

Getting Started

1. Rules of the game

This game is a hybrid of cricket and hand cricket. To know more about hand cricket, visit <https://www.instructables.com/id/How-to-Play-Hand-Cricket/>

Whatever you show your opponent, enter its value. For example, showing an open palm to your opponent represents 5. Input 5 and not 'open palm'.

The ultimate goal is simple: Score more than your opponent to win.

2. OS Pre-requisites

To play this game, you need to have Python software installed. You can download the software from <https://www.python.org/downloads>.

NOTE: THIS GAME IS CROSS-PLATFORM COMPATIBLE.

Supported platforms:

- Microsoft Windows 7 or later
- Android API 24 or later (Apps are available on the Play Store)
- Mac OS X 10.6 or later
- Linux

Disk space: 10 MB (minimum).

3. What's this project?

This is a hybrid of cricket and the legacy hand cricket game – implemented in Python and supporting text files.

This project was built entirely on Python 3.7.4 and is compatible with all versions of Python 3 and newer.

The game can be played even without an internet connection.

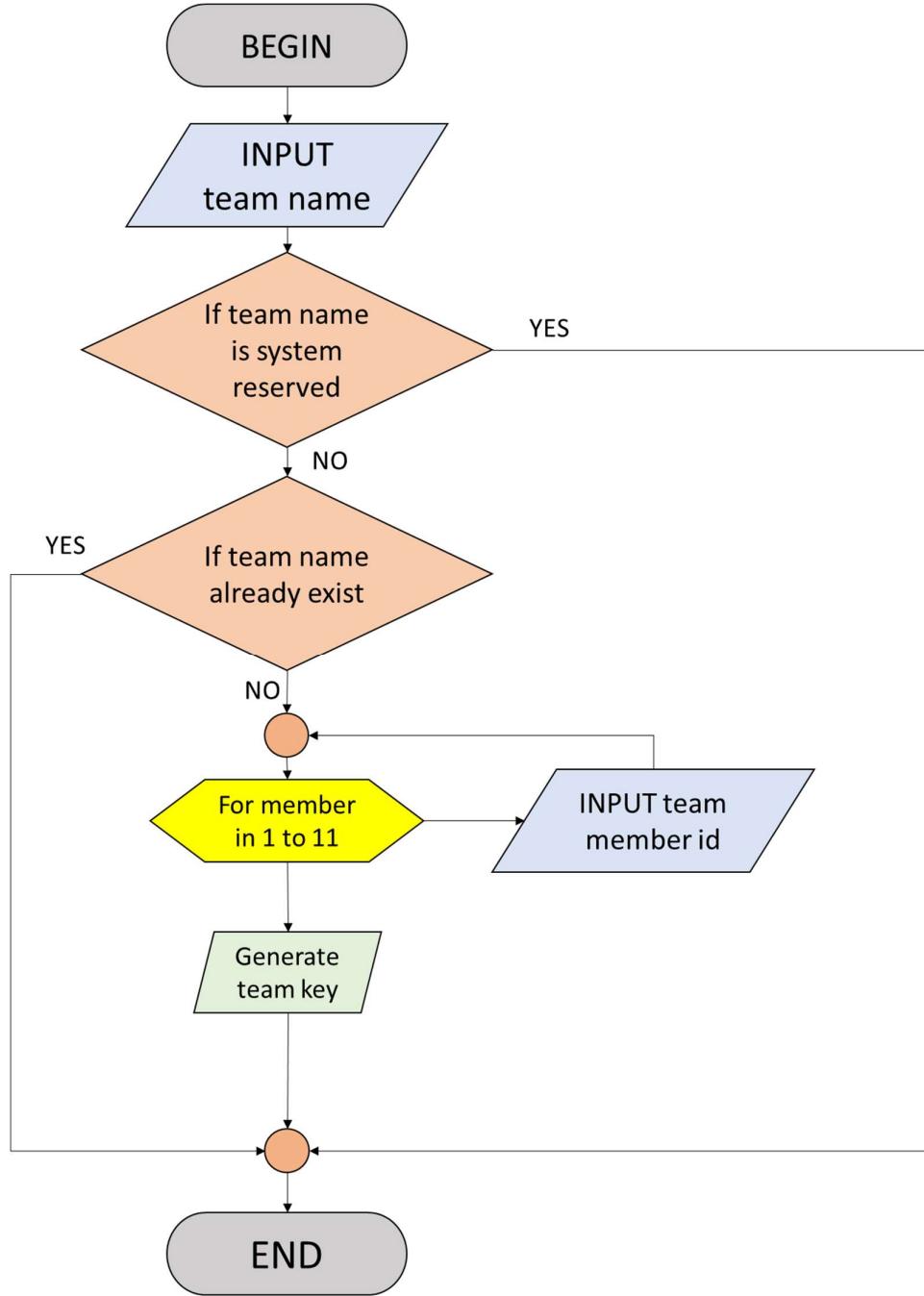
Tournament mode is not yet included in this game. Customized tournaments can be created using individual team files. For such tournaments, at least 20 MB of disk space is recommended.

4. Known bugs and vulnerabilities:

- A hack exists wherein a team may abruptly and deliberately close the application to avoid losing a match. This bug is not fixed since a more serious bug, in which unexpected crashes would lead to a loss irrespective of the position, would otherwise overshadow the possibility of victory.
- There is no provision for rain delay and abandoned matches here.
- Passwords and game data are stored in plaintext. Soon, this game will use SQLite databases to store game data with password hashing.

