INTRODUCTON

The main objective of this hand cricket game is to give the user a digital option to play this game. The game is available in single player mode. It is a leisure time game. It is not among the addictive game so it can be played for a while to calm down the mind. It does not require any complex gaming knowledge, so that it can be played by any age group.

In this project we have used some basic concepts of python with random module, if-elif conditional statement, looping statements(for loop, while loop) and global variables. We have defined certain user defined function along with some built-in function to make the program easily understandable.

To play the game the user first perform toss then if he wins he opts for either bowling or batting. If he losses the toss then computer or the bot decides for batting or bowling.

USER DEFINED MODULE FUNCTION

* **FUNTION FOR COMMENTRY WHILE BATTING**

**def commentry(b):**

**if b==0:**

**x=random.choice(("Great defense by the batsman!","That was a dot ball!","The ball passed very close to the stumps!"))**

**print(x)**

**elif b==1:**

**x=random.choice(("That was very close to out!","Fast running between the wickets!","It seems non-striker is very eager to get strike!"))**

**print(x)**

**elif b==2:**

**x=random.choice(("Batsman will keep the strike with himelf!","Good shot but only got two runs!","Good runing between the wickets!"))**

**print(x)**

**elif b==3:**

**x=random.choice(("Bad fielding cost 3 runs to the team!","Batsman seems to be like a rocket while running!"))**

**print(x)**

**elif b==4:**

**x=random.choice(("One bounce and a four!!","Batsman seems to be pretty confident!","So well timed shot which adds four runs in total score!"))**

**print(x)**

**elif b==5:**

**print("That was a huge wide and wicketkeeper fails to catch it which cost them 5 runs!")**

**elif b==6:**

**x=random.choice(("A great shot by the batsman! The ball went above the boundary!!","The ball has crossed the stadium, it was such a massive shot!","After this six pressure is on bowler!"))**

**print(x)**

This function is used for commentary when the user is batting.

* **FUNCTION FOR COMMENTARY WHILE BOWLING**

**def commentryO(y):**

**if y==0:**

**print("Amazing bowling! Batsman missed the ball!")**

**elif y==1:**

**print("Good fielding, batsman could only score 1 run!")**

**elif y==2:**

**print("Nice bowl, but could not stop batsman from stealing 2 runs.")**

**elif y==3:**

**print("Bad fielding by the fielders, which cost the team 3 runs!")**

**elif y==4:**

**print("The batsman managed to find a wide gap between the fielders!")**

**elif y==5:**

**print("That was a huge wide and wicketkeeper fails to catch it which cost them 5 runs!")**

**elif y==6:**

**print("A very bad bowl, the batsman managed to deliver the ball outside the boundary!")**

This function is used for commentary when the user is bowling

* **FUNCTION FOR BATTING**

**def batting():**

**print('Enter the run',name,' you want to score:')**

**global runs**

**global balls**

**global i**

**global c**

**i=int(input())**

**c = random.randint(0,6)**

**if i in range (0,7):**

**if i==c:**

**print('You are out!')**

**print()**

**print("Player score:",runs)**

**if balls!=0:**

**print("Strike rate:",(runs/balls)\*100)**

**print()**

**else:**

**balls+=1**

**print("Strike rate:0")**

**print()**

**else:**

**commentry(i)**

**print("RUNS in this ball")**

**runs+=i**

**print("Total score:",runs)**

**print()**

**balls+=1**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

The function is used while the user is batting and it also allows the user to enter the name and the run user wants to score. It also displays the strike rate, the total score and the commentary on every run the user scores . It also checks whether the user is out or not.

* **FUNTION FOR BOWLING**

**def bowling():**

**print('Enter the run',name,' you want to bowl:')**

**global runsO**

**global j**

**global d**

**j=int(input())**

**d = random.randint(0,6)**

**if j in range (0,7):**

**if j==d:**

**print('Bot is out!')**

**print()**

**print("Bot score:",runsO)**

**print()**

**else:**

**commentryO(d)**

**print(d,"RUNS in this ball")**

**runsO+=d**

**print("Total score:",runsO)**

**print()**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

This Function allows the user to enter the value he/she wants to bowl and it also checks whether the bot is out or not. It displays the run scored by BOT in every ball followed by the commentary in the function. It also displays the total score of the BOT.

