|  | *14. Guidance sessions external experts can give seminar* | *5* |
|  | *15. Get list of all fields of all sports can manage coaches for all sports* | *2* |
|  | *16. Verify data validate coaches* | *3* | *I5=3* | *5* |

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| ***Process-1*** | ***Organise Personal Sessions*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Improve health and fitness of players Use them for making predictions.* | *5* | *I1=20* | *1* |
|  | *2. Verify consistency prevent problems affecting further process.* | *13* |
|  | *3. Transform physical condition Test diets properly.* | *2* |
|  | *4. Use different statistical models Compare their usefulness.* | *5* | *I2=20* | *2*  *3* |
|  | *5. List available plans Access them in further assessment.* | *5* |
|  | *6. Analyse results of different models Keep only relevant models.* | *5* |
|  | *7. Compare stats by age Test their ability to generalize.* | *5* |
|  | *8. Analyse cross-validation results for models Select them based on their quality.* | *8* | *I3=8* | *3* |

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| ***Process-2*** | ***Educate Players on sportsmanship*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Imparting good treatments to others Help others if they have a problem* | *13* | *I1=20* | *1* |
|  | *2. Life enriching sessions Make individuals realise life is not all about winning* | *5* |
|  | *3. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *2* |
|  | *4. Guidance sessions external experts can give seminar* | *13* | *I2=20* | *2* |
|  | *5. Trainer evaluation check progress of trainers* | *5* |
|  | *6. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *2* |
|  | *7. Investigate trainer value Decide which coaches are best for academy.* | *8* | *I3=16* | *3* |
|  | *8. Teaching fair generous behaviour be impartial no matter anyone* | *8* |

***5. USER STORIES: GOAL 5- Accommodate GPS Technology***

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| ***Objective-1*** | ***Perform analysis of region*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.visiting nearby regions spreading awareness* | *5* | *I1=20* | *1* |
|  | *2.collecting data analyse data* | *13* |
|  | *3.analysing data generating reports* | *2* |
|  | *4.hire travel agents learning about regions* | *8* | *I2=20* | *2* |
|  | *5.hire statistics people generate region statistics* | *5* |
|  | *6.visit nearby sports centre study other academics* | *2* |
|  | *7.visit tournaments analyse sports crowd* | *5* |
|  | *8.meet youth find latest sports trends* | *8* | *I3=19* | *3* |
|  | *9.travel nearby sport events study regional sports* | *8* |
|  | *10.travel to rural areas studying rural sports* | *3* |
|  | *11.travel to urban areas studying urban sports* | *13* | *I4=18* | *4* |
|  | *12.generate charts study statistics* | *5* |
|  | *13.visit local schools learn school sports* | *5* | *I5=18* | *5* |
|  | *14.visit outdoor marathons find new players* | *13* |
|  | *15.visit other local academies increase network* | *13* | *I6=18* | *6* |
|  | *16.meet local coaches increase contacts* | *5* |

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| ***Process-1*** | ***Find regional sports statistics*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Generate region Statistics Use it for modelling region profiles* | *5* | *I1=20* | *1* |
|  | *2. Find region Statistics Sort and categorize data* | *13* |
|  | *3. Communicate Relevant statistics Remove unnecessary statistics* | *2* |
|  | *4. Sort relevant region data Categorize Accordingly* | *5* | *I2=20* | *2* |
|  | *5. Remove data abnormalities Display only correct data* | *5* |
|  | *6. Make different categories of data Search region statistics easily* | *5* |
|  | *7. Consider only relevant region statistics Remove all unnecessary statistics* | *5* |
|  | *8. Add statistics to region profile Display region Profile* | *8* | *I3=8* | *3* |

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| ***Process-2*** | ***Communicate relevant Statistics*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Generate region Statistics Use it for modelling region profiles* | *5* | *I1=20* | *1* |
|  | *2. Find region Statistics Sort and categorize data* | *13* |
|  | *3. Communicate Relevant statistics Remove unnecessary statistics* | *2* |
|  | *4. Sort relevant region data Categorize Accordingly* | *5* | *I2=20* | *2* |
|  | *5. Categorize region statistics Search region statistics easily* | *5* |
|  | *6. Choose relevant region Statistics Remove all unnecessary statistics* | *5* |
|  | *7. Arrange data suitable for creating graphs Create statistical graphs easily* | *5* |
|  | *8. Generate statistical graphs Add them to region profiles* | *8* | *I3=8* | *3* |

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| ***Objective-2*** | ***Increase community*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.visiting nearby regions spreading awareness* | *8* | *I1=20* | *1* |
|  | *2.collecting data analyse data* | *5* |
|  | *3.analysing data generating reports* | *5* |
|  | *4.hire travel agents learning about regions* | *2* |
|  | *5.hire statistics people generate region statistics* | *5* | *I2=20* | *2* |
|  | *6.visit nearby sports center study other academics* | *8* |
|  | *7.visit tournaments analyse sports crowd* | *2* |
|  | *8.meet youth find latest sports trends* | *5* |
|  | *9.travel nearby sport events study regional sports* | *8* | *I3=18* | *3* |
|  | *10.travel to rural areas studying rural sports* | *5* |
|  | *11.travel to urban areas studying urban sports* | *5* |
|  | *12.generate charts study statistics* | *13* | *I4=18* | *4* |
|  | *13.visit local schools learn school sports* | *5* |
|  | *14.visit outdoor marathons find new players* | *8* | *I5=18* | *5* |
|  | *15.visit other local academies increase network* | *5* |
|  | *16.meet local coaches increase contacts* | *5* |

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| ***Process-1*** | ***Use promoters to spread awareness of sports*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Generate Player Statistics Use it for modelling player profiles* | *5* | *I1=20* | *1* |
|  | *2. Find player Statistics Sort and categorize data* | *13* |
|  | *3. Communicate Relevant statistics Remove unnecessary statistics* | *2* |
|  | *4. Sort relevant Player data Categorize Accordingly* | *5* | *I2=20* | *2* |
|  | *5. Remove data abnormalities Display only correct data* | *5* |
|  | *6. Make different categories of data Search Player statistics easily* | *5* |
|  | *7. Consider only relevant player statistics Remove all unnecessary statistics* | *5* |
|  | *8. Add statistics to Player profile Display Player Profile* | *8* | *I3=8* | *3* |

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| ***Process-2*** | ***Expand sports community with more admissions*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Generate Player Statistics Use it for modelling player profiles* | *5* | *I1=20* | *1* |
|  | *2. Find player Statistics Sort and categorize data* | *13* |
|  | *3. Communicate Relevant statistics Remove unnecessary statistics* | *2* |
|  | *4. Sort relevant Player data Categorize Accordingly* | *5* | *I2=20* | *2* |
|  | *5. Categorize player statistics Search Player statistics easily* | *5* |
|  | *6. Choose relevant Player Statistics Remove all unnecessary statistics* | *5* |
|  | *7. Arrange data suitable for creating graphs Create statistical graphs easily* | *5* |
|  | *8. Generate statistical graphs Add them to player profiles* | *8* | *I3=8* | *3* |

# *6. USER STORIES: GOAL 6 – Process User Feedback*

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| --- | --- | --- | --- | --- |
| ***Objective-1*** | ***Generate player data*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Check his basic details Append in database if its rights* | *13* | *I1=20* | *1* |
|  | *2.Scape player’s data from respected source Append in database for more info* | *5* |
|  | *3.Check details filled by End user Be sure about the data* | *2* |
|  | *4.Delete all anomalies Have clean database* | *8* | *I2=20* | *2* |
|  | *5.Call database admin for big mistakes Have solution for those entries* | *8* |
|  | *6.Append each player category in their own table Have faster searching* | *3* |
|  | *7.Archive all player who are not playing Clear Clutter* | *1* |
|  | *8.Make a good structure Parse data easily* | *5* | *I3=20* | *3* |
|  | *9.Attend player matches Analyse player game* | *5* |
|  | *10.Hire professional psychiatrists judge player behaviour* | *5* |
|  | *11.Conduct post match meets Study player statistics* | *5* |
|  | *12.Bring players together Conduct player meets* | *8* | *I4=20* | *4* |
|  | *13.Interact with students Learn personal problems* | *8* |
|  | *14.Analyse player behaviour Generate player reports* | *3* |
|  | *15.Handing player reports Self player analysis* | *1* |
|  | *16.Personal mentoring provide personal attention* | *8* | *I5=8* | *5* |

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| ***Process-1*** | ***Observer player attitude*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Take data from End User Have one more source for player’s data* | *5* |  |  |
|  | *2.Take data from web scraping Have reliable data source* | *5* |
|  | *3.Append data by admin Have initial database* | *2* |
|  | *4.Take data from dataset repositories Have huge database for head start* | *8* | *I4=20* | *4* |
|  | *5.Parse data from different API Have faster data gathering* | *5* |
|  | *6.Ask sports officials for rating Use those ratings in database* | *3* |
|  | *7.Use Social Network for misc. data Have Informal data about players* | *1* |
|  | *8.Use news details for new discoveries Use them for highlights* | *3* |

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| ***Process-2*** | ***Create player profiles*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Insert basic details in main table Use it frequently* | *5* |  |  |
|  | *2.Insert Players in different category Sort them out easily* | *5* |
|  | *3.Insert rankings in another table Show manager player’s skill* | *2* |
|  | *4.Insert links about player User can see them for more info* | *8* | *I4=20* | *4* |
|  | *5.Insert picture, videos in database Show user who is the player* | *5* |
|  | *6.Update Current details in database Use the newest numbers* | *3* |
|  | *7.Use only stats which will affect prediction Have better prediction* | *1* |
|  | *8.Have highest R square value for the data model Have Highest accuracy* | *3* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Objective-2*** | ***Educate players*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1. Imparting good treatments to others Help others if they have a problem* | *13* | *I1=20* | *1* |
|  | *2. Life enriching sessions Make individuals realise life is not all about winning* | *5* |
|  | *3. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players* | *2* |
|  | *4. Guidance sessions external experts can give seminar* | *8* | *I2=20* | *2* |
|  | *5. Trainer evaluation check progress of trainers* | *5* |
|  | *6. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future* | *5* |
|  | *7. Investigate trainer value* | *2* |
|  | *Decide which coaches are best for academy.* | *8* | *I3=20* | *3* |
|  | *8. Teaching fair generous behaviour be impartial no matter anyone* | *5* |
|  | *9.Improve health and fitness of players Use them for making predictions.* | *3* |
|  | *10.Verify consistency prevent problems affecting further process.* | *3* |
|  | *11.Transform physical condition Test diets properly.* | *1* |
|  | *12.Use different statistical models Compare their usefulness.* | *8* | *I4=20* | *4* |
|  | *13.List available plans Access them in further assessment.* | *8* |
|  | *14.Analyse results of different models Keep only relevant models.* | *3* |
|  | *15.Compare stats by age Test their ability to generalize.* | *1* |
|  | *16.Analyse cross-validation results for models Select them based on their quality.* |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Process-1*** | ***Carry out talk sessions with players*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Plan schedule meet players* | *5* |  |  |
|  | *2.Organise meets educate players* | *5* |
|  | *3.Provide professionals exposure of players* | *2* |
|  | *4. collect player reports communicate with students* | *8* | *I4=20* | *4* |
|  | *5. Give player reports report analysis* | *5* |
|  | *6.Conduct mentor session help students learn* | *3* |
|  | *7.hire psychiatrists professional advice* | *1* |
|  | *8.meet guardians increase guardian communication* | *3* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Process-2*** | ***Teach players to develop excel and all aspects of life*** | ***SP*** | ***IC*** | ***IP*** |
|  | *1.Conduct life-enriching sessions improve student* | *5* |  |  |
|  | *2. Showing importance of late help students understand* | *5* |
|  | *3.Imparting life-values improve player attitude* | *2* |
|  | *4.Hire life coaches teach student lessons* | *8* | *I4=20* | *4* |
|  | *5.Organise sessions with coaches providing professional advice* | *5* |
|  | *6. Meet students personally ensure personal growth* | *3* |
|  | *7.Conduct personality test collect student data* | *1* |
|  | *8. Analyse student test data generate final student report* | *3* |

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 8

**Sports Academy**

**Software Configuration Management**

***21-07-2017***

***Version 1.0***



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB/PHP** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/Front End** |

**Approved By: Dr M. R. Dube**

**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

# *The software engineering community realized that software architecture is not only about structures (components and interfaces), but also about system behavior (interaction between components, protocols). Furthermore, this community introduced an architectural design phase in the system life cycle, in which requirements should be satisfied and which should serve as a basis for detailed design activities. Researchers and engineers in software engineering have adopted the term 'architecture' as well. Nevertheless, there is no consensus about the subject; no universally-accepted definition of the term 'architecture' is agreed upon.*

# *Perry and Wolf (1992) consider a software architecture as a set of architectural elements that have a particular form. Similar to Zachman and Van Waes, they distinguish three different classes of architectural elements: processing, data, and connecting elements. Perry and Wolf consider an architecture as a necessary framework in which requirements are satisfied and which serves as a basis for the design.*

# *Garlan et al. (1995) stated that a system's architectural design is concerned with describing its decomposition into computational elements and their interactions. Design tasks at this level include organizing the system as a composition of components; developing global control structures; selecting protocols for communication, synchronization, and data access; assigning functionality to design elements; physically distributing the components; scaling the system and estimating performance; defining the expected evolutionary paths; and selecting among design alternatives.*