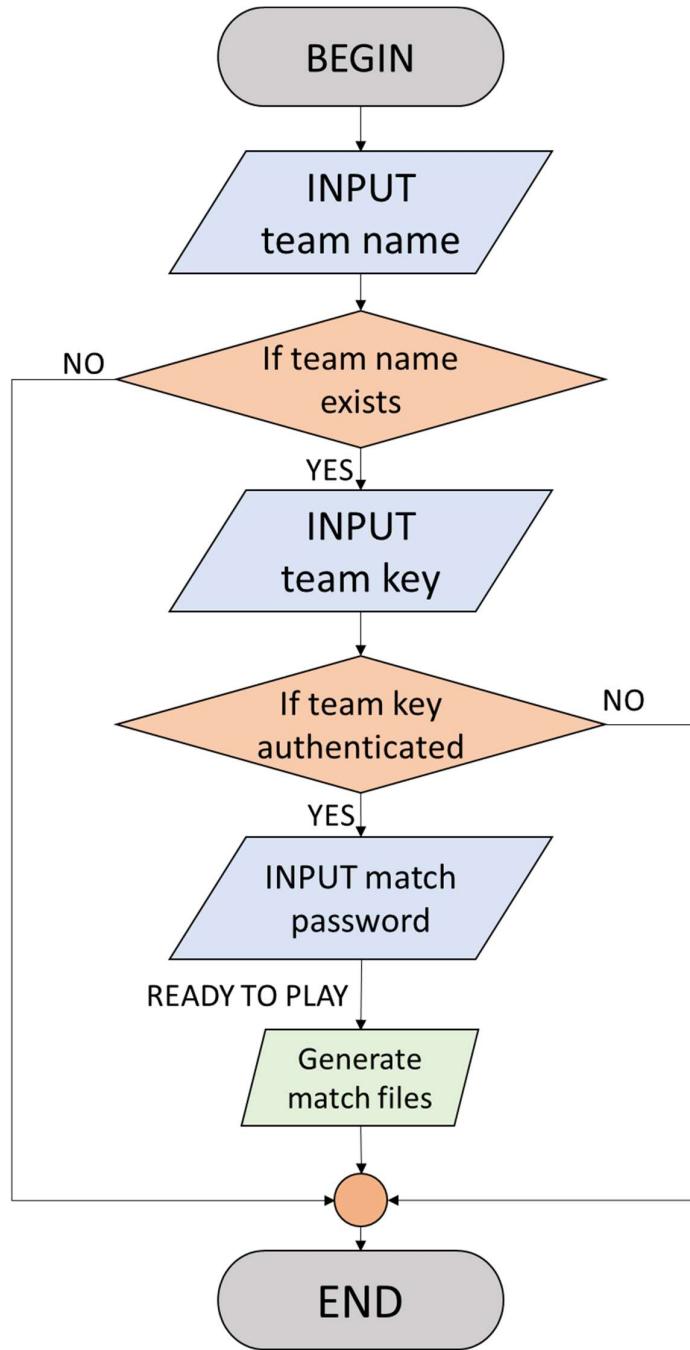
5. Procedure

a. Setting up a team



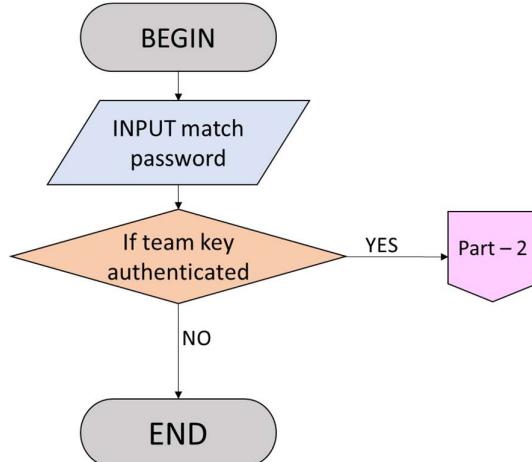
NOTE: If team name already exists, the program will terminate. Reopen the program and try again.