**SOURCE CODE**

**import random**

**i=0**

**j=0**

**d=1**

**c=1**

**def commentry(b):**

**if b==0:**

**x=random.choice(("Great defense by the batsman!","That was a dot ball!","The ball passed very close to the stumps!"))**

**print(x)**

**elif b==1:**

**x=random.choice(("That was very close to out!","Fast running between the wickets!","It seems non-striker is very eager to get strike!"))**

**print(x)**

**elif b==2:**

**x=random.choice(("Batsman will keep the strike with himelf!","Good shot but only got two runs!","Good runing between the wickets!"))**

**print(x)**

**elif b==3:**

**x=random.choice(("Bad fielding cost 3 runs to the team!","Batsman seems to be like a rocket while running!"))**

**print(x)**

**elif b==4:**

**x=random.choice(("One bounce and a four!!","Batsman seems to be pretty confident!","So well timed shot which adds four runs in total score!"))**

**print(x)**

**elif b==5:**

**print("That was a huge wide and wicketkeeper fails to catch it which cost them 5 runs!")**

**elif b==6:**

**x=random.choice(("A great shot by the batsman! The ball went above the boundary!!","The ball has crossed the stadium, it was such a massive shot!","After this six pressure is on bowler!"))**

**print(x)**

**def commentryO(y):**

**if y==0:**

**print("Amazing bowling! Batsman missed the ball!")**

**elif y==1:**

**print("Good fielding, batsman could only score 1 run!")**

**elif y==2:**

**print("Nice bowl, but could not stop batsman from stealing 2 runs.")**

**elif y==3:**

**print("Bad fielding by the fielders, which cost the team 3 runs!")**

**elif y==4:**

**print("The batsman managed to find a wide gap between the fielders!")**

**elif y==5:**

**print("That was a huge wide and wicketkeeper fails to catch it which cost them 5 runs!")**

**elif y==6:**

**print("A very bad bowl, the batsman managed to deliver the ball outside the boundary!")**

**def batting():**

**print('Enter the run',name,' you want to score:')**

**global runs**

**global balls**

**global i**

**global c**

**i=int(input())**

**c = random.randint(0,6)**

**if i in range (0,7):**

**if i==c:**

**print('You are out!')**

**print()**

**print("Player score:",runs)**

**if balls!=0:**

**print("Strike rate:",(runs/balls)\*100)**

**print()**

**else:**

**balls+=1**

**print("Strike rate:0")**

**print()**

**else:**

**commentry(i)**

**print("RUNS in this ball")**

**runs+=i**

**print("Total score:",runs)**

**print()**

**balls+=1**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

**def bowling():**

**print('Enter the run',name,' you want to bowl:')**

**global runsO**

**global j**

**global d**

**j=int(input())**

**d = random.randint(0,6)**

**if j in range (0,7):**

**if j==d:**

**print('Bot is out!')**

**print()**

**print("Bot score:",runsO)**

**print()**

**else:**

**commentryO(d)**

**print(d,"RUNS in this ball")**

**runsO+=d**

**print("Total score:",runsO)**

**print()**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

**#\_\_\_\_main\_\_\_\_**

**runs=0**

**runsO=0**

**print('Welcome to hand cricket!')**

**print('Player has to enter a valid run(0,1,2,3,4,5,6) after every ball!')**

**name=input("Enter player's name:")**

**print()**

**print("LET'S TOSS THE COIN: ")**

**toss=input('Enter "H" for HEADS and "T" for TAILS: ')**

**tos=random.choice(('H','T'))**

**if toss==tos:**

**print('YOU WON THE TOSS!')**

**inn= input('BATTING(B) OR BOWLING(L): ')**

**if inn=='B':**

**print("YOU ARE BATTING!!")**

**balls=0**

**while i!=c:**

**batting()**

**while (runs>=runsO and j!=d):**

**bowling()**

**print("TARGET SCORE: ",runs+1)**

**elif inn=='L':**

**print("YOU ARE BOWLING!!")**

**while j!=d:**

**bowling()**

**balls=0**

**while (runsO>=runs and i!=c):**

**batting()**

**print("TARGET SCORE: ",runsO+1)**

**elif toss!=tos:**

**print('BOT WON THE TOSS!!')**

**inn\_b=random.choice(("BATTING","BOWLING"))**

**if inn\_b=="BATTING":**

**print("YOU ARE BOWLING!!")**

**while j!=d:**

**bowling()**

**balls=0**

**while (runsO>=runs and i!=c):**

**batting()**

**print("TARGET SCORE: ",runsO+1)**

**else:**

**print("YOU ARE BATTING!!")**

**balls=0**

**while i!=c:**

**batting()**

**while (runs>=runsO and j!=d):**

**bowling()**

**print("TARGET SCORE: ",runs+1)**

**if runs>runsO:**

**print("Congratulations",name,"!!")**

**print("You won the game!")**

**print("""░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░**

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**elif runs<runsO:**