# *Soni et al. (1995) stated that software architecture is concerned with capturing the structures of a system and the relationships among the elements both within and between structures. Software architectures describe how a system is decomposed into components, how these components are interconnected, and how they communicate and interact with each other. Based on a survey on the role of architecture in the design and development of large systems within Siemens, Soni et al. notice that different structures are used at different stages of the development process. Each structure describes the system from a different perspective.*

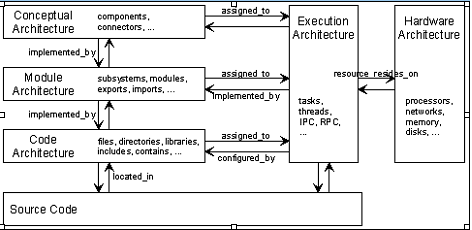
# *Soni et al. argue that the four different architectures they distinguished are needed because of the growing complexity of software throughout history (see Figure 1.3). Initially, only the code architecture was required. The module and execution architecture became necessary when systems became larger and distributed. Now, software engineers would like to use communicating objects and assemblies of reused components. Therefore, a high-level structure is described in the form of a conceptual architecture. On the other hand, Zachman and especially Van Waes reason that their various architectures are wanted as representation for each of the involved actors.*

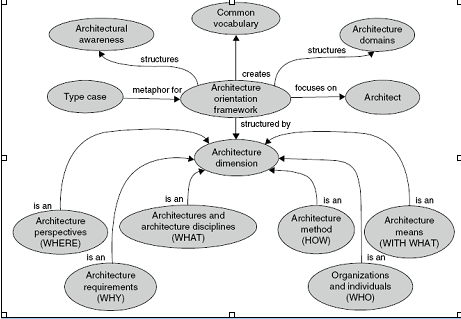
# *Garlan and Perry (1995) found that the term 'architecture' is used in a number of ways in software engineering. Among the various uses are a) the architecture of a particular system, as in 'the architecture of this system consists of the following three components,' b) an architectural style, as in 'this system adopts a client-server architecture,' and c) the general study of architecture, as in 'the papers in that issue are about architecture.'*

# *A discussion group at Carnegie Mellon University's Software Engineering Institute developed a typical definition: the structure of the components of a program/system, their interrelationships, and principles and guidelines governing their design and evolution over time. They represent a spectrum in the software architecture community about the emphasis that should be placed on architecture - its constituent parts, the whole entity, the way it behaves once built, or the process of building it. Taken together, they reflect the various aspects of software architecture.*

# *Software architecture is concerned with the design and implementation of IT systems. From the viewpoint of architectural activity, software architecture covers the steps necessary to design and implement architecture. With regard to the structural aspect of architecture, software architecture describes the structures of IT systems. From this point on, the terms “IT system” and “system” are used synonymously provided no explicit differentiation is necessary. A system is a unit that consists of integrated software and hardware building blocks and exists for the purpose of fulfilling a functional objective. To achieve this objective, it communicates with its environment and must take account of the conditions defined by the environment.*

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# ARCHITECTURE OBJECTIVES

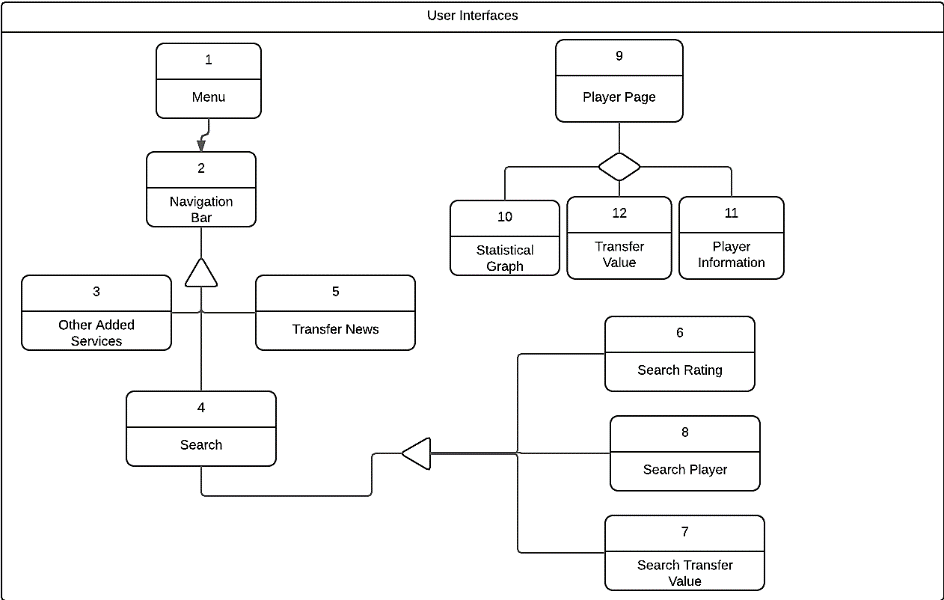
* ***To manage complexity****: An architectural model allows one to present the essence of a complex system in a (simple) model. An architectural model supports the ability to comprehend complex systems; it presents them at a level of abstraction at which a system's high-level design can be understood. It supports the analysis of relationships as an aid to understand complexities in a design environment. In particular, an architecture is needed in complex, dynamic environments (Van Waes, 1991). Zachman states that the increased scope of design and levels of complexity of system implementations are forcing the use of architectural models for defining and controlling the interfaces and the integration of the system components (Zachman, 1987). Architectural models abstract away from details instead of from the essential complexity. Brooks claims that 'the complexity of software is an essential property, not an accidental one' (Brooks, 1995; p. 183). Descriptions of a software entity that abstract away its complexity often abstract away its essence.*
* ***To serve as a set of specifications****: An architecture may be seen as a result of the design process. It is laid down in specifications, which are derived from the requirements, and from which the desired system can be built. Specifying an architecture is concerned with the specification of components, their interactions, and the constraints on these entities and their interactions. These unambiguous specifications define the scope of future development activities, and serve as a basis for further design and implementation activities.*
* ***Means of communication****: Furthermore, an architectural model may play the role of a means of communication during a system (re-)design process. The architect can use it to visualise various aspects of the system to be designed, thus providing the various parties concerned with a basis for discussion and decision-making. By producing order in chaos, architectural models help each party to clarify its perception of the problem. Visualisation and explanation of the relevant aspects of the problem area, and the possible relationships between them, supports the various actors to focus their attention on the essential elements, thus providing a basis for discussion of the problems.*
* ***To indicate the most vital system elements****: Furthermore, the architecture determines the nature and quality of a system. As such, an architectural model indicates the invariant or most vital system elements, which must be treated carefully during system re-design. Systems evolve and are adapted to new uses, just as buildings change over time and are adapted to new uses. One frequently accompanying property of evolution is an increasing brittleness of the system, caused by violations of the architecture. Violations of the architecture frequently lead to an increase in problems in the system and contribute to an increasing resistance to change, or at least to changing gracefully.*
* ***Means to reduce the impact of changes****: Another role of an architecture involves its contribution to the effective re-design of a system. The architecture should reduce the impact of changes to the lower component levels, and to as few components as possible. Both for shop floor control systems and for products, it is advantageous to use as many parts of the existing system or product design as possible. In a re-engineering trajectory, an architectural model of the system allows one to pinpoint and discuss the areas requiring major change, and to integrate the new specifications into the existing model. Furthermore, architectural change is not so much determined by the system components, as well by the interfaces between these components; the ease with which components can be modified, replaced, or with which the system can be extended by new components is dependent on the extent to which the interfaces of the new components match those of the old ones.*
* ***Means to gain strategic benefits****: Finally,(product) architecture may have certain strategic importance for a company. The development of a new product brings together a wide range of technologies. Only a few of these technologies contribute to ultimate competitive advantage. Successful companies do not compete on (and even give away) the enabling technologies on which their core utility is based. By the architectural design of functions that can be filled in by cheap, standard components, companies profit from the strong competition in the markets for these components, and are free to focus on their true sources of competitive value. In addition, a company might extend the value of its product by publishing the product's interfaces to the outside world. Other enterprises might use this product as an indispensable part for their own products*

# SYSTEM DESIGN SPECIFICATION

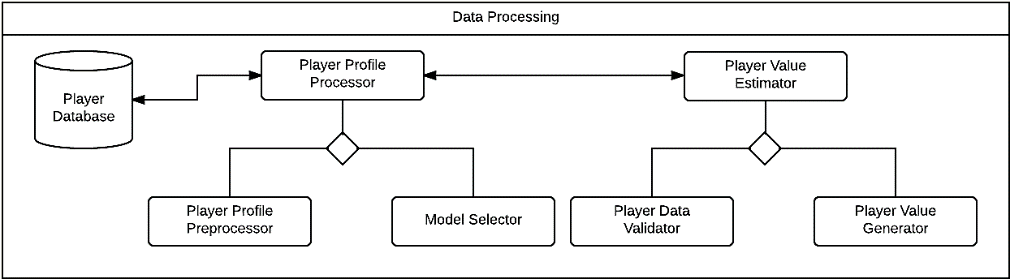
*A modular architecture may naturally result in a layered architecture; modules are assigned to specific layers. Layers reflect design decisions based on allowable relations and interfacing constraints. The layers in an architecture represent allowable interfaces among modules. Modules within a layer can communicate with each other. Modules in different layers can communicate with each other only if their respective layers are adjacent (Soni et al., 1995). A layer builds on its underlying layer, which at its turn builds on its underlying layer as well. Consequently, a layer explicitly uses the functionality of its underlying layer, and implicitly uses the functionality of all layers underneath its underlying layer.*

*Layers are used mainly to solve mapping problems. The mapping task is decomposed in layers: each layer performs a specific part of the mapping. In this sense, the division in layers is part of an architecture. The advantage of layers is the flexibility: changes can be made inside a layer without affecting other layers. A disadvantage of a layered architecture is its rigidity: new layers are hard to be shoved in between existing layers, since this requires a (major) change of interfaces. Examples of the application of layers in mappings are:*

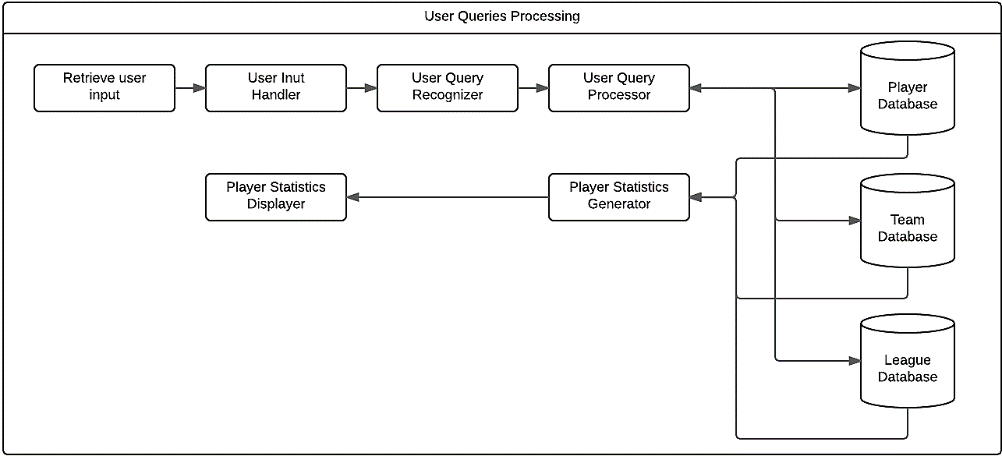
* *the targets of an enterprise must be mapped on its physical processes; therefore, a strategical, tactical, and operational layer are distinguished;*