b. Registering for a match

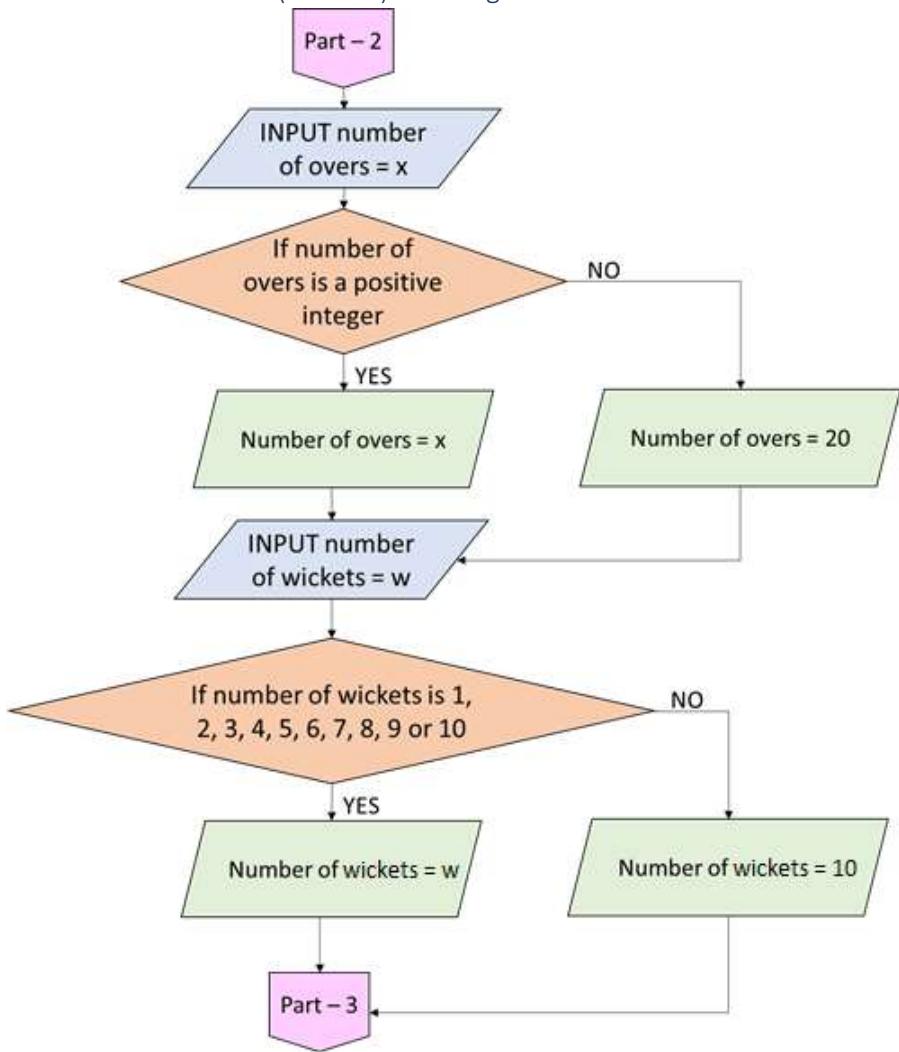


c. Gameplay

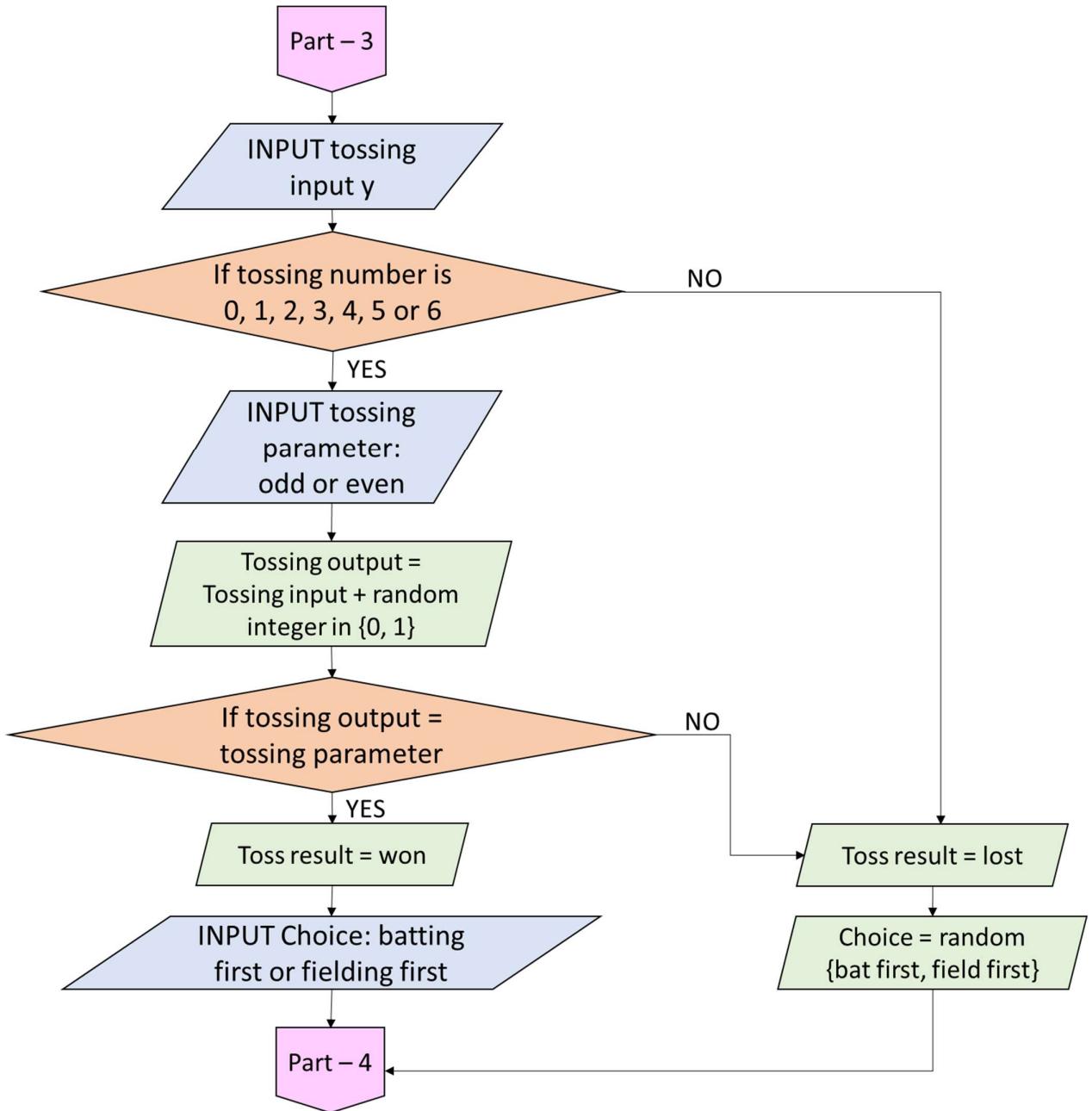
i. (Part – 1) Authenticating playing team



