APPROACH

**Person Parameters** :

*Px ,Py - Initial Position*

*Vx,Vy - Velocity*

*Lamba - Angle between the Player and the Object(i.e either ball, goalpost or teammate etc.)*

**Ball Parameters :**

*Bx,By*

*Vb - Velocity when its kicked*

**Goal Keeper Behaviour**

If(GxGy == BxBy)

{

if(teammate\_nearby && opponent not in radius):

pass

}

**A picture containing diagram

Description automatically generated**

OR

2. If(GxGy == BxBy)

{

if(teammate\_nearby\_middle\_line && opponent not in radius):

pass

}

A picture containing diagram

Description automatically generated

**Attacking Team Roles** :

If( team\_mate moving towards goal ):

{

(1 player try to get into the radius of team\_mate to help)

(1 player try to move towards mid line)

}

**Defending Team Roles :**

If( opponent moving towards goal ):

{

(1 player try to get into the radius of opponent to tackle)

(2 player try to move towards goal to defend)

}

Diagram

Description automatically generated with medium confidence

Attacker Role :

If(opponent in radius of the person with ball )

{

Pass to the nearby teammate

And 1 team move towards opposite side to from a line of attack

}

Diagram

Description automatically generated with low confidence

Similar to above whenever enemy is in radius and is being tackled pass to the nearby player **UNTIL THE BALL IS VERY NEAR TO THE GOAL**

A picture containing diagram

Description automatically generated

Shape

Description automatically generated

When Nearby TAKE THE SHOT

A picture containing shape

Description automatically generated

IF GOAL WAS NOT SCORED :

CALL GOAL KEEPER ROLE TO PASS TO NEARBY TEAMMATE

{

OPPONENT TEAM DEFENDER MOVE TOWARDS GOAL POST TO DEFEND

2 MORE OPPONENT MOVE TOWARDS MIDLINE TO TACKLE AT HALF WAY

Diagram, schematic

Description automatically generated

}

WHILE MOVING TOWARDS GOAL TEAM\_MATES STAY IN CERTAIN PATTERN ON TRIANGLE FORM OF ATTACK FOR EASY PASSING OF BALL IF BEING TACKLED LENGTH OF SIDE S OF TRIANGLE IS VARIED BY RANDOM FUNCTION TO INCREASE RANDOMNESS

A picture containing chart

Description automatically generated