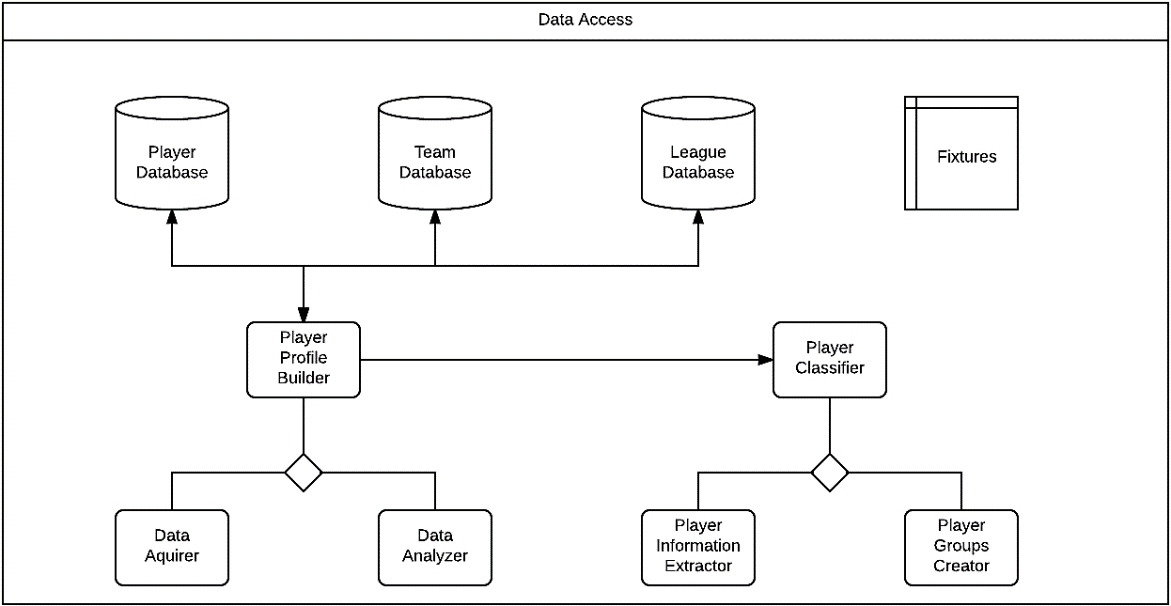












|  |  |
| --- | --- |
| Layer-1 | User Interfaces |
| Purpose | This the layer that the users will use to interact with the system. |
| Related Components | User Interfaces. |
| Software Interfaces | Layer 3 and Layer 4 Interfaces |
| Composition Style | **Generalization** |
| Communication Pattern | **Vertical** |
| Implementation Steps | 1. Create Website  2. Host Server  3. Access database to present statistics to user  4. Present player on-the-field information  5. Present player off-the-field information  6. Generate required statistical graphs  7. Generate forms for feedback  8. Generate navigation elements |

|  |  |
| --- | --- |
| Layer-2 | Data Processing |
| Purpose | This Layer processes the data of the system and makes predictions. |
| Related Components | Goal 3 and Goal 6 components |
| Software Interfaces | Layer 1 and Layer 4 Interfaces |
| Composition Style | **Aggregation** |
| Communication Pattern | **Horizontal** |
| Implementation Steps | 1. Access Data  2. Remove data abnormalities  3. Remove unnecessary database  4. Encode data in a format suitable for statistical models  5. Statistical Modelling  6. Check and cross-validate model  7. Tune model  8. Generate predictions and store in the database |

|  |  |
| --- | --- |
| Layer-3 | User Queries Processing |
| Purpose | The User Query Processing is done in this layer of components. |
| Related Components | Goal 4 and Goal 5 components |
| Software Interfaces | Layer 1 and Layer 4 Interfaces |
| Composition Style | **Composition** |
| Communication Pattern | **Horizontal** |
| Implementation Steps | 1. Accept Query  2. Extract the attributes required by the query  3. Gain Database access  4. Verify Database access  5. Query the required values from database  6. Validate values from the response  7. Send appropriate graphs/values to the interface |

|  |  |
| --- | --- |
| Layer-4 | Data Access |
| Purpose | The Data Access and Acquiring is done in this layer. |
| Related Components | Goal 1 and Goal 2 components |
| Software Interfaces | Layer 3 and Layer 4 Interfaces |
| Composition Style | **Aggregation** |
| Communication Pattern | **Vertical** |
| Implementation Steps | 1. Fetch data from data sources  2. Validate received data  3. Populate Player database  4. Populate League database  5. Populate Clubs database  6. Build Player Profiles  7. Group players on various attributes  8. Analyse groups and represent group insights in the database |

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# INTRODUCTION

*As identified in the Software Configuration Management (SCM) Plan Standard, the implementation of a formal and structured SCM environment ensures that all Software Development product artefacts are baselined and maintained in a stable environment.*

*This SCM Procedures identifies the procedures that conform to the requirements identified in the SCM Plan Standard. This document is intended to provide a uniform approach to SCM for the software product being developed or modified by projects regardless of location or staffing model. It describes the procedures for managing and controlling the development, delivery, and maintenance of the specific Software Product <Product name>.*

*The SCM Procedures applies to <Product Name> under development or maintenance. It also applies to all documentation products and other project or program initiative documentation that management communicates now or in the future as required to be controlled by SCM procedures. Each project associated with the product will develop work instructions for the implementation of these procedures.*

*The primary audience for this document consists of staff assigned to projects where <Product Name> is within scope are required to implement and apply SCM procedures.*

# ROLES AND RESPONSIBILITIES

*<This section identifies the specific roles and responsibilities as they relate to SCM, each Project will identify the role that will be responsible for the Product. The SCM Manager will create work instruction documents to assist the project team members with the responsibilities within their assigned role. Each Project will identify who is assigned to each role by having one roles and responsibilities table below per project by coping table for each project and pasting directly below the previous table provided.>*

*The table below is a specific list of the personnel who may be members of Project teams and SCM teams along with their assigned roles and responsibilities as they relate to SCM. The Roles defined herein can sometimes be overlapped with other roles and responsibilities depending on the environment. In addition, one person allocated for a specific role as listed below may often have the responsibility of other roles.*

|  |  |
| --- | --- |
| *<Named Project(s)>* ***Role*** | *<Named Project(s)>* ***Responsibility*** |
| *Program Manager/*  *Project Management*  Chinmay Patil | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions for each Product being worked as part of the Program/Project.* * *Ensures proper execution of the SCM Plan Standard.* * *Oversees the SCM process.* * *Assesses and evaluates all other change requests.* * *Establish appropriate Change Control Board (CCB).* * *Submit CCB baseline information.* * *Identify dependent projects.* * *Establish/revise required artifacts.* * *Creation of SCM Procedures and work instructions for each VA product they are assigned.* |
| *Software Configuration Manager*  Ajinkya Deshpande | * *Educates project team members in SCM “best practices.”* * *Develops and maintains SCM Procedures and work instructions for each VA product they are assigned.* * *Establishes, promotes, and releases baselines.* * *Performs or validates interim and final builds.* * *Prepares release package, release archives and Version Description Documents (VDD).* * *Accountable for instituting the established processes and reporting progress statistics based on change requests.* * *Identifies product baselines as necessary of all products within their assigned Projects.* * *Responsible for SCM audits and necessary status accounting related to the product.* * *Conducts audits at scheduled milestones.* |
| *Development Manager/Leads*  Sagar Telangi | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* * *Submits build/release requests.* * *Coordinates development activities and assigns tasks.* * *Ensures all SCM Procedures and work instructions are implemented and followed for all software, documentation, and/or any other components for which they are responsible.* * *Ensures all developers’ work within the specified SCM process and related guidelines as specified in the SCM Procedures and work instructions.* * *Attends the CCB meetings and provide technical details, as required.* |
| *Developers/System Administration/Functional/ Technical Analysts/DBAs/System Administration*  Chinmay Patil | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* * *Maintain accurate, detailed information for all assigned change requests (CRs), in the CR database, related to the applicable development detail of the CRs lifecycle.* * *Provide impact analysis reporting for the CCB approved problems or changes, including documentation of suggested solutions to facilitate CCB disposition activities.* * *Documentation of build, release, and installation instructions.* |
| *Software Change Manager*  Ajinkya Deshpande | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* * *Governing body for reviewing and approving change requests under the SCM Procedures and work instructions.* |
| *Technical Writer*  Sagar Telangi | * *Develops technical deliverable documentation to support the software deliverables.* * *Provides editing, formatting, and graphics support for documentation.* * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* |
| *Software Quality Assurance Manager*  Chinmay Patil | * *Develops and maintains artifacts following proper version control procedures defined in the SCM Procedures and work instructions.* * *Ensures all SQA Analysts work within the SCM Procedures and work instructions.* * *Verifies that only SCM-approved deliverables are installed into the test environment(s).* * *Ensures that SQA Analysts are always testing from official SCM deliverables.* * *Attends CCB meetings and provides testing details, as required.* * *Reviews status accounting related to the project.* * *Reviews deliverable artifacts.* |
| *Software Quality Assurance Analysts/ Testing Analyst/*  Gourav Tagotra | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* * *Responsible for testing installed releases, as SCM provides releases from development.* * *Update CRs assigned to them according to test activity results.* * *Determines Pass/Fail for each CR scheduled for a release.* * *Opens CRs (defect and or enhancements) for any newly discovered problems during testing.* |
| *Release Manager/ Implementation Team/ EVS/Operations Team/*  Ajinkya Deshpande | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions document.* * *Coordinates the release and deployment of software to the existing sites and the newly activated sites following SCM Procedures and work instructions.* * *Assures products meet all exit criteria prior to release* * *Assures change control and SCM processes have been followed as defined in the SCM Procedures and work instructions.* |
| *Process Engineer*  Sagar Telangi | * *Develops and maintains artifacts following proper version control procedures using the SCM Procedures and work instructions.* * *Guides the Team members in following the EPG published process maps.* |

# CONFIGURATION IDENTIFICATION

*<This section describes the Configuration Identification of the Software Product and providing a unique identity to the product, it’s components, and associated documentation, including the definition of appropriate level of identification. In order to identify the configuration item(s)(CI) s that are to be placed under SCM control, the SCM Manager must understand that Configuration Identification is the process of selecting the CIs and the development items subject to Change Control for a product, assigning unique identifiers to them, and recording their functional and physical characteristics in technical documentation.*

*The following items are subject to configuration identification for software products as per the SCM Plan Standard and are to be placed under SCM control:*

* *Products that are delivered to the customer*
* *Designated internal work products, including source code used to generate the deliverable*
* *Commercial off the Shelf (COTS) products*
* *Non-Developmental Items (NDI) products*
* *Tools*
* *Other items that are used in creating and describing these work products, including documentation describing the function and physical requirements and characteristics of the product*

*These items consist of the set of currently approved or conditionally approved technical documentation, source code, executable images, and object files that identify and describe the functional and physical characteristics of the application.*

***Commercial off the Shelf (COTS) products***

*A COTS item is defined as a commercial item that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and:*

* *Has been sold, leased, or licensed to the general public; or has been offered for sale, lease, or license to the general public*
* *Has been sold or offered for sale in substantial quantities in the commercial marketplace*
* *Has been offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace*

*COTS items shall be identified within the system configuration by the manufacturers name, item identification, and version in sufficient detail to allow re-acquisition of the identical item. If a COTS item is changed in such a manner that it no longer meets the definition of COTS, the item must be reclassified by its new classification.*

***Non-Developmental Items (NDI) products***

*An NDI is defined as any COTS item that requires only minor tailoring of a type customarily available in the commercial marketplace, and is within the normal function of the COTS item. This tailoring does not include modification or customization beyond what is normally provided in the commercial marketplace and is outside of the provider’s normal pricing structure.*

*NDI items shall be identified within the system configuration by the manufacturers name, item identification, version, and tailoring in sufficient detail to allow re-acquisition of the identical item. If a NDI item is changed in such a manner that it no longer meets the definition of NDI the item must be reclassified by its new classification*

***Modified Item***

*A modified item is defined as a COTS or GOTS item which is customized for a specific purpose and to meet specific requirements beyond the normal function of the COTS or GOTS item is defined as a Modified item*

***Third Party Item***

*A Third-Party Item is defined as a new item or modified item developed by a subcontractor for a specific purpose and to meet specific requirements.*

***Developmental Item***

*A Developmental Item is defined as a new item or modified item developed for a specific purpose and to meet specific requirements.*

|  |  |
| --- | --- |
| COTS USED |  |
| NDI USED | Jupyter Notebook, NumPy, SciPy, Pandas, Scikit-Learn, Net Beans, Bootstrap |
| MODIFIED ITEMS | None |
| THIRD PARTY ITEMS | None |
| DEVELOPMENTAL PRODUCTS | None |

# COMPONENT SPECIFICATION: GOAL-1

|  |  |
| --- | --- |
| ***Component Name*** | **Developing Sports Careers** |
| ***Audience*** | Youngsters |
| ***Responsibilities*** | Building Player Profiles, provide exposure |
| ***Processing*** | 1. Collect player stats 2. Ascertain Data Correctness 3. Filter Data Sources 4. Identify appropriate DBMS 5. Analyse Data 6. Extract Appropriate Data 7. Insert extracted data into resource database 8. Provide Exposure to all sports 9. Training players to compete 10. Career enhancing sessions |
| ***Reference*** | Profile Builder |
| ***Constraints*** | Free Player Data Availability Restrictions |
| ***Composition*** | Sub - System 1, Module 1 |
| ***Resources*** | Database 1, 4 tables |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Cleans Data, Checks for Abnormality |

## Procedure Definition Language (Pseudo-code):

INTERFACE: PlayerProfileBuilder interfaces

DO:

mysql\_connect(DATABASE);

connect\_to(NET)

INITIALIZE PYTHON SCRIPT FOR scraping

BEGIN

Find Data Sources

FIND GOOD SITES

RUN scapy.py

data=FETCH DATA()

Parse to XML OR JSON

SEND pydata to our System

GET XML OR JSON in our System

if(data==null):

restart scraping

else:

unparse\_Data()

if(data is in range):

Group all data into category

Identify appropriate DBMS

Insert extracted data into resource database

else:

Group all data into category

Identify appropriate DBMS

Insert extracted data into resource database

Clean Player Data Abnormalities

Make backup of newly added data

Segregate Database

IF( DATA := CALL DATA\_AQUIRER();) THEN

CALL DATA\_ANALYSER(DATA);

ELSE

OUTPUT(DATA SOURCE UNAVAILABLE)

RETURN -1;

END

# COMPONENT SPECIFICATION: GOAL-1 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Developing sports careers** |
| ***Audience*** | Internal Stakeholders |
| ***Responsibilities*** | State computational abilities here. |
| ***Processing*** | 1. Request creation of Player Profile 2. Find Player Data Sources 3. Create a preliminary database 4. Formulate database structure 5. Assign database privileges 6. Launch Player Profile Page 7. Find professional competitions 8. Search for spikes in player’s performance 9. Insert Player Data into DBMS 10. Create Cloud Backup of Database |
| ***Reference*** | Data Acquirer |
| ***Constraints*** | RDBMS |
| ***Composition*** | Sub - System 1, Module 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 |
| ***Interface/Tasks*** | Acquire Data, Remove Data Abnormalities |