ii. (Part – 2) Deciding number of overs and wickets

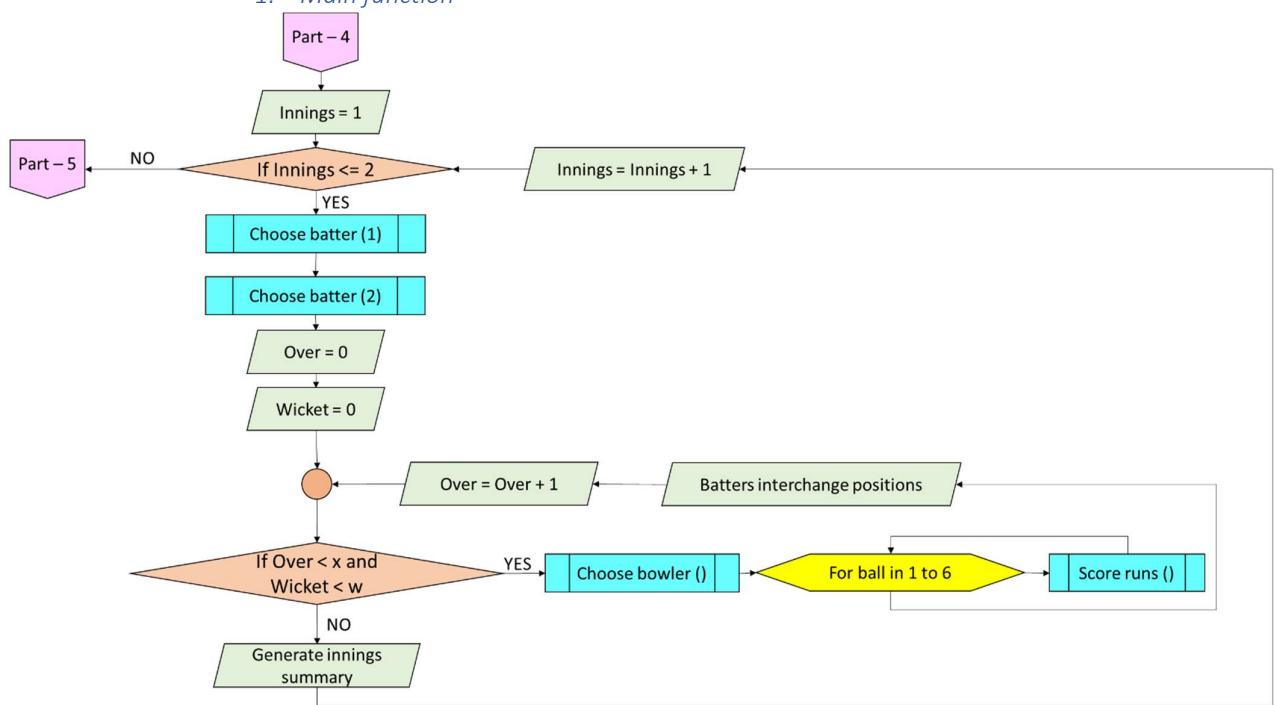


iii. Toss



iv. Innings

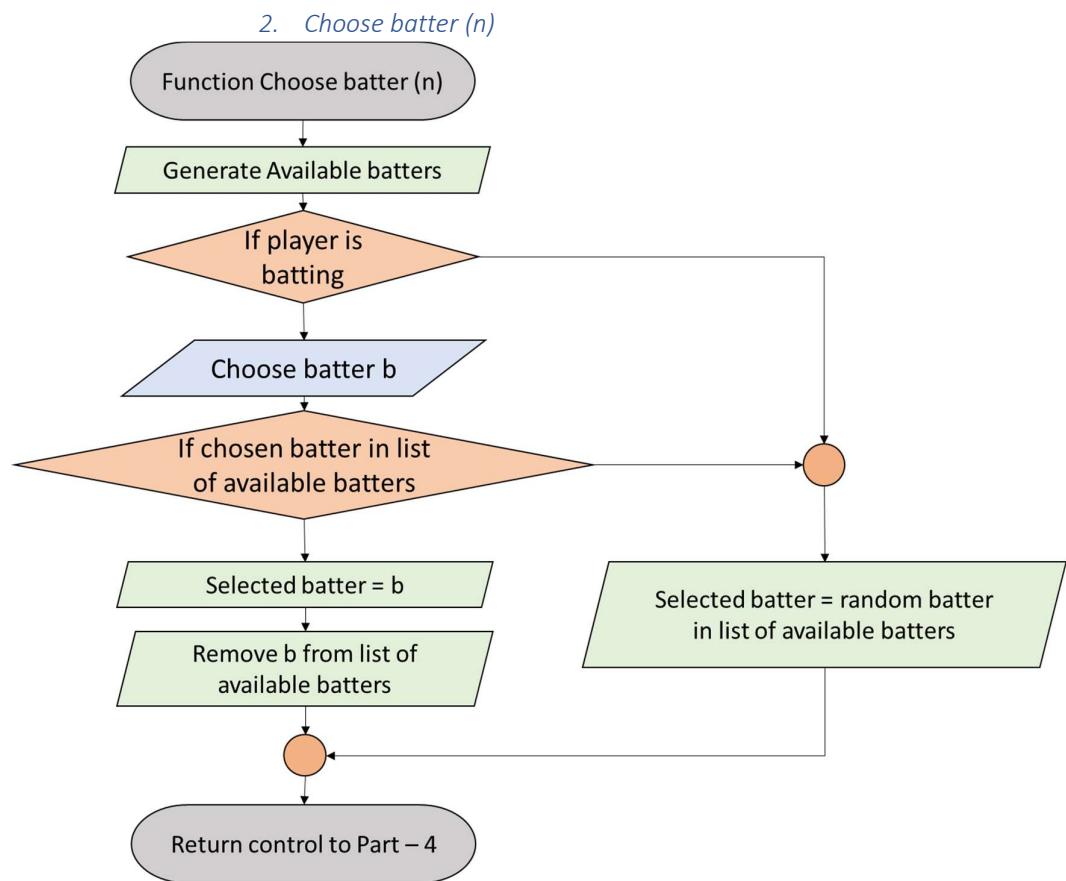
1. Main function



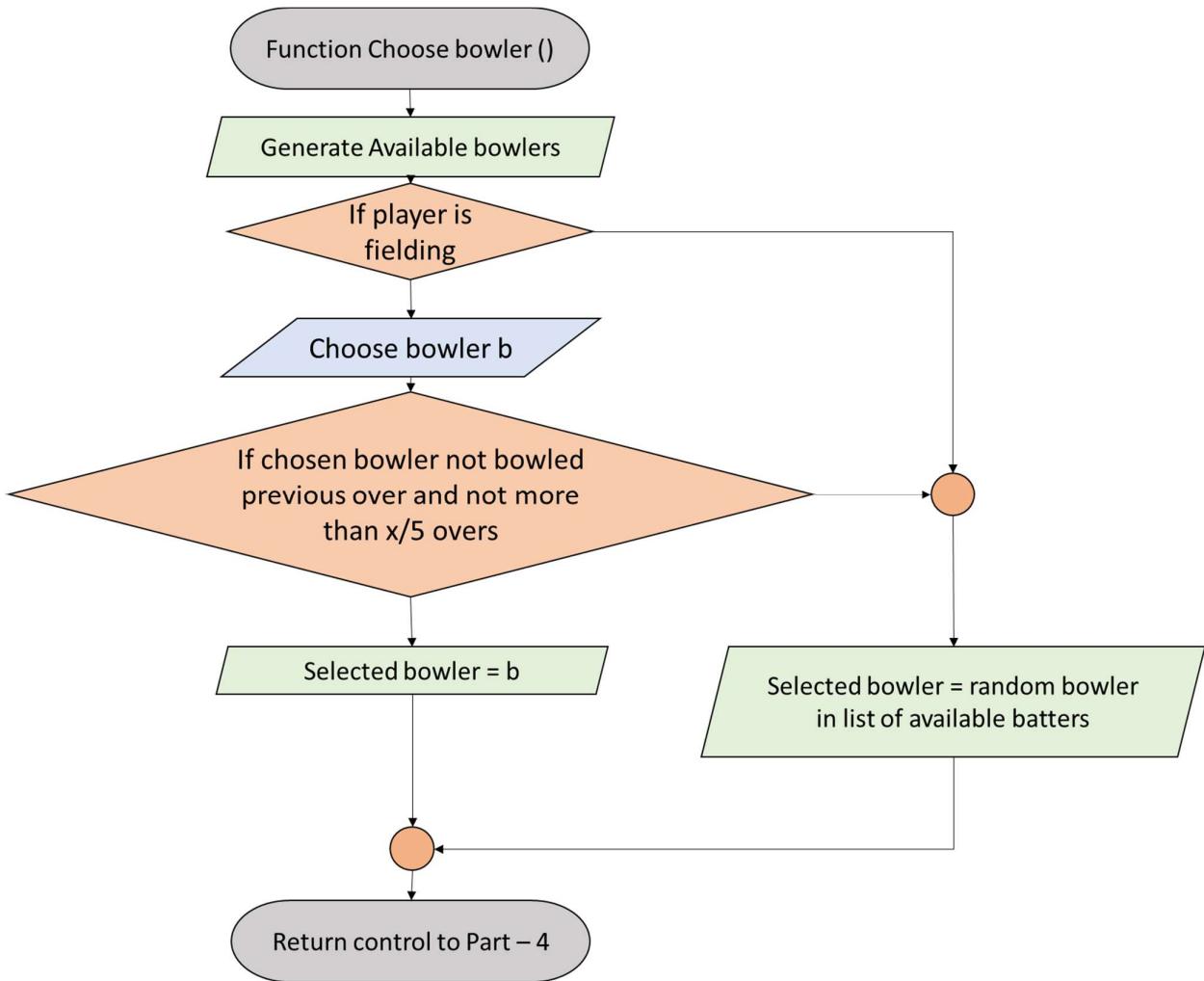
Here, x represents the total number of overs and w represents the total number of wickets.

Note that if all the wickets fall, the innings ends irrespective of whether the over was completed or not.

In the super over, only 1 over and 2 wickets per innings is permitted as per official rules.