**print("Well played",name)**

**print("But u lost...")**

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**else:**

**print()**

**print("!!!!!!!!!!!!!!\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_TIE\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!!!!!!!!!!!!!")**

**WORKING DESCRIPTION**

* Variables and Global Variables used in the Source Code:-
  + - * + **i (integer):** It is a Global variable which stores the run entered by the user for every ball.
        + **j (integer):** It is a Global variable which stores the run which the user wants to bowl.
        + **c (integer):** It is a Global variable which generates a random run which is used as the value the BOT want to ball.
        + **d (integer):** It is a Global variable which generates a random run which is used as the value the BOT want to bat.
        + **runs (integer):** It is a Global variable which stores the run scored by the user.
        + **runsO (integer):** It is a global variable which stores the run scored by the BOT.
        + **b(integer):** It is a variable which is used to generate corresponding commentary based on the value of i.
        + **y(integer):** It is a variable which is used to generate corresponding commentary based on the value of j.
        + **x(string):** It is the commentary which is displayed when the user is batting.
        + **balls(integer):** It will count the no. of balls played by the user.
        + **name(string):** It will store the name of player which the user has entered
* **def batting():**

**print('Enter the run',name,' you want to score:')**

**global runs**

**global balls**

**global i**

**global c**

**i=int(input())**

**c = random.randint(0,6)**

**if i in range (0,7):**

**if i==c:**

**print('You are out!')**

**print()**

**print("Player score:",runs)**

**if balls!=0:**

**print("Strike rate:",(runs/balls)\*100)**

**print()**

**else:**

**balls+=1**

**print("Strike rate:0")**

**print()**

**else:**

**commentry(i)**

**print("RUNS in this ball"**

**runs+=i**

**print("Total score:",runs)**

**print()**

**balls+=1**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

A message will be displayed asking the user to enter the run he/she wants to score. An if statement will check whether the value of I falls in between 0 to 6. If true then another if statement will check whether the user is out or not (i=c). If, true a message will be displayed stating this and the total run scored by the player will also be displayed. After this another message will be displayed showing the strike rate of the user. If the user is not out then a commentary will be displayed on the basis of the run entered by the user and the number of balls along with the total score of the user will be updated and that score will be printed as the total score. If the value of i doesn’t fall in between 0 to 6 then a message stating ‘Enter a valid run’ will be displayed.

* **def bowling():**

**print('Enter the run',name,' you want to bowl:')**

**global runsO**

**global j**

**global d**

**j=int(input())**

**d = random.randint(0,6)**

**if j in range (0,7):**

**if j==d:**

**print('Bot is out!')**

**print()**

print("Bot score:",runsO)

**print()**

**else:**

**commentryO(d)**

**print(d,"RUNS in this ball")**

**runsO+=d**

**print("Total score:",runsO)**

**print()**

**else:**

**print("Enter a valid run! (0,1,2,3,4,5,6)")**

**print()**

A message will be displayed asking the user to enter the run he/she wants to bowl. An if statement will check whether that value of j is in the range 0 to 6. If true then another if statement will check whether the BOT is out or not (j=d). If true then a message stating

this will be displayed along with the run scored by the BOT. If false then a commentary will be displayed based on the value of d. The total score of the BOT will be displayed on the screen. If the value of d dosen’t fall in between the range 0 to 6 then a message will be displayed to the user to enter the valid run.