## Procedure Definition Language (Pseudo-code):

INTERFACE: DataAquirer interface

DO

Find Data Sources

foreach(TABLE table in database):

if table is desired:

fetch tht table

BEGIN

GET DATA SCOURCES;

import database libraries

construct prepared Statement

insert query in tht statement

run that query

if(query\_runned)

Insert extracted data into resource database

print done

else

print do this process again

IF(DATA SOURCES AVAILABLE) THEN

CHECK DATA DIMENSIONS;

FILTER DATA

FETCH DATA INTO TEMPORARY DATASET;

CREATE DBMS INSTANCE;

INSERT DATA FROM TEMPORARY DATASET INTO DBMS INSTANCE;

RETURN DATA;

ELSE

RETURN NULL;

END

# COMPONENT SPECIFICATION: GOAL-1 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | **Train Player** |
| ***Audience*** | Stakeholders |
| ***Responsibilities*** | State computational abilities here. |
| ***Processing*** | 1. Get all equipments  2. Design exercises  3. Design schedule  4. Prioritise the important parameters  5. Draw a map for the shortlisted attributes  6. Organise the parameters  7. Mentor personally  8. Get weekly updates of player  9. Find player’s current ability  10. Career enhancing sessions |
| ***Reference*** | Data Analyzer |
| ***Constraints*** | Processing Speed |
| ***Composition*** | Sub - System 1, Module 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 |
| ***Interface/Tasks*** | Filter Relevant Data, Ascertain Correctness of Data |

## Procedure Definition Language (Pseudo-code):

INTERFACE RAW\_DATA\_ANALYSER

DO

Ascertain data correctness

Clean Player Data Abnormalities

BEGIN

FOR EACH COLUMN IN DATA LOOP

IF(VALUES OF COLUMN NOT IN EXPECTED RANGE) THEN

REPORT DATA ABNORMALITY;

CLEAN ABNORMAL DATA;

import database libraries

construct prepared Statement

insert query in tht statement

run that query

if(query\_runned)

Insert extracted data into resource database

print done

else

print do this process again

END LOOP;

END

# COMPONENT SPECIFICATION: GOAL-2

|  |  |
| --- | --- |
| ***Component Name*** | **Teaching students importance of sports** |
| ***Audience*** | Stakeholders |
| ***Responsibilities*** | Imparting good treatment to opponents |
| ***Processing*** | 1. Life enriching sessions 2. Sportsmanship lectures to trainers 3. Player personality analysis test 4. Personal mentoring sessions 5. Teaching art of sports 6. Teaching how to overcome failure 7. After game evaluations 8. Demonstrating failures are stepping stones 9. Detailed knowledge about sports rules 10. Imparting good treatment to opponents |
| ***Reference*** | Player Classifier |
| ***Constraints*** | MySQL Database |
| ***Composition*** | Sub - System 1, Module 3 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 5 to 13 |
| ***Interface/Tasks*** | Update Database, Perform Classification of Players |

## Procedure Definition Language (Pseudo-code):

INTERFACE: Classify Players

DO

Build Player Classes

BEGIN

import database libraries

connect to db

If(connencted)

foreach(TABLE table in database):

if table is desired:

fetch tht table

WHILE (All data is not read)

{

PlayerPosition = ExtractPlayerPositionFromFile()

PlayerAbilities= ExtractPlayerAbilitiesFromFile()

if(new Category found)

MAKE new table for new categories()

else

Keep same Database

Verify(PlayerPosition)

Verify(PlayerAbilites)

Group\_dataset(PlayerPosition)

Group\_dataset(PlayerAbilities)

Update\_Database\_Table()

}

Else

Print Connection Error

if(user ask to connect again)

connect again

END IF

END

# COMPONENT SPECIFICATION: GOAL-2 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Train Coaches** |
| ***Audience*** | Staff Members |
| ***Responsibilities*** | State computational abilities here. |
| ***Processing*** | 1. Acquire trainer Data  2. Analyze trainer Data  3. Verify Data  4. Store trainer information into Database  5. Life enriching sessions  6. Trainer personality analysis test  7. Classify trainers according to area of expertise  8. Extract Important trainer Attributes  9. Classify trainers According to those attributes  10. Display trainer information |
| ***Reference*** | Extract Trainer Position From File |
| ***Constraints*** | MySQL Database |
| ***Composition*** | Sub - System 1, Module 3 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Update Database, Perform Classification of Players |

## Procedure Definition Language (Pseudo-code):

INTERFACE: ExtractPlayerPositionFromFile(Player\_Name)

DO

Extract Player Information

BEGIN

import database libraries

connect to db

If(connencted)

foreach(TABLE table in database):

if table is desired:

fetch tht table

WHILE (Database.PName == Player\_Name) LOOP

Name=ExtractName()

Position=ExtractPosition()

Ranking=ExtractRanking()

LINKS=ExtractLINKS()

Do all data validation

encrypt in XML or JSON

Return Player

END LOOP

OUTPUT (“PLAYER NOT FOUND”)

END

# COMPONENT SPECIFICATION: GOAL-2 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | **Teach Students** |
| ***Audience*** | Students / Players |
| ***Responsibilities*** | State computational abilities here. |
| ***Processing*** | 1. Life enriching sessions  2. Analyze Player Data  3. Remove Abnormalities from Data  4. Store Player information into Database  5. Extract Player data  6. Player personality analysis test  7. Personal mentoring sessions  8. Teaching art of sports  9. Pre-match and after match evaluation  10. Player evaluation |
| ***Reference*** | Extract Player Abilities From File |
| ***Constraints*** | MySQL Database |
| ***Composition*** | Sub - System 1, Module 3 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 10 to 18 |
| ***Interface/Tasks*** | Update Database, Perform Classification of Players |

## Procedure Definition Language (Pseudo-code):

INTERFACE: ExtractPlayerAbilitiesFromFile(Player\_Name)

DO

Extract Player Information

BEGIN

Function

Open dataset

Connect to Database

WHILE (Database.PName == Player\_Name) LOOP

Name=ExtractName()

BasicDetails=ExtractDetails()

Skills=ExtractSkill()

Abilities=ExtractAbilities()

ADD THIS PLAYER IN GROUP

PRINT NEW GROUP DETAILS

Return Player

END LOOP

END

# COMPONENT SPECIFICATION: GOAL-3

|  |  |
| --- | --- |
| ***Component Name*** | **Providing ideal sports nutritional diet** |
| ***Audience*** | Academy Players |
| ***Responsibilities*** | Process Player Profile Requests, Obtain and Populate Profiles |
| ***Processing*** | 1. Pre-Process Player Data 2. Analyse the player requirements 3. Generate Player Features 4. Provide nutritionist with player data 5. Provide sports available for current fitness 6. Generate monthly nutrition required 7. Performing a comprehensive nutrition assessment determining the nutrition diagnosis 8. Individual outpatient counseling 9. Monitoring an individual's progress over subsequent visits 10. Regular health check-up |
| ***Reference*** | **Player Profile Processor** |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system 2, Module 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 10 |
| ***Interface/Tasks*** | Check incorrect scaling, scale player profiles |

## Procedure Definition Language (Pseudo-code):

INTERFACE: PLAYER\_PROFILE\_PROCESSOR

DO

if(Player\_Details==NOT SCALED)

SCALE PLAYER PROFILES

Normalise data

else

Normalise data

BEGIN

for(Statistical Model in Library):

Check if its acceptable

Choose Statistical Model

if(Model is good)

Optimise Choices

After few epoch

Tune statistical model hyper-parameters

Associate Player Profiles and model

PLAYER\_DATA\_PREPROCESSOR();

TRAIN\_DATA,TEST\_DATA := TRAIN\_TEST\_SPLIT(PLAYER DATA);

MODEL1=MODEL\_SELECTOR();

END

# COMPONENT SPECIFICATION: GOAL-3 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Pre-process Player Data** |
| ***Audience*** | Customers/ Stakeholders |
| ***Responsibilities*** | Process Player Profile Requests, Obtain and Populate Profiles |
| ***Processing*** | 1. Access Player Data 2. Evaluate player data 3. Group and compare attributes 4. Schedule player fitness chart plan 5. Create Player Profiles 6. Insert Data into Profiles 7. Get BMI index of player 8. Provide education including practical tips to meet your nutrition needs 9. Demonstrate Important Player information 10. Generate Player Features |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system 2, Module 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Choose Statistical Model  , Optimise Choices |

## Procedure Definition Language (Pseudo-code):

INTERFACE: PLAYER\_PROFILE\_PREPROCESSOR

DO

CHECK INCORRECT SCALING

SCALE PLAYER PROFILES

BEGIN:

import database libraries

connect to db

If(connencted)

foreach(TABLE table in database):

if table is desired:

fetch tht table

IF(DATA IS NOT SCALED) THEN

BRING DATA TO SAME SCALE

FEED SCALED DATA TO DATABASE INSTANCE

RETURN;

END

# COMPONENT SPECIFICATION: GOAL-3 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | **Recommend Diets** |
| ***Audience*** | Customers/ Stakeholders |
| ***Responsibilities*** | Process Player Profile Requests, Obtain and Populate Profiles |
| ***Processing*** | 1. Pre-process Player Data 2. Associate Player Profiles 3. Show players which diets are better 4. Verify if any allergies with given diet 5. Choose Statistical model 6. Finalize on the model and parameters 7. Assess medical history 8. Maintain those necessary dietary changes 9. Compare stats by age 10. Recommend the diet |
| ***Reference*** | MODEL\_SELECTOR |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system 2, Module 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Tune statistical model hyper-parameters, Associate Player Profiles and model |

## Procedure Definition Language (Pseudo-code):

INTERFACE: MODEL\_SELECTOR  
DO  
  Probe Statistical Models  
  Choose Statistical Model  
  Optimise Choices  
  Tune statistical model hyper-parameters  
  Associate Player Profiles and model  
BEGIN  
  LOAD SELECTED MODELS;  
  FOR I IN SELECTED MODELS LOOP:  
    TRAIN I  
    RESULTS[I] := I.MAKE\_PREDICTIONS(TEST\_DATA);  
  END LOOP;  
  OPTIMAL\_MODEL := DECIDE\_OPTIMAL\_MODEL(RESULTS);  
  TUNED\_OPTIMAL\_MODEL = TUNE(OPTIMAL\_MODEL);  
  RETURN TUNED\_OPTIMAL\_MODEL;  
END

# COMPONENT SPECIFICATION: GOAL-4

|  |  |
| --- | --- |
| ***Component Name*** | **Showing players importance of sportsmanship** |
| ***Audience*** | Students |
| ***Responsibilities*** | Analyse player personality |
| ***Processing*** | 1. Conduct matches analyse player statistics 2. Collect player data generate reports 3. Extract player information train them 4. Conduct personal sessions mentor players 5. Hire professional help refine reports 6. Conduct personality tests collect personal details 7. Organise events study player attitude 8. Provide attitude tests collecting more data 9. Analyse tests generate reports 10. Organise coaching sessions talk about reports |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Get User Queries, Get User Input |

## Procedure Definition Language (Pseudo-code):

INTERFACE:USER\_QUERY\_PROCESSOR

DO

GET USER QUERIES

GET USER INPUT

BEGIN

BEGIN

CHOOSE MODEL

SET HYPERPARAMETER

FIND HIGHEST R SQUARE VALUE

DO DIMENSIONAL REDUCTIONALITY

KEEP PCA HIGHEST

IF(QUERY) THEN

USER\_QUERY\_RECOGNIZER(USER\_QUERY);

ELSE

USER\_INPUT\_HANDLER(USER\_INPUT);

END LOOP;

END

# COMPONENT SPECIFICATION: GOAL-4 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Studying player behaviour** |
| ***Audience*** | Students |
| ***Responsibilities*** | Analyse player behaviour post-match |
| ***Processing*** | 1. Conduct parent meetings communicate with guardians  2. Question guardians regarding ward collect more personal details  3.Personally meet player stalk with students  4. Conduct outdoor trips study player behaviour  5. Post match analysis studying attitude  6. Conduct student review generate final student report  7. Conduct prize distribution motivate players to win  8. Bring players together study player friendliness  9.Rent stadiums conduct tournaments  10.Organise marathons encourage athletics |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module: 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Get User Queries, Process User Queries And Generate Predictions |

## Procedure Definition Language (Pseudo-code):

INTERFACE USER\_QUERIES\_RECOGNIZER

DO

GET USER QUERIES

GENERATE STATS

BEGIN

KEEP NEW DATA

FIT THE DATA IN MODEL

PREDICT VALUE

PLAYER\_DATA = FETCH\_PLAYER\_DATA(USER\_QUERY);

LOAD MODEL;

PREDICTION = MODEL.PREDICT(PLAYER\_DATA);

OUTPUT(PLAYER\_DATA);

OUTPUT(‘PREDICTED VALUE:’);

OUTPUT(PREDICTION);

END

# COMPONENT SPECIFICATION: GOAL-4 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | **Teach Players** |
| ***Audience*** | Students |
| ***Responsibilities*** | Making them understand importance of sportsmanship |
| ***Processing*** | 1. Sportsmanship sessions Make individuals realise life is not all about winning  2. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players  3. Trainer evaluation To ensure that trainers posses all required knowledge  4. Trainer personality analysis test Keep track of player progression.  5. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future  6. Teaching art of sports Understand the sport from all perspectives  7. After game evaluations how to analyse matches played  8. Pre-match evaluation how to analyse other teams  9. Detailed knowledge about sports rules Expect transparency.  10. Mock matches get familiar with match environment |
| ***Reference*** | USER\_INPUT\_HANDLER |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module: 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | Get User Input, Process User Input And Append To Database |