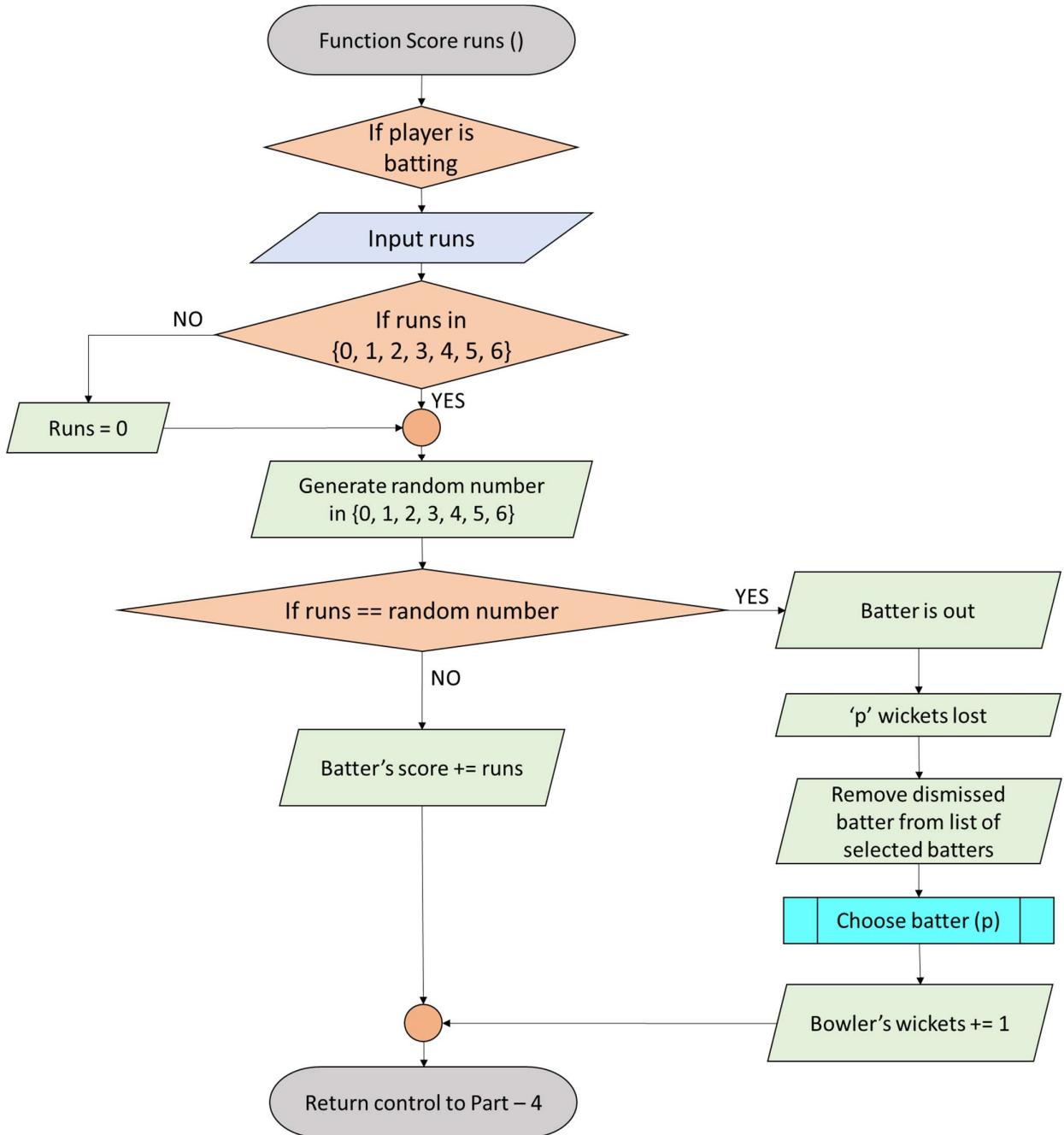
3. Choose bowler



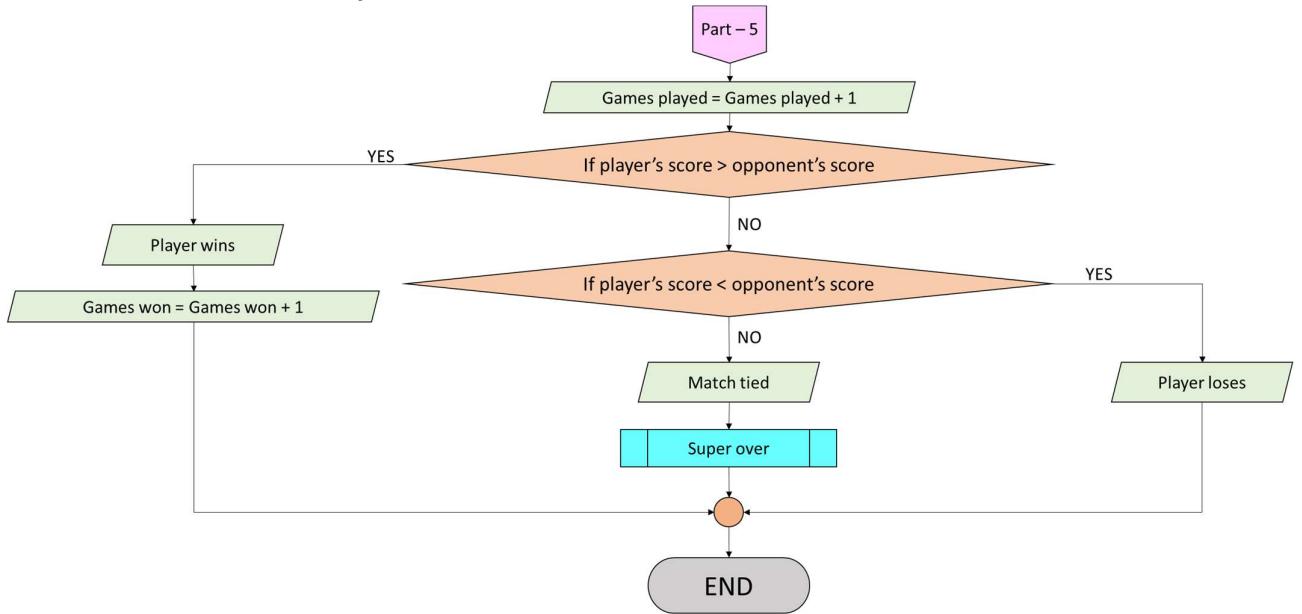
Here, x represents the total number of overs. The condition on x is implemented as per the official rules of cricket.

In the super over, only one bowler can bowl.

4. Score runs



5. End of the match



6. Super Over

The whole gameplay program is same, except for the following few changes:

- There is no toss. If the player batted first in the tied match, he/she will field first in the super over and vice versa.
- There is only one over per innings, as the name suggests.
- Each team has a maximum of two wickets.
- As per revision to the ICC rules following the 2019 World Cup Final which England won on boundary count, super over will be repeated if it is also tied, until there is a winner.
- In this super over component, the number of games played won't change. There are also measures to protect this component from being misused.

6. Gameplay instructions

a. Setting up a team

- Open the python file 'setupteam.py'.
- Enter a team name of your choice. Before you proceed, please ensure that your team's name is not present in the same folder. For example, if a team name '2' is present, the target file is 'team2.txt'. Therefore, if you want to name your team as '2', the file 'team2.txt' should not be there in the same folder.
- Give names to your team members. The names need not be all distinct. However, for convenience, try to avoid names starting

with ‘CPU’ followed by a number from 1 to 11, both included.

This is because the opposition team has members from CPU1 to CPU11.

- A passcode (team key) will be generated. Keep the passcode safe. For safety, carry your team’s text file with you, i.e., create a backup of it. Suppose your team’s name is ‘O’, create a backup of ‘team0.txt’ file. In case you forget the password (team key), open the text file and check the last string. To avoid password theft, remove your team’s text file from the current folder and store it elsewhere, preferably in an external storage device or online.
- In the example below, the team’s text file is *teamHandcricketPlayers.txt*, the Player ID represents the name assigned to each player, while the team’s password is *vq7oplvezYluc* . Once you see something like this (the password and team details may differ), hit ‘Enter’ key or its equivalent(s) to complete the process.

```
Welcome to Python based hand cricket
NOTE: Team names '1', 'Computer' and 'CPU' are system reserved. Hence, they are not allowed.
Team name: HandcricketPlayers
Player ID 1: 1
Player ID 2: 2
Player ID 3: 3
Player ID 4: 4
Player ID 5: 5
Player ID 6: 6
Player ID 7: 7
Player ID 8: 8
Player ID 9: 9
Player ID 10: 10
Player ID 11: 11
Team registration in progress...
Registered. Open Match registration file to play match
ATTENTION! Your team key is vq7oplvezYluc . Keep it safe because you need it every time you register for a match
```

Figure 1: Register team with software: Successful registration message

b. Registering for a match

- Once your team is set, you should register for a match before you can play. This is because several teams may exist, while each team would want its personalized experience.
- For this, open ‘registerformatch.py’.
- This is very simple: Enter your team’s name and your team key.

```
Team name: HandcricketPlayers
Enter your team key: vq7oplvezYluc
Team HandcricketPlayers is now ready to play a match!
Enter your password: -
```

Figure 2: Register a team for a match against the computer: Successful registration message: Choose a password and enter it to proceed.

