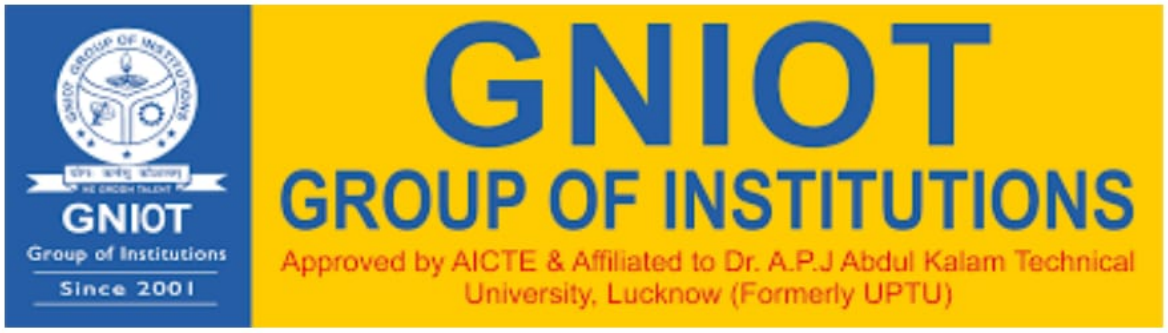
ANNEXURE-I

‘SOCCER ANALYSIS’

Mini Project Report File

By- SHIVAM TIWARI

(Roll no. 1901320100154)



Department of

Computer Science and Engineering

G.N.I.O.T, Greater Noida

Dr A.P.J. Abdul Kalam Technical University,

Lucknow

ANNEXURE-II

PROJECT REPORT ON

'SOCCOR ANALYSIS'

Submitted in partial fulfilment for the award of

DEGREE IN

COMPUTER SCIENCE AND ENGINEERING

(BATCH 2019-2023)

By- SHIVAM TIWARI (1901320100154)

Department of

Computer Science and Engineering

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Dr A.P.J. Abdul Kalam Technical University,

Lucknow

ANNEXURE-III

Certificate of Originality

This is to certify that the project report title 'SOCCOR ANALYSIS' being submitted by SHIVAM TIWARI in partial fulfilment for the award of the degree of BACHELORS OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING to the Dr A.P.J. Abdul Kalam Technical University, Lucknow is a record of the bonafide work carried out by him under my guidance and supervision. The results embodied in this project report have not been submitted to any other university or institute for the award of any Degree or Diploma.

(Head of the Department)

ACKNOWLEDGEMENT

Presentation, inspiration, and motivation have always played a key role in the success of any venture.

I express my sincere thanks to **Dr Rajdev Tiwari, HOD CSE of GNIOT.**

I pay my deep sense of gratitude to **Dr. Preety Verma Dhaka,** to encouraged me to the highest peak and gave me this opportunity to make this project. I'm immensely obliged to my friends for their inspiration, guidance and supervision in completion of this project.

Last, but not the least , my parents are also an important source of inspiration for me. So, with due regards, I express my gratitude to them.

ABSTRACT

Association football, more commonly known as simply football or soccer, is **a team sport played with a spherical ball between two teams** of 11 players. It is played by approximately 250 million players in over 200 countries and dependencies, making it the world's most popular sport. The game is played on a rectangular field called a pitch with a goal at each end. The object of the game is to score more goals than the opposition by moving the ball beyond the goal line into the opposing goal, usually within a time frame of 90 or more minutes. Football is played in accordance with a set of rules known as the Laws of the Game. The ball is 68–70 cm (27–28 in) in circumference and known as the football. The two teams compete to get the ball into the other team's goal (between the posts and under the bar), thereby scoring a goal. Players are not allowed to touch the ball with hands or arms while it is in play, except for the goalkeepers within the penalty area. Players may use any other part of their body to strike or pass the ball, and mainly use their feet. The team that scores more goals at the end of the game is the winner; if both teams have scored an equal number of goals, either a draw is declared or the game goes into extra time or a penalty shootout, depending on the format of the competition. Each team is led by a captain who has only one official responsibility as mandated by the Laws of the Game: to represent their team in the coin toss prior to kick-off or penalty kicks. Football is governed internationally by the International Federation of Association Football (FIFA; French: Federation International Football Association),

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• INTRODUCTION

History and Structure:-

Football (or soccer as the game is called in some parts of the world) has a long history. Football in its current form arose in England in the middle of the 19th century. But alternative versions of the game existed much earlier and are a part of the football history

The first known examples of a team game involving a ball, which was made out of a rock, occurred in old Mesoamerican cultures for over 3,000 years ago. It was by the Aztecs called *Tchatali*, although various versions of the game were spread over large regions. In some ritual occasions, the ball would symbolize the sun and the captain of the losing team would be sacrificed to the gods. A unique feature of the Mesoamerican ball game versions was a bouncing ball made of rubber – no other early culture had access to rubber.