## Procedure Definition Language (Pseudo-code):

INTERFACE USER\_INPUT\_HANDLER  
DO  
GET USER INPUT  
PROCESS USER INPUT AND APPEND TO DATABASE  
BEGIN  
FOR USER\_INPUT IN USER\_INPUTS LOOP  
    IF USER\_INPUT HAS MISSING VALUES THEN  
      OUTPUT(‘MISSING DATA WARNING’);  
      RETURN;  
    END IF;  
  IF USER\_INPUT HAS ABNORMALITIES THEN  
      OUTPUT(‘WARNING’);  
      FIX ABNORMALITIES;  
  END IF;  
END LOOP;  
APPEND USER\_INPUTS TO USER\_INPUTS DATABASE;  
END

# COMPONENT SPECIFICATION: GOAL-5

|  |  |
| --- | --- |
| ***Component Name*** | **Forming sports community** |
| ***Audience*** | Locals |
| ***Responsibilities*** | To collect regional data |
| ***Processing*** | 1.visiting nearby regions spreading awareness  2.collecting data analyse data  3.analysing data generating reports  4.hire travel agents learning about regions  5.hire statistics people generate region statistics  6.visit nearby sports center study other academics  7.visit tournaments analyse sports crowd  8.meet youth find latest sports trends  9.travel nearby sport events study regional sports  10.travel to rural areas studying rural sports |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module: 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE PLAYER\_STATISTICS\_DEMONSTRATOR:  
DO    
BEGIN  
  FETCH INPUT PLAYER\_ID/PLAYER\_NAME;  
  CONNECT TO DATABASE;  
  IF(PLAYER EXISTS IN DATABASE) THEN  
    STATISTICS=PLAYER\_STATISTICS\_GENERATOR();  
    DISPLAY\_PLAYER\_STATISTICS(STATISTICS);  
    RETURN;  
  ELSE  
    RETURN("PLAYER NOT FOUND");  
  END IF;  
END

# COMPONENT SPECIFICATION: GOAL-5 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Perform analysis of region** |
| ***Audience*** | Stakeholders |
| ***Responsibilities*** | Collect regional data |
| ***Processing*** | 1. Generate region Statistics Use it for modelling region profiles  2. Find region Statistics Sort and categorize data  3. Communicate Relevant statistics Remove unnecessary statistics  4. Sort relevant region data Categorize Accordingly  5. Remove data abnormalities Display only correct data  6. Make different categories of data Search region statistics easily  7. Consider only relevant region statistics Remove all unnecessary statistics  8. Add statistics to region profile Display region Profile  9. Generate region Statistics Use it for modelling region profiles  10. Find region Statistics Sort and categorize data |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module: 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE PLAYER\_STATISTICS\_GENERATOR  
DO  
  IMPORT DATABASE LIBRARIES  
BEGIN  
  CONNECT TO DATABASE;  
  FETCH PLAYER DATA;  
  FETCH SELECTED STATISTICS;  
  FETCH REQUIRED STATISTICS FROM DATABASE FOR PLAYER;  
  RETURN STATISTICS;  
END

# COMPONENT SPECIFICATION: GOAL-5 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | **Increase community** |
| ***Audience*** | Locals |
| ***Responsibilities*** | spread awareness |
| ***Processing*** | 1.visiting nearby regions spreading awareness  2.collecting data analyse data  3.analysing data generating reports  4.hire travel agents learning about regions  5.hire statistics people generate region statistics  6.visit nearby sports center study other academics  7.visit tournaments analyse sports crowd  8.meet youth find latest sports trends  9.travel nearby sport events study regional sports  10.travel to rural areas studying rural sports |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 2 , Module: 2 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE DISPLAYER\_PLAYER\_STATISTICS  
DO  
  
BEGIN  
  CONNECT TO DATABASE;  
  GET STATISTICS;  
  DETERMINE GRAPHS TO BE DISPLAYED;  
  GENERATE HTML/JS CODE FOR GRAPHS;  
  DISPLAY GRAPHS;  
  RETURN;  
END

# COMPONENT SPECIFICATION: GOAL-6

|  |  |
| --- | --- |
| ***Component Name*** | **Individual player development in all aspects of life** |
| ***Audience*** | Stakeholders |
| ***Responsibilities*** | Collect player data |
| ***Processing*** | 1.Check his basic details Append in database if its rights  2.Scape player’s data from respected source Append in database for more info  3.Check details filled by End user Be sure about the data  4.Delete all anomalies Have clean database  5.Call database admin for big mistakes Have solution for those entries  6.Append each player category in their own table Have faster searching  7.Archive all player who are not playing Clear Clutter  8.Make a good structure Parse data easily  9.Attend player matches Analyse player game  10.Hire professional psychiatrists judge player behaviour |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 3 , Module: 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE: - Player Value Estimator

DO: Estimate Player Values

BEGIN

if(CONNECT(DATABASE))

foreach(Entry : database)

Player=Player\_Validator(Entry)

Data=Unwrap\_XML(Player)

Html\_Code=Player\_Showcaser(Data)

GenerateHTML(Html\_Code)

Save this Html

else

Show ERROR

END

# COMPONENT SPECIFICATION: GOAL-6 OBJECTIVE-1

|  |  |
| --- | --- |
| ***Component Name*** | **Collect player data** |
| ***Audience*** | Stakeholders |
| ***Responsibilities*** | Generate player data |
| ***Processing*** | 1.Check his basic details Append in database if its rights  2.Scape player’s data from respected source Append in database for more info  3.Check details filled by End user Be sure about the data  4.Delete all anomalies Have clean database  5.Call database admin for big mistakes Have solution for those entries  6.Append each player category in their own table Have faster searching  7.Archive all player who are not playing Clear Clutter  8.Make a good structure Parse data easily  9.Attend player matches Analyse player game  10.Hire professional psychiatrists judge player behaviour |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 3 , Module: 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE: - Player Validator

DO

Go to given index in database

Fetch data from all tables

BEGIN

Check all data acquired is right

ADD Details in an Player Object

Make Object Immutable

Parse the Object using XML

END

# COMPONENT SPECIFICATION: GOAL-6 OBJECTIVE-2

|  |  |
| --- | --- |
| ***Component Name*** | Educate players |
| ***Audience*** | Students |
| ***Responsibilities*** | Tell players about their report |
| ***Processing*** | 1. Imparting good treatments to others Help others if they have a problem  2. Life enriching sessions Make individuals realise life is not all about winning  3. Sportsmanship lectures to trainers Coaching staff should be convinced in order to convince the players  4. Guidance sessions external experts can give seminar  5. Trainer evaluation check progress of trainers  6. Personal mentoring sessions To prepare trainers for problems that could arise in foreseeable future  7. Investigate trainer value Decide which coaches are best for academy.  8. Teaching fair generous behaviour be impartial no matter anyone  9.Improve health and fitness of players Use them for making predictions.  10.Verify consistency prevent problems affecting further process. |
| ***Reference*** | Procedure Name |
| ***Constraints*** | Environment Issues |
| ***Composition*** | Sub-system: 3 , Module: 1 |
| ***Resources*** | Player Database |
| ***Interactions*** | Components: 1 to 18 |
| ***Interface/Tasks*** | None |

## Procedure Definition Language (Pseudo-code):

INTERFACE: - Player Showcaser

DO

Format the table

Show Basic Details Tab

Show model of player

Make Graphs

Show Contract Details

Show Predicted Price

Show similar players

BEGIN

If(table\_formated())

If(data\_available())

Show output();

Else

Show Error;

END

**T.Y. B. Tech.**

**CS 303: Software Engineering Laboratory**

Assignment No: 9

**Sports Academy**

**System Review and Acceptance**

***28-11-2017***

!!br0ken!! ***Version 1.0***



|  |  |  |  |
| --- | --- | --- | --- |
| Project Group Information | | | |
| Roll. No. | **Gr. No.** | **Name** | **Roles** |
| 63 | **161640** | **Ajinkya Deshpande** | **Leader** |
| 64 | **161689** | **Sagar Telangi** | **DB, PHP** |
| 69 | **161122** | **Chinmay Patil** | **Python** |
| 70 | **161437** | **Gourav Tagotra** | **PHP/ Front End** |

**Approved By: Dr M. R. Dube**

**Academic Year: 2017-18 Semester: I**

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# INTRODUCTION

*At the time of the scheduled peer review, ensure proper representation and preparation by the reviewers. Provide clarifications on the work products. Present comments and listen to the comments of the other reviewers. Comments can be presented either by page or by reviewer. Keep the comment discussions short with a focus on detection, not correction. Editorial comments are provided separately and are not discussed at the scheduled review.*

*Participate in categorizing comments. The comments will be categorized and documented as errors, defects, and action items. Refer to the definitions for the categorization rules, which are summarized as follows:*

* *Errors (i.e., problems in the material currently under peer review).*

*Optionally, errors are subcategorized as major (affects functionality and/or performance) and minor (does not affect functional- ity and/or performance).*

* *Defects (i.e., problems in materials previously peer reviewed).*

*Optionally, defects are also subcategorized as major and minor.*

*Note: Defects will further be categorized as delivered or undelivered in the program’s change request system.*

* *Action items (i.e., unresolved comments requiring further investigation)*
* *A comment can remain categorized as a comment if the reviewers and presenters agree that there is no error, defect, or action item required.*

*To complete the peer review you must identify errors, defects, and action items to be resolved and documented. If needed, follow the program’s or project’s defined decision-making processes to elevate and reconcile any issues encountered in resolving peer review errors, defects, or action items with appropriate stakeholders. To ensure completion, per- form the following:*

* *Correct all errors and update the peer review information to indicate that the error is resolved.*
* *Submit change request paperwork for all defects. The status and tracking of the defect corrections are then handled through the change request system. The defects associated with the peer review should indicate this transfer and are categorized as resolved, allowing the peer review to be closed.*
* *Resolve and complete all action items. If any action items cannot be completed within the two-week period, these action items should be moved to the program- or project-level action item tracking system. The action items associated with the peer review should indicate this transfer and are categorized as resolved, allowing the peer review to be closed.*

# REVIEW TYPES

*Design and code reviews promise to improve software quality, ensure compliance with standards, and serve as a valuable teaching tool for developers. As with most practices, there are subtle nuances surrounding how they're performed that can dramatically affect their value. In some organizations, reviews are a valuable aspect of the software lifecycle. In others, they are a necessary evil tainted with political bureaucracy and big egos. Suboptimal reviews conducted late in the lifecycle are often misguided due to few objective guidelines that help guide the review process. When used throughout the development lifecycle, code and design quality metrics are valuable inputs to the review process.*

* 1. *Reviews Increase Agility Continuous Integration.*

*Agile practices are abundant, and for many teams interested in increasing their agility, valuable energy and resources have been devoted to improving these practices. Because of this, many teams have abandoned reviews while emphasizing other aspects of agility. But, reviews are an important tool in the agile toolkit.*

*A driving principle of the Agile Manifesto is continuous attention to technical excellence. Another is embracing and harnessing change as an opportunity to increase customer advantage. For developers, change often begins and ends with modifications to the source code. A poorly designed application with smelly code is a breeding ground for risk that makes change incredibly difficult, and is the greatest technical inhibitor to increased agility. Effective reviews that emphasize design quality and code cleanliness are an important aspect of increased agility. Reviews done right help ensure continuous attention to technical excellence. Unfortunately, not all reviews are done right.*

*1.2 Review Worst Practices*

*Some development teams find reviews a healthy and valuable asset to developers and the project team. Other teams realize little value from their review process. There are numerous causes for painful and ineffective reviews. Some symptoms of ineffective reviews include:*

* *Witch hunt reviews - Many reviews degrade quickly into attack and defend mode. This often occurs because the developer who wrote the code feels attacked and threatened when reviewers make direct and opinionated statements about the code. Nothing could be less productive.*
* *Curly brace reviews - Some reviews emphasize formatting and comments instead of more serious problems. Is placement of curly braces and misspelled comments really that important? Curly brace reviews are feeding ground for the anal retentive, and provide no real value.*
* *Blind reviews - Often times, reviewers walk into the review meeting having never laid eyes on the code they are about to review. Most of the review time is spent trying to figure out what the code does. Spending time in the review meeting attempting to understand the code instead of reviewing it for more serious ailments is a waste of time.*
* *Exclusionary reviews - Many times, the code provided for the review is only a sampling of the code written. For example, unit tests might be excluded from the review. In an unhealthy review environment, providing impartial and incomplete code listings will leave the reviewers wondering how the code actually works.*
* *Tree killer review - If you can't baffle them by providing half of what they need to understand the code, then maybe overwhelming them by providing thousands of lines of code might work. Waiting until codebase is incredibly large to host the first review is entirely ineffective. Not only is it to difficult to provide effective feedback on a large codebase, these reviews are often held late in the lifecycle and do not allow the developer to improve her code based on the feedback received.*
* *Token review - It's not uncommon for management to dictate that reviews be held. Token reviews are typically held for political reasons. Management wants to ensure that all code is reviewed for auditing purposes. Unfortunately, developers realize very little value surrounding these reviews. Any problems found are not fixed unless they are absolutely critical. Since the primary motivation is an audit trail for management, the team has little motivation to improve the code.*
* *World review- The reviews conducted with great number of people in attendance. This can be incredibly intimidating for the developers whose code is being reviewed, and it is not sure what value it provides to invite so many people. A few developers, up to five, should serve all the needs required of the review process. If more people want to provide input, there are better ways.*