- If you see an option to enter the password (OTP), enter a password of your choice and hit ‘Enter’ key or its equivalent(s) to complete the process when the password registration success message appears.

c. Gameplay

- Now, you are ready to play! Open ‘handcricketgame.py’ to start playing. Your opponent is computer controlled.
- First, you should enter the OTP which you entered while registering for the match.
- Next, you’ll get to choose the number of overs for the match. The default is a 20 over match. Your input should be a positive integer. Otherwise (or if you hit ‘Enter’ without giving any input), the game will last for 20 overs. There is no test match.

```
Enter match password: password1
For how many overs game? Default: T20, Your choice: -
```

Figure 3: Password verified. In this example, the password chosen was ‘password1’. Now choose the number of overs of the game.

- Now choose the number of wickets for the match. It must be a positive integer from 1 to 10, both included. Otherwise (or if you hit ‘Enter’ without giving any input), the game will last for 10 wickets.

```
Enter match password: password1
For how many overs game? Default: T20, Your choice: 5
Match is for 5 overs.
For how many wickets would you want to play? Default: 10 wicket game, Your choice: -
```

Figure 4: Decided number of overs. For example, this match has 5 overs per innings. Now choose the number of wickets.

- Now it’s time for the toss. Choose a number from 0 to 6. Then choose ‘Odd’ or ‘Even’. Write exactly the same words in the same uppercase/lowercase order. In case of invalid input, you’ll automatically lose the toss.

```

Enter match password: password1
For how many overs game? Default: T20, Your choice: 5
Match is for 5 overs.
For how many wickets would you want to play? Default: 10 wicket game, Your choice: 10
Total: 10 wickets game
Time for the toss!
Choose a number between 0 and 6: -

```

Figure 5: Time for the toss! Follow the instructions. You can choose 0, 1, 2, 3, 4, 5 or 6 as your input.

- If you win the toss, you can choose whether to bat first or field first. Choose wisely. Again, write exactly the same words in the lowercase order only. Any other input, and you will be randomly assigned batting or fielding.

```

Enter match password: password1
For how many overs game? Default: T20, Your choice: 5
Match is for 5 overs.
For how many wickets would you want to play? Default: 10 wicket game, Your choice: 10
Total: 10 wickets game
Time for the toss!
Choose a number between 0 and 6: 6
Odd or Even? zero is counted as even and the sum of your input and AI input is checked. Even
You won the toss
Choose to bat first or field first: -

```

Figure 6: Won the toss. Write the exact word 'bat' or 'field'. If you want to bowl first, input 'field'.

If you're batting, first choose your batters from the list of available batters. Then, just input the number of runs that you want to score and that will add to your score. But here's the catch: The number must be an integer between 0 and 6, both included. Your opponent must also input any integer in the same range. Thus, if your number matches with your opponent's number, you are out. Your opponent's number is hidden, so choose wisely. Don't worry, invalid input results in no run.

```

Enter match password: password1
For how many overs game? Default: T20, Your choice: 5
Match is for 5 overs.
For how many wickets would you want to play? Default: 10 wicket game, Your choice: 10
Total: 10 wickets game
Time for the toss!
Choose a number between 0 and 6: 6
Odd or Even? zero is counted as even and the sum of your input and AI input is checked. Even
You won the toss
Choose to bat first or field first: bat
You won the toss and chose to bat first
First Innings
Remaining batters: ['1', '3', '4', '5', '6', '7', '8', '9', '10', '11', '2']
Choose your batter: -

```

Figure 7: Batting first. Choose your batter

- Note that if your choice of batter/bowler is invalid, a random player from your available list will be selected.

```
Enter match password: password1
For how many overs game? Default: T20, Your choice: 5
Match is for 5 overs.
For how many wickets would you want to play? Default: 10 wicket game, Your choice: 10
Total: 10 wickets game
Time for the toss!
Choose a number between 0 and 6: 6
Odd or Even? zero is counted as even and the sum of your input and AI input is checked. Even
You won the toss
Choose to bat first or field first: bat
You won the toss and chose to bat first
First Innings
Remaining batters: ['1', '3', '4', '5', '6', '7', '8', '9', '10', '11', '2']
Choose your batter: 1
Remaining batters: ['3', '4', '5', '6', '7', '8', '9', '10', '11', '2']
Choose your batter: 2
Over 1
Ball 1
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: ■
```

Figure 8: First ball!

- At the end of each over, hit ‘Enter’ or its equivalent(s) to proceed. You can see team score only after any over. At the end of each innings, the innings summary will be displayed.

```

Ball 1
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 2
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 3
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 4
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
This over: ['6', '6', '6', '6', '6', '6']
Batting:
1 : 36 ( 6 )
2 : 0 ( 0 )
Bowling:
CPU7 : 1 - 0 - 36 - 0
Score: 36 / 0

```

Figure 9: Six sixes in the first over, 36 without loss. Note that the commentary is the same for all the sixes. The commentary is different for different scores and different for every dismissal. Now, hit the 'Enter' button to begin the next over. The batters interchange. More action coming up...

NOTE: The commentary is now even more diverse for a single score, check modules/commentary.py and feel free to discuss any changes.

```

Ball 6
This is hand cricket batting. Bowler: CPU7 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU7 to 1 , SIX, That went too far away from the stadium. What a shot.
This over: ['6', '6', '6', '6', '6', '6']
Batting:
1 : 36 ( 6 )
2 : 0 ( 0 )
Bowling:
CPU7 : 1 - 0 - 36 - 0
Score: 36 / 0

Over 2
Ball 1
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 2
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 2 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Remaining batters: ['3', '4', '5', '6', '7', '8', '9', '10', '11', '']
Choose your batter: -

```

Figure 10: OUT!! LBW and gone for a golden duck! That's why you may not hit 6 all the time!!! Notice the " with the remaining batters. If it was omitted, the program would crash if all 10 wickets fell. Now it won't, since we have the blank. If you choose the blank, some other batter will bat.

```

Bat any number from 0 to 6: 6
CPU11 to 2 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Remaining batters: ['3', '4', '5', '6', '7', '8', '9', '10', '11', '']
Choose your batter: 3
Ball 2
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 3 , SIX, That went too far away from the stadium. What a shot.
Ball 3
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 3 , SIX, That went too far away from the stadium. What a shot.
Ball 4
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 3 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 3 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: -

```

Figure 11: Still going for sixes? Batter number 3 is taking a huge risk! Nevertheless, there are only 5 overs per side, so it may be worth the risk.

```
Ball 6
This is hand cricket batting. Bowler: CPU11 . Batter on strike: 3
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU11 to 3 , SIX, That went too far away from the stadium. What a shot.
This over: ['W', '6', '6', '6', '6', '6']
Batting:
1 : 36 ( 6 )
3 : 30 ( 5 )
Bowling:
CPU11 : 1 - 0 - 30 - 1
Score: 66 / 1
-
```