The first known ball game which also involved kicking took place In China in the 3rd and 2nd century BC under the name *cuju*. Cuju was played with a round ball (stitched leather with fur or feathers inside) on an area of a square. A modified form of this game later spread to Japan and was by the name of *kemari* practiced under ceremonial forms.

Proposed System:-

- The Objective of the Game. The main aim of football is that a team has to score more goals than their opponents in the...
- Football Ground: Size & Markings. The pitch sizes vary from ground-to-ground, but are roughly 90-120 meters in length...
- Player & Equipments. Each team consists of 18 players, this is known as the '18-man Squad' and includes all the players...
- Scoring. Scoring in football is extremely straightforward. To score a goal, a team is required to put the ball inside..

- **SYSTEM SPECIFICATIONS**

Software Requirements:-

Operating System: Windows
Developing software: Pycharm IDE, Jupyter notebook
Language used: Python

Hardware Requirements:-

Processor: PC with i3 processor
Class Memory: 256 MB RAM
Hard disk space: 2.5 GB installation drive

- **APPLICATION INFRASTRUCTURE**

About Python Programming:-

PYTHON is an interpreted high-level general purpose programming language. Its design philosophy emphasizes code readability with its use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Python is dynamically-typed and garbage-collected. It supports multiple programming paradigms, including structured(particularly, procedural), object-oriented and functional programming. It is often described as a "batteries included" language due to its comprehensive standard library.

Guido Van Rossum began working on Python in late 1980s, as a successor to the ABC programming language, and first released it in 1991 as Python 0.9.0. Python 2.0 was released in 2000 and introduced new features, such as list comprehensions and a cycle-detecting garbage collection system(in addition to reference counting). Python 3.0 was released in 2008 and was a major revision of the language that is not completely backward-compatible. Python 2 was discontinued with version 2.7.18 in 2020.

Python consistently ranks as one of the most popular programming languages.

Programming Tools:-

PyCharm is the most popular IDE used for Python scripting language. This chapter will give you an introduction to **PyCharm** and explains its features. **PyCharm** offers some of the best features to its users and developers in the following aspects −. Code completion and inspection. Advanced debugging.