*The Design checklist is as follows:*

* *Deficiencies and conflicts in requirements, architecture, or program/project plans will be reported.*
* *Design decisions and the decision rationales will be recorded according to plans and defined processes.*
* *Top-level software components of the software end item will be identified and described.*
* *Static relationships between top-level software components will be defined.*
* *Dynamic relationships between top-level software components will be defined.*
* *The concepts of execution of the software end item and its components will be defined.*
* *External interfaces of the software end item and its components will be identified and described.*
* *Top-level software components will be decomposed into lower-level software units.*
* *Internal interfaces between software units will be identified and described according to the standards identified by the project.*
* *Design traceability data will be documented according to plans, processes, and product standards.*
* *Design definitions will be documented according to plans, defined processes, and standards.*
* *Measurement and estimated data will be collected.*
* *Applicable work products will be submitted for peer reviews in accordance with project plans.*
* *Applicable work products will be submitted for control in accordance with program or project plans.*

# VERIFICATION SUMMARY

*Note: The verification summary is required to be written for all the objectives and processes as they were detailed as User Stories. Replicate the standard template for objectives and process for the goals.*

# VERIFICATION STEPS: GOAL-1

|  |  |
| --- | --- |
| Objective-1 | Developing sports careers |
| Purpose | This will ensure the reliability and correctness of system. |
| Target Audience | Customers |
| Status | Completed |
| Role: | **As an**end user, developer |
| Verification Steps | 1. Verified that request creation of Player Profile |
|  | 2. Verified that find Player Data Sources |
|  | 3. Verified that create a preliminary database |
|  | 4. Verified that create a Player Data Spyder |
|  | 5. Verified that formulate database structure |
|  | 6. Verified that populate Player Database |
|  | 7. Verified that generate a backup |
|  | 8. Verified that share backup with Project Team |
|  | 9. Verified that assign database privileges |
|  | 10. Verified that launch Player Profile Page |
|  | 11. Verified that find professional competitions |
|  | 12. Verified that find all essential equipments for mastering the particular sport |
|  | 13. Verified that create log file |
|  | 14. Decide appropriate sorting for database |
|  | 15. Verified that commit changes on player’s performance |
|  | 16. Verified that search for spikes in player’s performance |

|  |  |
| --- | --- |
| Process-1 | Acquire Player Statistics |
| Purpose | Collect Player Statistics for creating player ranking index |
| Target Audience | Internal Stakeholders |
| Status | Completed |
| Role: | **As a**trainer |
| Verification Steps | 1. Verify that set up a mandatory field set |
|  | 2. Validate the research Player statistics |
|  | 3. Verify that the set statistics fields in database |
|  | 4. Validate accept Player Profile inputs |
|  | 5. Verify that the player statistics are added |
|  | 6. Validate the data limits and bounds |
|  | 7. Verify population of the player database |
|  | 8.Verify proper indexing of the database |

|  |  |
| --- | --- |
| Process-2 | Analyse Data |
| Purpose | To keep the data relative and precise. |
| Target Audience | Developer |
| Status | On-going |
| Role: | **As a**developer |
| Verification Steps | 1.Validate player profile format |
|  | 2.Validate search for spikes in player’s performances |
|  | 3.Verify SWOT analysis of player |
|  | 4.Verify to show the correct, improvised techniques |
|  | 5.Verify that correct the found weakness |
|  | 6.Verify the method of generating improvised data |
|  | 7.Validate corrected abnormality |
|  | 8.Verify to notify team about changes |

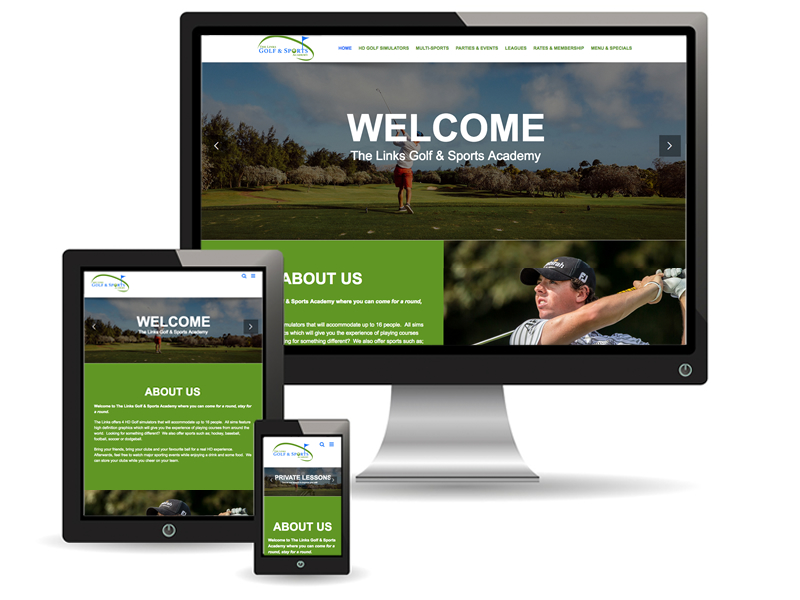
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| --- | --- |
| Objective-2 | Train Player |
| Purpose | To improvise the performance of the player |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a**trainer |
| Verification Steps | 1. Verified that Get all equipments |
|  | 2. Verified that Design exercises |
|  | 3. Verified that Design schedule |
|  | 4. Verified that Prioritise the important parameters |
|  | 5. Verified that Draw a map for the shortlisted attributes |
|  | 6. Verified that Organise the parameters |
|  | 7. Verified that Record formulated observations |
|  | 8. Verified that Correspond with Analysis team |
|  | 9. Verified that Consolidate outline of analysis process |
|  | 10. Verified that Construct final analysis methodology |
|  | 11. Verified that Mentor personally |
|  | 12. Verified that Get weekly updates of player |
|  | 13. Verified that Find player’s current ability |
|  | 15. Verified that Career enhancing sessions |
|  | 16. Verified that Get best coaches |

|  |  |
| --- | --- |
| Process-1 | Coach Player |
| Purpose | The purpose is to coach the player in order to improve skill set |
| Target Audience | Customers |
| Status | On-going |
| Role: | **As a coach** |
| Verification Steps | 1. Verified that Find a certain player |
|  | 2. Verified that Identify current skill set of player |
|  | 3. Verified that Identify versatility of the player |
|  | 4. Verified that Find similar players playing in same position |
|  | 5. Verified that Prioritize players by rating |
|  | 6. Verified that Give player personal mentoring |
|  | 7. Verified that Demonstrating a particular task |
|  | 8. Verified that Display player’s current team |

|  |  |
| --- | --- |
| Process-2 | Ensure increase in player career performance |
| Purpose | This will ensure that player is improving over period of time |
| Target Audience | Customers |
| Status | On-going |
| Role: | **As an**analyst |
| Verification Steps | 1. Verified that Get correct player data |
|  | 2. Verified that Receive exact information |
|  | 3. Verified that Get updated info of player |
|  | 4. Verified that Use Player Data |
|  | 5. Verified that Get correct analysis of player over period of time |
|  | 6. Verified that Make a precise database |
|  | 7. Verified that Track validation process |
|  | 8. Verified that Run background checks |

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# VERIFICATION STEPS: GOAL-2

|  |  |
| --- | --- |
| Objective-1 | Train Coaches |
| Purpose | Making them understand that sports is not all about winning |
| Target Audience | Staff Members |
| Status | On-going |
| Role: | **As a** *sport enthusiast* |
| Verification Steps | 1. Verify that Life enriching sessions |
|  | 2. Verify that Sportsmanship lectures to trainers |
|  | 3. Verify that Trainer evaluation |
|  | 4. Verify that Trainer personality analysis test |
|  | 5. Verify that Personal mentoring sessions |
|  | 6. Verify that Teaching art of sports |
|  | 7. Verify that After game evaluations |
|  | 8. Verify that Pre-match evaluation |
|  | 9. Verify that Detailed knowledge about sports rules |
|  | 10. Verify that Mock matches |
|  | 11. Verify that Imparting good treatment to opponents |
|  | 12. Verify that Trainer evaluation |
|  | 13. Verify that Teaching fair generous behaviour |
|  | 14. Verify that Guidance sessions |
|  | 15. Verify that Get list of all fields of all sports |
|  | 16. Verify data |

|  |  |
| --- | --- |
| Process-1 | Acquire valuable life lessons |
| Purpose | It will ensure that in life failures are stepping stones for success. |
| Target Audience | External Stakeholders |
| Status | On-going |
| Role: | **As a**human being |
| Verification Steps | 1. Verified that Imparting good treatments to others |
|  | 2. Verified that Life enriching sessions |
|  | 3. Verified that Sportsmanship lectures to trainers |
|  | 4. Verified that Guidance sessions |
|  | 5. Verified that Trainer evaluation |
|  | 6. Verified that Personal mentoring sessions |
|  | 7. Verified that Investigate trainer value |
|  | 8. Verified that Teaching fair generous behaviour |

|  |  |
| --- | --- |
| Process-2 | Teach coaches and trainers |
| Purpose | It will ensure that in life failures are stepping stones for success. |
| Target Audience | Coaches |
| Status | Completed |
| Role: | **As a**trainer |
| Verification Steps | 1.Verified that Acquire trainer attributes and data |
|  | 2. Verified that Examine coaches relation with each other |
|  | 3. Verified that Detailed knowledge about sports rules |
|  | 4. Verified that Survey form |
|  | 5. Verified that Extract coach skill values |
|  | 6. Verified that Find coach weaknesses |
|  | 7. Verified that Find coach injury record |
|  | 8. Verified that Compare coach abilities |

|  |  |
| --- | --- |
| Objective-2 | Teach Students |
| Purpose | Making them understand that sports is not all about winning |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a**Trainer |
| Verification Steps | 1.Verified that Life enriching sessions |
|  | 2.Verified that Sportsmanship lectures to trainers |
|  | 3. Verified that Player evaluation |
|  | 4. Verified that Player personality analysis test |
|  | 5. Verified that Personal mentoring sessions |
|  | 6. Verified that Teaching art of sports |
|  | 7. Verified that After game evaluations |
|  | 8. Verified that Pre-match evaluation |
|  | 9. Verified that Detailed knowledge about sports rules |
|  | 10. Verified that Mock matches |
|  | 11.Verified that Imparting good treatment to opponents |
|  | 12. Verified that Player evaluation |
|  | 13. Verified that Teaching fair generous behaviour |
|  | 14. Verified that Guidance sessions |
|  | 15. Verified that Get list of all fields of all sports |
|  | 16. Verify data |

|  |  |
| --- | --- |
| Process-1 | Organise life lesson courses |
| Purpose | It will ensure that in life failures are stepping stones for success. |
| Target Audience | Customers/ Stakeholders |
| Status | On-going/ Completed |
| Role: | **As a**human being |
| Verification Steps | 1. Verified that Imparting good treatments to others |
|  | 2. Verified that Life enriching sessions |
|  | 3. Verified that Sportsmanship lectures to trainers |
|  | 4. Verified that Guidance sessions |
|  | 5. Verified that Trainer evaluation |
|  | 6. Verified that Personal mentoring sessions |
|  | 7. Verified that Investigate trainer value |
|  | 8. Verified that Teaching fair generous behaviour |

|  |  |
| --- | --- |
| Process-2 | Teach students importance of sports |
| Purpose | Students would appreciate small wins |
| Target Audience | Academy Players |
| Status | On-going/ Completed |
| Role: | **As a**trainer |
| Verification Steps | 1. Verified that Acquire player attributes and data |
|  | 2. Verified that Examine players relation with each other |
|  | 3. Verified that Detailed knowledge about sports rules |
|  | 4. Verified that Survey form |
|  | 5. Verified that Extract player skill values |
|  | 6. Verified that Find player weaknesses |
|  | 7. Verified that Find player injury record |
|  | 8. Verified that Compare player abilities |
|  | 9. Validate results of analysis. |
|  | 10. Verify integrated results. |

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# VERIFICATION STEPS: GOAL-3

|  |  |
| --- | --- |
| Objective-1 | Pre-process Player Data |
| Purpose | Perform pre-processing on player data such as: Health check ups |
| Target Audience | Customers/ Stakeholders |
| Status | On-going/ Completed |
| Role: | **As a*n analyst*** |
| Verification Steps | 1.Verify raw player data |
|  | 2.Evaluate player data |
|  | 3.Verified that Dispose irrelevant attributes |
|  | 4.Verified that Group and compare attributes |
|  | 5.Verified that Get expert nutritionist to advice |
|  | 6.Verified that Schedule player fitness chart plan |
|  | 7.Verified that Standardize player features |
|  | 8.Verified that Evaluate data dimensionality |
|  | 9.Verified that Use different nutrition selection strategies |
|  | 10.Verified that Consolidate final data with features |
|  | 11.Verified that Compare attributes by age |
|  | 12.Verified that Get BMI index of player |
|  | 13.Verified that Assess individual nutrition needs |
|  | 14.Verified that Provide education including practical tips to meet your nutrition needs |
|  | 15.Verified that Promote your body's potential towards health, wellness and disease prevention |
|  | 16.Verified to Tabulate player data |

|  |  |
| --- | --- |
| Process-1 | Associate Player Health Profiles |
| Purpose | Improve health and fitness of players |
| Target Audience | Customers/ Stakeholders |
| Status | On-going/ Completed |
| Role: | **As a** *nutritionist* |
| Verification Steps | 1.Verified that Fetch formatted player data |
|  | 2.Verified that List available raw player attributes |
|  | 3.Verify consistency |
|  | 4.Verified that Transform physical condition |
|  | 5.Verified that Compare attributes between players |
|  | 6.Verified that Inspect attributes by player positions |
|  | 7.Verified that Compare stats by age |
|  | 8.Verified that Associate insights gained with data |