Figure 12: This is what the bowler's figures would look like.

```
Ball 5
This is hand cricket batting. Bowler: CPU4 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU4 to 1 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU4 . Batter on strike: 1
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU4 to 1 , OUT stumped!! The batter is outside the crease and the bails are whipped off!
Remaining batters: ['4', '5', '6', '7', '8', '9', '10', '11', '', '']
Choose your batter: 4
This over: ['6', '6', '6', '6', '6', 'W']
Batting:
4 : 0 ( 0 )
3 : 30 ( 5 )
Bowling:
CPU4 : 1 - 0 - 30 - 1
Score: 96 / 2
```

Figure 13: Last ball of the third over, finally gone! Batter 1 has hit 66 runs off 12 deliveries

```

CPU4 to 3 , OUT bowled, what a beauty! The middle stump is broken
Remaining batters: ['5', '6', '7', '8', '9', '10', '11', '', '', '']
Choose your batter: 5
Ball 4
This is hand cricket batting. Bowler: CPU4 . Batter on strike: 5
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU4 to 5 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: CPU4 . Batter on strike: 5
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU4 to 5 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU4 . Batter on strike: 5
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU4 to 5 , SIX, That went too far away from the stadium. What a shot.
This over: ['6', '6', 'W', '6', '6', '6']
Batting:
4 : 0 ( 0 )
5 : 18 ( 3 )
Bowling:
CPU4 : 2 - 0 - 60 - 2
Score: 126 / 3

```

Figure 14: Penultimate over: one batter out, a bowler claims two wickets. Only one over remains...

```

Over 5
Ball 1
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 4
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 4 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Remaining batters: ['6', '7', '8', '9', '10', '11', '', '', '', '']
Choose your batter: 6
Ball 2
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 6
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 6 , OUT caught, that was a terrific blinder. The fielder deserves a round of applause...
Remaining batters: ['7', '8', '9', '10', '11', '', '', '', '']
Choose your batter: 7
Ball 3
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6:

```

Figure 15: Two wickets in two balls! First LBW, then a stunning catch, the bowler is on a hat-trick. Will he claim it?

```

CPU3 to 4 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Remaining batters: ['6', '7', '8', '9', '10', '11', '', '', '', '']
Choose your batter: 6
Ball 2
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 6
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 6 , OUT caught, that was a terrific blinder. The fielder deserves a round of applause...
Remaining batters: ['7', '8', '9', '10', '11', '', '', '', '']
Choose your batter: 7
Ball 3
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 4
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: -

```

Figure 16: No hat-trick! The last ball of this innings...

```

Choose your batter: 7
Ball 3
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 4
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
Ball 6
This is hand cricket batting. Bowler: CPU3 . Batter on strike: 7
Any other input means NO RUN
Bat any number from 0 to 6: 6
CPU3 to 7 , SIX, That went too far away from the stadium. What a shot.
This over: ['W', 'W', '6', '6', '6', '6']
Batting:
7 : 24 ( 4 )
5 : 18 ( 3 )
Bowling:
CPU3 : 1 - 0 - 24 - 2
Score: 150 / 5
-
```

Figure 17: End of the first innings! We finish at 150-5

```
Score: 150 / 5

End of 1st innings
Batting
1 scored 66 runs off 12 balls, hitting 0 fours and 11 sixes.
2 scored 0 runs off 1 balls, hitting 0 fours and 0 sixes.
3 scored 42 runs off 8 balls, hitting 0 fours and 7 sixes.
4 scored 0 runs off 1 balls, hitting 0 fours and 0 sixes.
5 scored 18 runs off 3 balls, hitting 0 fours and 3 sixes.
6 scored 0 runs off 1 balls, hitting 0 fours and 0 sixes.
7 scored 24 runs off 4 balls, hitting 0 fours and 4 sixes.
8 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
9 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
10 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
11 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.

Bowling
CPU1 : 0 - 0 - 0 - 0
CPU2 : 0 - 0 - 0 - 0
CPU3 : 1 - 0 - 24 - 2
CPU4 : 2 - 0 - 60 - 2
CPU5 : 0 - 0 - 0 - 0
CPU6 : 0 - 0 - 0 - 0
CPU7 : 1 - 0 - 36 - 0
CPU8 : 0 - 0 - 0 - 0
CPU9 : 0 - 0 - 0 - 0
CPU10 : 0 - 0 - 0 - 0
CPU11 : 1 - 0 - 30 - 1
```

Figure 18: First innings summary. If it doesn't load, hit 'Enter' key again.

- Similarly, if you're bowling (fielding), choose a bowler and input a number in the same range, but you would want your number to match with your opponent's number to get him out. This time if you give any other integer, your opponent will get a six. If you give any other invalid input, your opponent will score as many runs as its input without getting out. Note that a bowler cannot bowl two consecutive overs and a bowler cannot bowl more than one-fifth of the total number of match overs. For example, in a 20 over game, no bowler is permitted more than 4 overs.

```

Bowling
CPU1 : 0 - 0 - 0 - 0
CPU2 : 0 - 0 - 0 - 0
CPU3 : 1 - 0 - 24 - 2
CPU4 : 2 - 0 - 60 - 2
CPU5 : 0 - 0 - 0 - 0
CPU6 : 0 - 0 - 0 - 0
CPU7 : 1 - 0 - 36 - 0
CPU8 : 0 - 0 - 0 - 0
CPU9 : 0 - 0 - 0 - 0
CPU10 : 0 - 0 - 0 - 0
CPU11 : 1 - 0 - 30 - 1

Second Innings
Target: 151
Over 1
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler:

```

Figure 19: Choose your bowler. The target in this example is 151 runs.

```

Second Innings
Target: 151
Over 1
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 1
Ball 1
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU2
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU2 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Ball 2
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU5
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: -

```

Figure 20: There we go! We claim a wicket in the very first ball of the second innings!

```

Second Innings
Target: 151
Over 1
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 1
Ball 1
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU2
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU2 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Ball 2
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU5
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU5 , OUT bowled, what a beauty! The middle stump is broken
Ball 3
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: -

```

Figure 21: Again, a wicket! Now, we're on a hat-trick! Will we get it?

```

Second Innings
Target: 151
Over 1
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 1
Ball 1
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU2
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU2 , OUT LBW, dead plumb, the batter is a goner. Three reds and no inside edge, the batter has to leave
Ball 2
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU5
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU5 , OUT bowled, what a beauty! The middle stump is broken
Ball 3
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU11 , 3 runs
Ball 4
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: -

```

Figure 22: No hat trick, we're out of luck. We expected our opponent to hit six all the time. This time, he responded with 3. Very clever indeed!

```

Ball 3
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
1 to CPU11 , 3 runs
Ball 4
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 4
1 to CPU1 , 1 run
Ball 5
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 5
1 to CPU11 , NO RUN
Ball 6
This is hand cricket batting. Bowler: 1 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 3
1 to CPU11 , 1 run
This over: ['W', 'W', '3', '1', '0', '1']
Batting:
CPU11 : 4 ( 3 )
CPU1 : 1 ( 1 )
Bowling:
1 : 1 - 0 - 5 - 2
Score: 5 / 2
Need 146 runs to win off 4 overs

```

Figure 23: Responding with different inputs. We have a theoretically won game now, since his required run rate is more than 36 runs per over.

```

1 : 1 - 0 - 5 - 2
Score: 5 / 2
Need 146 runs to win off 4 overs

Over 2
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 2