* **runs=0**

**runsO=0**

It will assign 0 as the initial value of runs and runsO.

* **print('Welcome to hand cricket!')**

**print('Player has to enter a valid run(0,1,2,3,4,5,6) after every ball!')**

It will print a greeting message and the basic instruction to play the game.

* **name=input("Enter player's name:")**

**print()**

**print("LET'S TOSS THE COIN: ")**

It will ask for the player’s name and display a message to start a toss

* **toss=input('Enter "H" for HEADS and "T" for TAILS: ')**

**tos=random.choice(('H','T'))**

The user has to enter ‘H’ for Heads and ‘T’ for Tails to toss. This choice will be stored in the variable ‘toss’. The variable tos will store the computer generated choice.

* **if toss==tos:**

**print('YOU WON THE TOSS!')**

**inn= input('BATTING(B) OR BOWLING(L): ')**

**if inn=='B':**

**print("YOU ARE BATTING!!")**

**balls=0**

**while i!=c:**

**batting()**

**while (runs>=runsO and j!=d):**

**bowling()**

**print("TARGET SCORE: ",runs+1)**

**elif inn=='L':**

**print("YOU ARE BOWLING!!")**

**while j!=d:**

**bowling()**

**balls=0**

**while (runsO>=runs and i!=c):**

**batting()**

**print("TARGET SCORE: ",runsO+1)**

If the value of the variables ‘toss’ and ‘tos’ is equal then the user has won the toss and a message stating this will open on the screen. Now, user has to enter his choice of batting or bowling which will store in the variable ‘inn’.

If the user has chose to bat in first inning then a while loop calling the function will run until and unless two variables (i and c) are equal.

The runs scored by the user will be stored in the variable ‘runs’. After this a while loop will run calling the function balling and printing the target score until either the BOT is out or it har achieved the target score.

If the user has chosen to bowl in the first inning a while loop will be run calling the function balling until the BOT is out[ two variables( j and d) are equal]. After this another while loop will run calling the function batting and printing the target score until either the user is out( i=c) or the target score is achieved by user (runs> runsO)

* **elif toss!=tos:**

**print('BOT WON THE TOSS!!')**

**inn\_b=random.choice(("BATTING","BOWLING"))**

**if inn\_b=="BATTING":**

**print("YOU ARE BOWLING!!")**

**while j!=d:**

**bowling()**

**balls=0**

**while (runsO>=runs and i!=c):**

**batting()**

**print("TARGET SCORE: ",runsO+1)**

**else:**

**print("YOU ARE BATTING!!")**

**balls=0**

**while i!=c:**

**batting()**

**while (runs>=runsO and j!=d):**

**bowling()**

**print("TARGET SCORE: ",runs+1)**

If the value of the variables ‘toss’ and ‘tos’ are not equal then BOT has won the toss and a message is displayed stating this.

The BOT choice to bat or ball is stored in the variable ‘inn\_b’. If the BOT has chosen to bat then a while loop will be run calling the function balling until the BOT is out[ two variables( j and d) are equal]. After this another while loop will be run calling the function batting and printing the target score until either the user is out( i=c) or the target score is achieved by user (runs> runsO).

If the BOT has chosen to bowl then a while loop calling the function will run until and unless two variables (i and c) are equal. The runs scored by the user will be stored in the variable ‘runs’. After this a while loop will run calling the function balling and printing the target score until either the BOT is out or it har achieved the target score.

* **if runs>runsO:**

**print("Congratulations",name,"!!")**

**print("You won the game!")**

**print("""░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░**

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**elif runs<runsO:**

**print("Well played",name)**

**print("But u lost...")**

**print("""░░░░░░░░░░░░▄█▀▀██▀▀▀▀▀▀▀█▄░░░░░**

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**else:**

**print()**

**print("!!!!!!!!!!!!!!\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_TIE\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!!!!!!!!!!!!!")**

If the user wins the match (runs>runsO) then a congratulatory message will be displayed with a thumbs up sign.

If the users loses the match (runsO>runs) then a consolidative message will be displayed with the thumps down sign.

If there is tie (runs=runsO) then a message displaying tie will be displayed.