

Darts 301 Pseudocode:

Player.Mod_Score(int Points_Scored)

```
if current score > points scored:
    current score - points scored
    return
else if current score < points scored:
    return
```

Game.Game()

```
get game type (301 or 501)
current round = 0
average rounds = 0
games played = 0
return
```

Game.Start_Game()

```
average round + current round / games played
games played + 1
current round = 0
return
```

Game.New_Round()

```
current round + 1
return
```

Board.Board()

```
Init board grid as 1024x1024 in array - all = 0
map dart board:
    get game type - in 301 mark all spaces which would be \
                    double or triple as std

    mark out values -
        set area of cord grid = score, i.e:
            bullseye coords all set = 50,
```

```

17 sector coords set to 17
as above set double or triple = std if game type = 301

```

Board.Throw_Dart

```

get target sector
roll random number against player accuracy to determine actual hit location:
    aim for center of sector deviating by accuracy:
        simulate throw from 2m, accounting for gravitational drop
        determine spread cone
        place hit within cone:
            if hit roll beats accuracy:
                land in target
                add target value to points scored
            else:
                select hit sector based on the largest sector in hit cone
                add sector value to points scored

```

Darts 301 UML:

Game
- Games_Played : int - Game_Type : int - Current_Round : int - Average_Rounds : int
+ Game() + ~Game() + Start_Game(out Games_Played : int) : int + New_Round(out Current_Round : int) : int + Get_Round(out Current_Round : int) : int + Get_Average_Rounds(out Average_Rounds : int) : int + Get_Game_Type(out Game_Type : int) : int + Get_Games_Played(out Games_Played : int) : int

Board
- Board_Grid : int = [1024][1024]
+ Board(Board_Grid : int) + ~Board() + Throw_Dart(Target : int, Player_Accuracy : int, Board_Grid : int, out Points_Scored : int) : int

Player
- Player_Name : string - Player_Score : int - Player_Accuracy : int
+ Player(Player_Name : string, Player_Accuracy : int) + ~Player() + Get_Name(out Player_Name : string) : string + Get_Score(out Player_Score : int) : int + Get_Accuracy(out Player_Accuracy : int) : int + Mod_Score(Points_Scored : int)