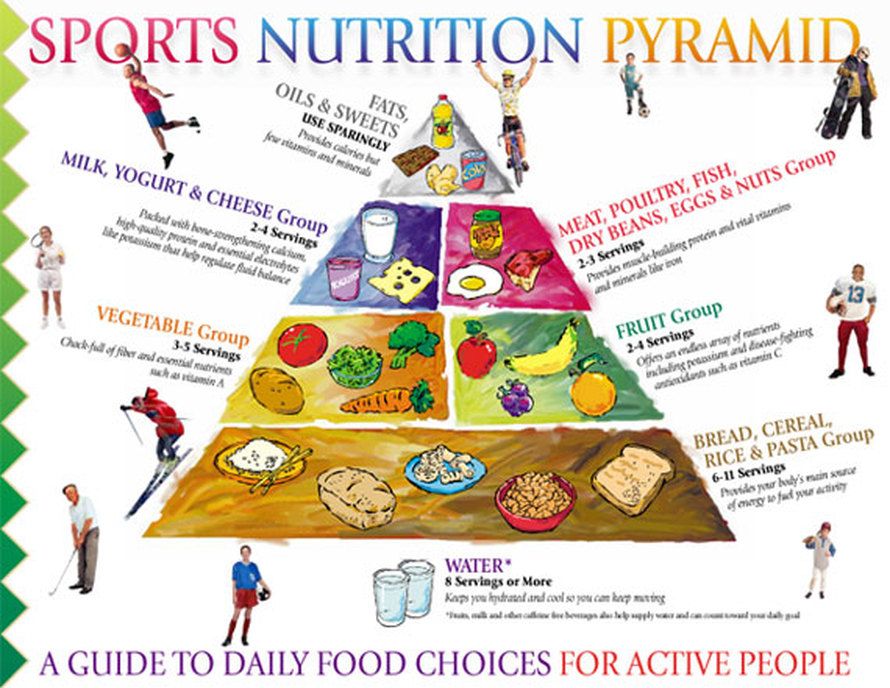
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| --- | --- |
| Process-2 | Generate Player Diets |
| Purpose | Improve diets of players |
| Target Audience | Internal Stakeholders |
| Status | On-going |
| Role: | **As a** *nutritionist* |
| Verification Steps | 1.Verified that Tabulate player data |
|  | 2.Verify whether generated diets are enough |
|  | 3..Verified that Recommend the diet |
|  | 4.Verified that Visualize transformed condition |
|  | 5.Verified that Scale features |
|  | 6.Verified that Analyse time needed if there is an injury |
|  | 7.Verified that Evaluate different strategies for diet |
|  | 8.Verified that Integrate generated features and methods |

|  |  |
| --- | --- |
| Objective-2 | Recommend Diets |
| Purpose | To make players fit |
| Target Audience | Customers/ Stakeholders |
| Status | On-going |
| Role: | **As a** *nutritionist* |
| Verification Steps | 1.Verified that Access data in proper format |
|  | 2.Verified that Access different statistical models |
|  | 3.Verified that Show players which diets are better |
|  | 4.Verified that Cross-validate and analyse models |
|  | 5.Verify if any allergies with given diet |
|  | 6.Verified that Assess medical history |
|  | 7.Verified that Modify the parameters |
|  | 8.Verified that Cross-validate changed parameter results |
|  | 9.Verified that Use different scoring methods |
|  | 10.Verified that Finalize on the model and parameters |
|  | 11.Verified that identify the strengths and weaknesses present in an individual's diet. |
|  | 12.Verified that Maintain those necessary dietary changes |
|  | 13.Verified that To improve nutrition and health outcomes |
|  | 14.Verified that Get BMI index of player |
|  | 15.Verified that Recommend the diet |
|  | 16.Verified that Compare stats by age |

|  |  |
| --- | --- |
| Process-1 | Arrange Diet Awareness Sessions |
| Purpose | Perform pre-processing on player data such as: Health check ups |
| Target Audience | Internal Stakeholders |
| Status | On-going |
| Role: | **As a** *nutritionist* |
| Verification Steps | 1.Verified that Improve health and fitness of players |
|  | 2.Verify consistency |
|  | 3.Verified that Transform physical condition |
|  | 4.Verified that Use different statistical models |
|  | 5.Verified that List available plans |
|  | 6.Verified that Analyse results of different models |
|  | 7.Verified that Compare stats by age |
|  | 8.Verified that Analyse cross-validation results for models |

|  |  |
| --- | --- |
| Process-2 | Hand Out Diets |
| Purpose | Select optimal model for player data. Selection is done by comparing results of models. |
| Target Audience | Customers/ Stakeholders |
| Status | On-going/ Completed |
| Role: | **As a** *academy member* |
| Verification Steps | 1.Verified that Access the optimal model |
|  | 2.Verified that Prepare generic plans |
|  | 3.Verified that Hand out the diet plans to the players |
|  | 4.Verified that Advice players to follow the diet plan |
|  | 5.Verified that Cross-validate changed parameter results |
|  | 6.Verified that Analyse the cross-validation result |
|  | 7.Verified that Train the model with optimal parameters |
|  | 8.Verified that Test the model |

# 



# VERIFICATION STEPS: GOAL-4

|  |  |
| --- | --- |
| Objective-1 | Studying player behaviour |
| Purpose | To collect regional data |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a**coach |
| Verification Steps | 1.Verified Conduct matches |
|  | 2.Verified Collect player data |
|  | 3.Verified Extract player information |
|  | 4.Verified Conduct personal sessions |
|  | 5.Verified Hire professional help |
|  | 6.Verified Conduct personality tests |
|  | 7.Verified Organise events |
|  | 8.Verified Provide attitude tests |
|  | 9.Verified Analyse tests |
|  | 10.Verified Organise coaching sessions |
|  | 11.Verified Conduct parent meetings |
|  | 12.Verified Question guardians regarding ward |
|  | 13.Verified Personally meet players |
|  | 14. Verified Conduct outdoor trips |
|  | 15. Verified Post match analysis |
|  | 16. Verified Conduct student review |

|  |  |
| --- | --- |
| Process-1 | Organise matches among students |
| Purpose | Analyse player behaviour post-match |
| Target Audience | Internal Stakeholders |
| Status | On-going |
| Role: | **As a**coach |
| Verification Steps | 1. Verified Make players participate |
|  | 2. Verified Conduct friendly matches |
|  | 3.Verified Judge player’s attitude |
|  | 4.Verified Organise professional tournaments |
|  | 5. Verified Conduct prize distribution |
|  | 6. Verified Bring players together |
|  | 7.Verified Rent stadiums |
|  | 8.Verified Organise marathons |

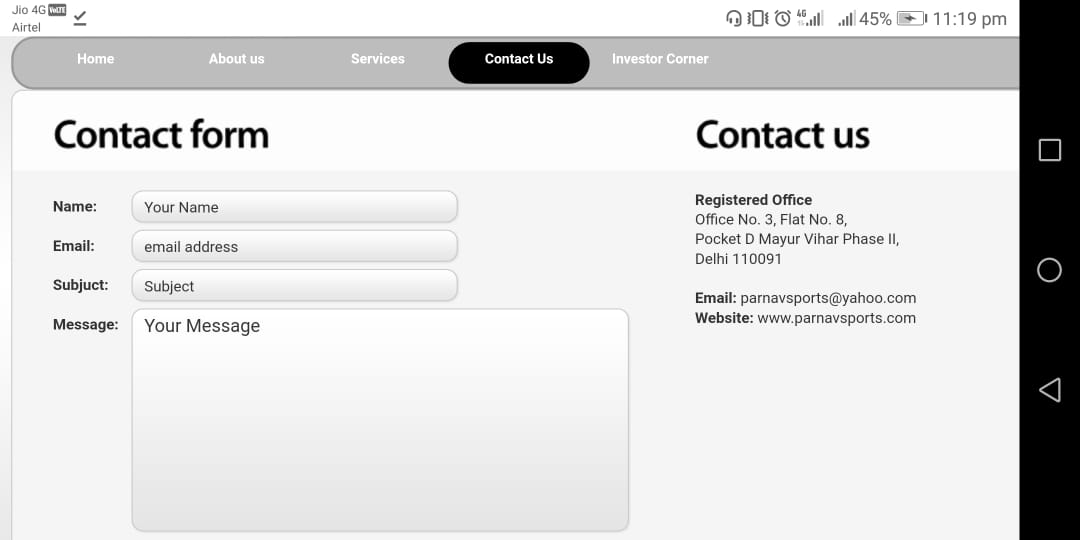
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| --- | --- |
| Process-2 | Pay attention to player attitude |
| Purpose | Study player personality traits |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *coach* |
| Verification Steps | 1.Verified Attend player matches |
|  | 2.Verified Hire professional psychiatrists |
|  | 3.Verified Conduct post match meets |
|  | 4.Verified Bring players together |
|  | 5. Verified Interact with students |
|  | 6.Verified Analyse player behaviour |
|  | 7.Verified Handing player reports |
|  | 8.Verified Personal mentoring |

|  |  |
| --- | --- |
| Objective-2 | Teach Players |
| Purpose | Making them understand importance of sportsmanship |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *coach* |
| Verification Steps | 1.Verified Sportsmanship sessions |
|  | 2.Verified Sportsmanship lectures to trainers |
|  | 3. Verified Trainer evaluation |
|  | 4. Verified Trainer personality analysis test |
|  | 5. Verified Personal mentoring sessions |
|  | 6. Verified Teaching art of sports |
|  | 7. Verified After game evaluations |
|  | 8.Verified Pre-match evaluation |
|  | 9. Verified Detailed knowledge about sports rules |
|  | 10. Verified Mock matches |
|  | 11.Verified Imparting good treatment to opponents |
|  | 12. Verified Trainer evaluation |
|  | 13.Verified Teaching fair generous behaviour |
|  | 14. Verified Guidance sessions |
|  | 15. Verified Get list of all fields of all sports |
|  | 16. Verified Verify data |

|  |  |
| --- | --- |
| Process-1 | Organise Personal Sessions |
| Purpose | Personal Mentoring |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *Life Coach* |
| Verification Steps | 1.Verified Improve health and fitness of players |
|  | 2.Verified Verify consistency |
|  | 3.Verified Transform physical condition |
|  | 4.Verified Use different statistical models |
|  | 5.Verified List available plans |
|  | 6.Verified Analyse results of different models |
|  | 7.Verified Compare stats by age |
|  | 8.Verified Analyse cross-validation results for models |

|  |  |
| --- | --- |
| Process-2 | Educate Players on sportsmanship |
| Purpose | Spread knowledge of sportsmanship |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *Coach* |
| Verification Steps | 1.Verified Imparting good treatments to others |
|  | 2.Verified Life enriching sessions |
|  | 3.Verified Sportsmanship lectures to trainers |
|  | 4.Verified Guidance sessions |
|  | 5.Verified Trainer evaluation |
|  | 6.Verified Personal mentoring sessions |
|  | 7.Verified Investigate trainer value |
|  | 8.Verified Teaching fair generous behaviour |





# VERIFICATION STEPS: GOAL-5

|  |  |
| --- | --- |
| Objective-1 | Perform analysis of region |
| Purpose | To collect regional data |
| Target Audience | Locals |
| Status | On-going |
| Role: | **As a** *promoter* |
| Verification Steps | 1.Verified visiting nearby regions |
|  | 2.Verified collecting data |
|  | 3.Verified analysing data |
|  | 4.Verified hire travel agents |
|  | 5.Verified hire statistics people |
|  | 6.Verified visit nearby sports center |
|  | 7.Verified visit tournaments |
|  | 8.Verified meet youth |
|  | 9.Verified travel nearby sport events |
|  | 10.Verified travel to rural areas |
|  | 11.Verified travel to urban areas |
|  | 12.Verified generate charts |
|  | 13.Verified visit local schools |
|  | 14.Verified visit outdoor marathons |
|  | 15.Verified visit other local academies |
|  | 16.Verified meet local coaches |

|  |  |
| --- | --- |
| Process-1 | Find regional sports statistics |
| Purpose | Collect regional data |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *collector* |
| Verification Steps | 1. Verified Generate region Statistics |
|  | 2. Verified Find region Statistics |
|  | 3. Verified Communicate Relevant statistics |
|  | 4. Verified Sort relevant region data |
|  | 5. Verified Remove data abnormalities |
|  | 6. Verified Make different categories of data |
|  | 7. Verified Consider only relevant region statistics |
|  | 8. Verified Add statistics to region profile |

|  |  |
| --- | --- |
| Process-2 | Communicate relevant Statistics |
| Purpose | tell about statistics |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *collector* |
| Verification Steps | 1. Verified Generate region Statistics |
|  | 2. Verified Find region Statistics |
|  | 3. Verified Communicate Relevant statistics |
|  | 4. Verified Sort relevant region data |
|  | 5. Verified Categorize region statistics |
|  | 6. Verified Choose relevant region Statistics |
|  | 7. Verified Arrange data suitable for creating graphs |
|  | 8. Verified Generate statistical graphs |

|  |  |
| --- | --- |
| Objective-2 | Increase community |
| Purpose | spread awareness |
| Target Audience | Locals |
| Status | On-going |
| Role: | **As a** *promoter* |
| Verification Steps | 1.Verified visiting nearby regions |
|  | 2.Verified collecting data |
|  | 3.Verified analysing data |
|  | 4.Verified hire travel agents |
|  | 5.Verified hire statistics people |
|  | 6.Verified visit nearby sports center |
|  | 7.Verified visit tournaments |
|  | 8.Verified meet youth |
|  | 9.Verified travel nearby sport events |
|  | 10.Verified travel to rural areas |
|  | 11.Verified travel to urban areas |
|  | 12.Verified generate charts |
|  | 13.Verified visit local schools |
|  | 14.Verified visit outdoor marathons |
|  | 15.Verified visit other local academies |
|  | 16.Verified meet local coaches |

|  |  |
| --- | --- |
| Process-1 | Use promoters to spread awareness of sports |
| Purpose | Collect regional data |
| Target Audience | Members |
| Status | On-going |
| Role: | **As a** *collector* |
| Verification Steps | 1. Verified Generate Player Statistics |
|  | 2. Verified Find player Statistics |
|  | 3. Verified Communicate Relevant statistics |
|  | 4. Verified Sort relevant Player data |
|  | 5. Verified Remove data abnormalities |
|  | 6. Verified Make different categories of data |
|  | 7. Verified Consider only relevant player statistics |
|  | 8. Verified Add statistics to Player profile |

|  |  |
| --- | --- |
| Process-2 | Expand sports community with more admissions |
| Purpose | increase academy community |
| Target Audience | Members |
| Status | On-going |
| Role: | **As a** *collector* |
| Verification Steps | 1. Verified Generate Player Statistics |
|  | 2. Verified Find player Statistics |
|  | 3. Verified Communicate Relevant statistics |
|  | 4. Verified Sort relevant Player data |
|  | 5. Verified Categorize player statistics |
|  | 6. Verified Choose relevant Player Statistics |
|  | 7. Verified Arrange data suitable for creating graphs |
|  | 8. Verified Generate statistical graphs |