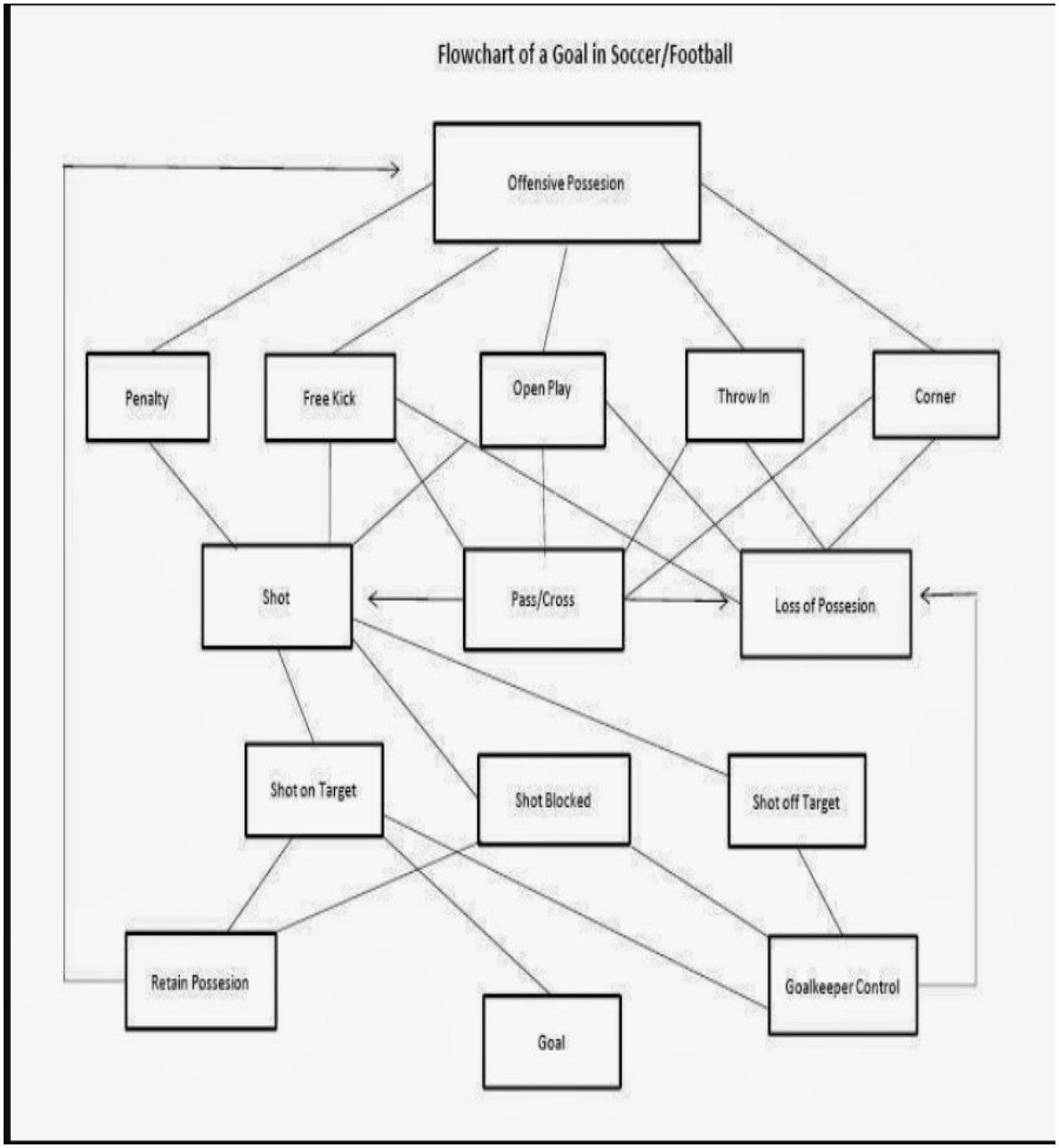
• SYSTEM DESIGN

System Flow Chart:-

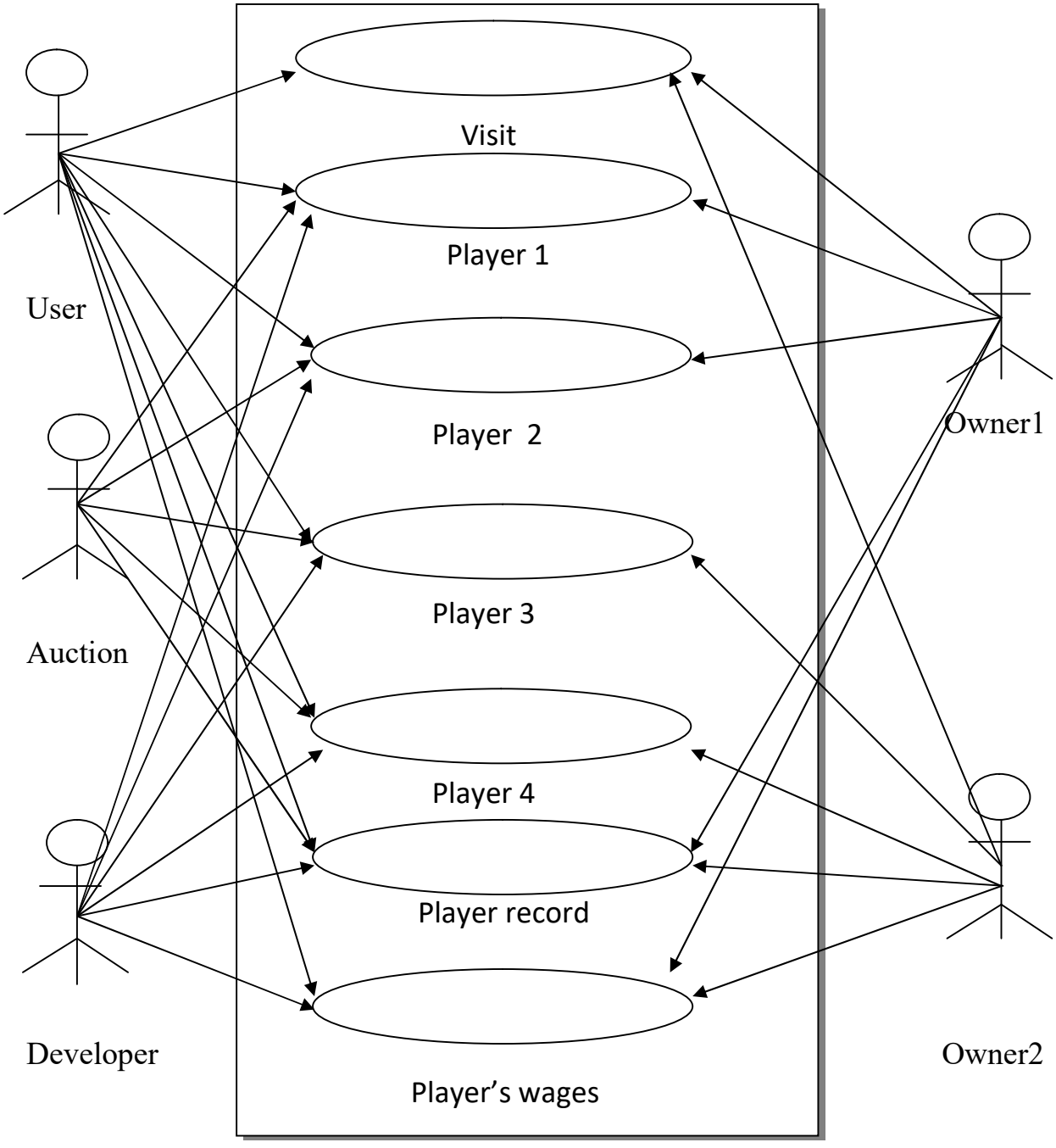
A flowchart(also spelled flow-chart and flow chart) is a schematic representation of an algorithm or a process. A flowchart is one of the seven basic tools of quality control, which include the histogram, pareto chart, cheek sheet, control chart, cause-and-effect diagram, flowchart, and scatter diagram. See Quality Management Glossary. They are commonly used in business/economic presentations to help the audience visualise the content better.