# 6 VERIFICATION STEPS: GOAL-6

|  |  |
| --- | --- |
| Objective-1 | Generate player data |
| Purpose | Collect player data |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *developer* |
| Verification Steps | 1.Verified Check his basic details |
|  | 2.Verified Scape player’s data from respected source |
|  | 3.Verified Check details filled by End user |
|  | 4.Verified Delete all anomalies |
|  | 5.Verified Call database admin for big mistakes |
|  | 6.Verified Append each player category in their own table |
|  | 7.Verified Archive all player who are not playing |
|  | 8.Verified Make a good structure |
|  | 9.Verified Attend player matches |
|  | 10.Verified Hire professional psychiatrists |
|  | 11.Verified Conduct post match meets |
|  | 12.Verified Bring players together |
|  | 13.Verified Interact with students |
|  | 14.Verified Analyse player behaviour |
|  | 15.Verified Handing player reports |
|  | 16.Verified Personal mentoring |

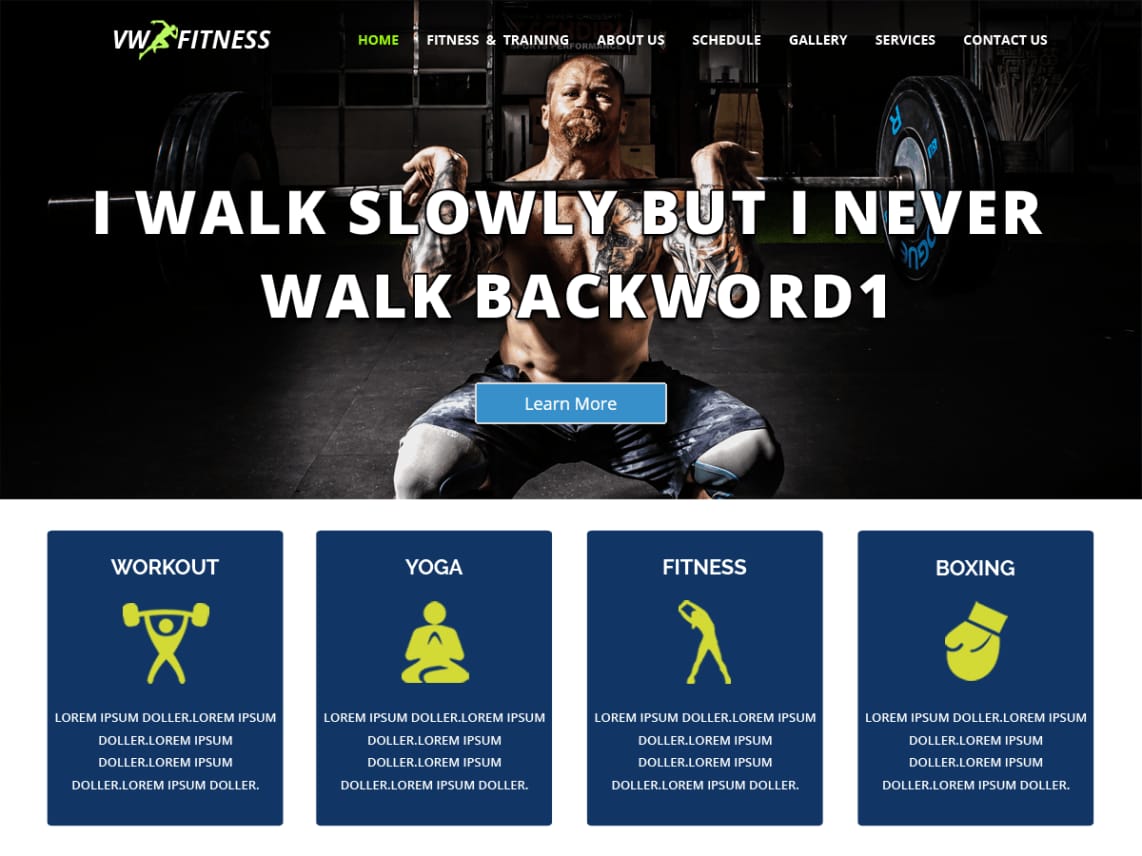
|  |  |
| --- | --- |
| Process-1 | Observer player attitude |
| Purpose | Fetching player data |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *collector* |
| Verification Steps | 1.Verified Take data from End User |
|  | 2.Verified Take data from web scraping |
|  | 3.Verified Append data by admin |
|  | 4.Verified Take data from dataset repositories |
|  | 5.Verified Parse data from different API |
|  | 6.Verified Ask sports officials for rating |
|  | 7.Verified Use Social Network for misc. data |
|  | 8.Verified Use news details for new discoveries |

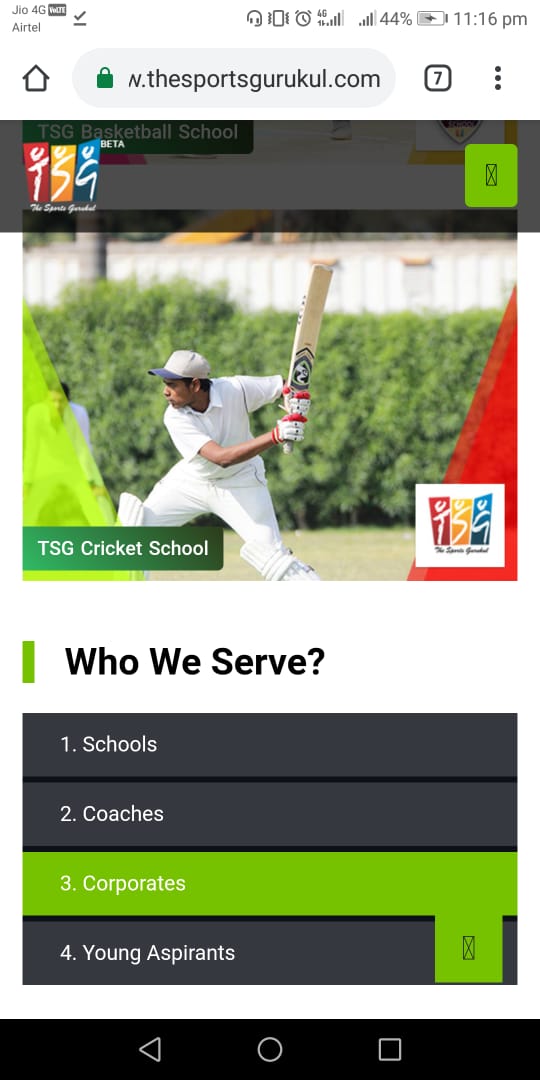
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| --- | --- |
| Process-2 | Create player profiles |
| Purpose | Analyse player data and create reports |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *Developers* |
| Verification Steps | 1.Verified Insert basic details in main table |
|  | 2.Verified Insert Players in different category |
|  | 3.Verified Insert rankings in another table |
|  | 4.Verified Insert links about player |
|  | 5.Verified Insert picture, videos in database |
|  | 6.Verified Update Current details in database |
|  | 7.Verified Use only stats which will affect prediction |
|  | 8.Verified Have highest R square value for the data model |

|  |  |
| --- | --- |
| Objective-2 | Educate players |
| Purpose | Tell players about their report |
| Target Audience | Students |
| Status | On-going |
| Role: | **As a** *Coach* |
| Verification Steps | 1.Verified Imparting good treatments to others |
|  | 2.Verified Life enriching sessions |
|  | 3.Verified Sportsmanship lectures to trainers |
|  | 4.Verified Guidance sessions |
|  | 5.Verified Trainer evaluation |
|  | 6. Verified Personal mentoring sessions |
|  | 7. Verified Investigate trainer value |
|  | 8. Verified Teaching fair generous behaviour |
|  | 9.Verified Improve health and fitness of players |
|  | 10.Verified Verify consistency |
|  | 11.Verified Transform physical condition |
|  | 12.Verified Use different statistical models |
|  | 13.Verified List available plans |
|  | 14.Verified Analyse results of different models |
|  | 15.Verified Compare stats by age |
|  | 16.Verified Analyse cross-validation results for models |

|  |  |
| --- | --- |
| Process 1 | Carry out talk sessions with players |
| Purpose | To educate players |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *Educator* |
| Verification Steps | 1.Verified Plan schedule |
|  | 2.Verified Organise meets |
|  | 3.Verified Provide professional tals |
|  | 4. Verified collect player reports |
|  | 5. Verified Give player reports |
|  | 6.Verified Conduct mentor session |
|  | 7.Verified hire psychiatrists |
|  | 8.Verified meet guardians |

|  |  |
| --- | --- |
| Process 2 | Teach players to develop excel and all aspects of life |
| Purpose | Development of students |
| Target Audience | Stakeholders |
| Status | On-going |
| Role: | **As a** *Coach* |
| Verification Steps | 1.Verified Conduct life-enriching |
|  | 2.Verified Showing importance of lite |
|  | 3.Verified Imparting life-values |
|  | 4.Verified Hire life coaches |
|  | 5.Verified Organise sessions with coaches |
|  | 6. Verified Meet students personally |
|  | 7.Verified Conduct personality test |
|  | 8.Verified Analyse student test data |

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# VERIFICATION MATRIX

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| User Story | Step-1 | Step-2 | Step-3 | Step-4 | Step-5 | Step-6 | Step-7 | Step-8 | Step-9 | Step-10 |
| G1:O1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G1:P1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G1:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G1:O2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G1:P1 | √ | √ | x | x | √ | x | √ | √ | √ | √ |
| G1:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G2:O1 | √ | √ | √ | √ | √ | √ | x | √ | √ | √ |
| G2:P1 | √ | √ | x | x | x | x | √ | √ | √ | √ |
| G2:P2 | √ | √ | √ | √ | √ | √ | √ | x | √ | √ |
| G2:O2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G2:P1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G2:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:O1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:P1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:O2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:P1 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G3:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G4:O1 | √ | √ | √ | x | √ | √ | √ | √ | √ | √ |
| G4:P1 | √ | √ | √ | √ | √ | x | √ | √ | √ | √ |
| G4:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G4:O2 | √ | √ | √ | √ | √ | x | √ | √ | √ | √ |
| G4:P1 | √ | √ | √ | √ | √ | √ | √ | x | √ | √ |
| G4:P2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G5:O1 | x | x | x | √ | √ | √ | x | x | √ | √ |
| G5:P1 | √ | √ | x | x | x | √ | √ | √ | x | x |
| G5:P2 | √ | √ | √ | √ | x | x | x | x | x | x |
| G5:O2 | x | √ | √ | x | x | x | x | x | √ | √ |
| G5:P1 | √ | √ | √ | √ | √ | √ | √ | √ | x | x |
| G5:P2 | √ | √ | √ | √ | √ | √ | x | √ | √ | √ |
| G6:O1 | √ | √ | x | √ | √ | √ | √ | √ | √ | √ |
| G6:P1 | √ | √ | √ | √ | √ | √ | x | x | √ | √ |
| G6:P2 | √ | √ | √ | x | x | x | √ | √ | √ | √ |
| G6:O2 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| G6:P1 | √ | √ | √ | √ | √ | x | √ | √ | √ | x |
| G6:P2 | √ | √ | √ | x | √ | √ | √ | x | x | X |
| G7:O1 | X | X | X | X | X | X | X | X | X | X |
| G7:P1 | X | X | X | X | X | X | X | X | X | X |
| G7:P2 | X | X | X | X | X | X | X | X | X | X |
| G7:O2 | X | X | X | X | X | X | X | X | X | X |
| G7:P1 | X | X | X | X | X | X | X | X | X | X |
| G7:P2 | X | X | X | X | X | X | X | X | X | X |