- Start and end symbols: Represented as circles, ovals or rounded(fillet) rectangles, usually containing the word “start” or “end”, or another phrase signalling the start or end of a process, such as “submit inquiry” or “receive product”.
- Input/Output, represented as a parallelogram. Examples: Get X from the user; usually containing the word “start” or “end”.
- Arrows, showing what’s called “flow of display x”.
- Generic processing steps: Represented as rectangles.
- Conditional or decision represented as a diamond(rhombus) showing where a decision is necessary, commonly a yes/no question or True/False test. The conditional symbol is peculiar in that it has two arrows coming out of it, usually from the bottom point and right point, one corresponding to Yes or True, and one corresponding to No or False.
- More than two arrows can be used, but this is normally a clear indicator that a complex decision is being taken, in which case it may need to be broken-down further.
- Arrows: Showing “flow of control”. An arrow coming from one symbol ending at another symbol represents that control passes to the symbol the arrow points to.

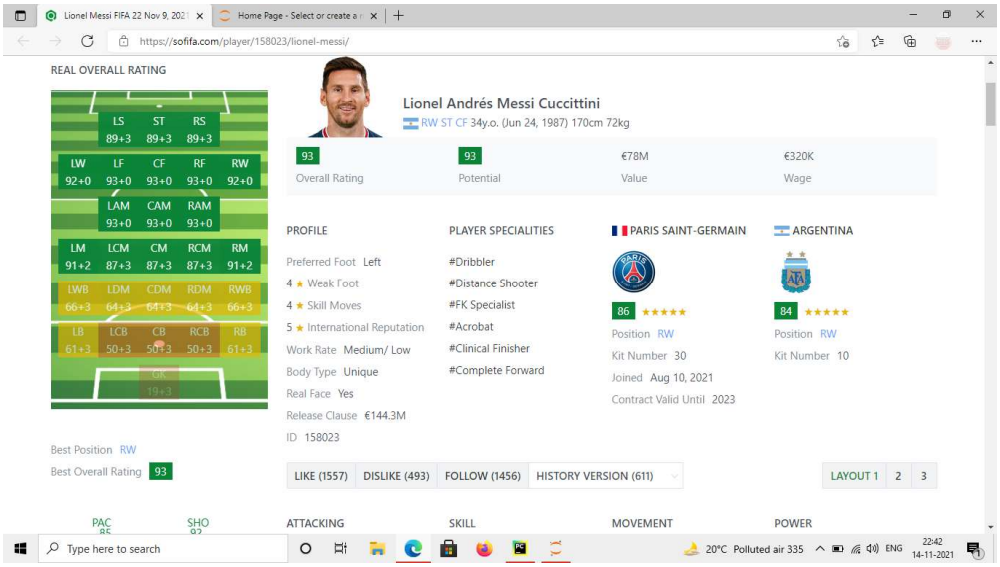
Flowchart of soccer analysis:-



USE CASE DIAGRAM:-



- **Snapshot of output:-**



Output Screen

• FUTURE SCOPE

It will going to help in selecting the player across the global for league tournament,

• CONCLUSION

We have successfully completed our mini project ‘soccer analysis in Python’.

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