```

Figure 24: Second over. This list is the list of all bowlers. We can't choose bowler 1 now. Let's pick 2 and see what happens...

```

Ball 1
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
2 to CPU11 , NO RUN
Ball 2
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 5
2 to CPU11 , 1 run
Ball 3
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 3
2 to CPU1 , poor bowling. The ball races to the boundary and the batters cross for a run. 5 runs
Ball 4
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 5
2 to CPU11 , SIX, That went too far away from the stadium. What a shot.
Ball 5
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
2 to CPU11 , 3 runs
Ball 6
This is hand cricket batting. Bowler: 2 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6:

```

Figure 25: Our bowler in action...

```

Bowling:
2 : 1 - 0 - 15 - 0
Score: 20 / 2
Need 131 runs to win off 3 overs

Over 3
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 3

```

Figure 26: Can't pick bowler 2. Bowler 1 is free, but each bowler has only one over since there are only 5 overs! Let's pick bowler 3.

```
Ball 5
This is hand cricket batting. Bowler: 3 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 4
3 to CPU11 , 2 runs
Ball 6
This is hand cricket batting. Bowler: 3 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 5
3 to CPU11 , FOUR. The ball races to the boundary and the fielders can do nothing
This over: ['0', '5', '1', '0', '2', '4']
Batting:
CPU11 : 25 ( 12 )
CPU1 : 7 ( 4 )
Bowling:
3 : 1 - 0 - 12 - 0
Score: 32 / 2
Need 119 runs to win off 2 overs

Over 4
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler:
```

Figure 27: Now let's have fun!!! Bowler 4 will bowl the next over for us.

```
Ball 6
This is hand cricket batting. Bowler: 4 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
4 to CPU1 , 2 runs
This over: ['0', '3', '4', '5', '0', '2']
Batting:
CPU11 : 34 ( 14 )
CPU1 : 12 ( 8 )
Bowling:
4 : 1 - 0 - 14 - 0
Score: 46 / 2
Need 105 runs to win off 1 overs

Over 5
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler: 5
Ball 1
This is hand cricket batting. Bowler: 5 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6:
```

Figure 28: Last over. 105 to win. Impossible! Now it's time to complete this match.

```

Ball 4
This is hand cricket batting. Bowler: 5 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 2
5 to CPU1 , FOUR. The ball races to the boundary and the fielders can do nothing
Ball 5
This is hand cricket batting. Bowler: 5 . Batter on strike: CPU1
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
5 to CPU1 , 1 run
Ball 6
This is hand cricket batting. Bowler: 5 . Batter on strike: CPU11
Any other input means free sixer for opponent.
Bowl any number from 0 to 6: 6
5 to CPU11 , OUT stumped!! The batter is outside the crease and the bails are whipped off!
This over: ['2', '3', '2', '4', '1', 'W']
Batting:
CPU8 : 0 ( 0 )
CPU1 : 19 ( 11 )
Bowling:
5 : 1 - 0 - 12 - 1
Score: 58 / 3
Need 93 runs to win off 0 overs

```

Figure 29: That's it! We win the match.

```

Batting
CPU1 scored 19 runs off 11 balls, hitting 1 fours and 0 sixes.
CPU2 scored 0 runs off 1 balls, hitting 0 fours and 0 sixes.
CPU3 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU4 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU5 scored 0 runs off 1 balls, hitting 0 fours and 0 sixes.
CPU6 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU7 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU8 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU9 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU10 scored 0 runs off 0 balls, hitting 0 fours and 0 sixes.
CPU11 scored 39 runs off 17 balls, hitting 2 fours and 1 sixes.

Bowling
1 : 1 - 0 - 5 - 2
2 : 1 - 0 - 15 - 0
3 : 1 - 0 - 12 - 0
4 : 1 - 0 - 14 - 0
5 : 1 - 0 - 12 - 1
6 : 0 - 0 - 0 - 0
7 : 0 - 0 - 0 - 0
8 : 0 - 0 - 0 - 0
9 : 0 - 0 - 0 - 0
10 : 0 - 0 - 0 - 0
11 : 0 - 0 - 0 - 0

```

Figure 30: The opponent's batting. We don't have to explicitly declare end of second innings. We win by 92 runs

- Score more than your opponent to win. At the end of the match, the total number of matches that you played and the total number of successful victories will be displayed.

```
Congratulations, you won!
HandcricketPlayers wins by 92 runs

Games played: 1
Games won: 1
Win Percentage 100.0
```

Figure 31: Won the match. This is the winning screenshot.

- In the event of a tie, you have the option of playing super over. Another passcode called the super over key is generated. You will have to keep both match password and super over key safe as you require it to play the super over. If you start another match straightaway without completing the super over, you will be considered to have resigned the match and hence lost. The super over key can be used only once.

```
Tied
You are eligible to play Super Over to decide the tie! Win the super over and then see the number of games won!
Your Super over key is 172732275 Keep it safe since you need it to play the super over.

Games played: 2
Games won: 1
Win Percentage 50.0
```

Figure 32: This is what happens if the scores are same. We batted first.

7. Super Over

- The super over is the official way to settle ties. The gameplay for super over is as follows:
 - Gameplay**
 - If you have tied your match, open ‘handcricketgamesuperover.py’ to start playing. You will face the same opponent.
 - First, you should enter the OTP which you entered while registering for the tied match as well as the super over key.

```
Enter tied match password: password1
Enter super over key: 172732275
Super over
Total: 2 wickets game
First Innings
Over 1
Bowlers: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11']
Choose your bowler:
```

Figure 33: Starting the super over. There is no toss. Since we batted first in the tied match, we bowl first.

- Each team gets only 1 over and 2 wickets
- There is no toss. If you batted first in the tied match, you will field first in this super over. If you batted second in the tied match, you will bat first in this super over.
- If you're batting, first choose your batters from the list of available batters. Then, just input the number of runs that you want to score and that will add to your score. But here's the catch: The number must be an integer between 0 and 6, both included. Your opponent must also input any integer in the same range. Thus, if your number matches with your opponent's number, you are out. Your opponent's number is hidden, so choose wisely. Don't worry, invalid input results in no run.
- Similarly, if you're bowling (fielding), choose a bowler and input a number in the same range, but you would want your number to match with your opponent's number to get him out. This time if you give any other integer, your opponent will get a six. If you give any other invalid input, your opponent will score as many runs as its input without getting out. Note that only one bowler is permitted throughout the innings.
- Note that if your choice of batter/bowler is invalid, a random player from your available list will be selected.
- At the end of each over, hit 'Enter' or its equivalent(s) to proceed. You can see team score only after any over. At the end of each innings, the innings summary will be displayed.
- Score more than your opponent to win. At the end of the match, the total number of matches that you played and the total number of successful victories will be displayed.
- If you win, the number of games won will be incremented accordingly.
- There is no change to the number of games played, since the super over is only a tiebreaker.

```
Congratulations, you won!
HandcricketPlayers wins by super over.

Games played: 2
Games won: 2
Win Percentage 100.0
```

Figure 34: Winning the super over. The tie is broken.

- In the event of a tie, you have the option of playing super over again. Another super over key is generated. You will have to keep the original match password and the new super over key safe as you require it to play the super over. If you start another match straightaway without completing the super over, you will be considered to have resigned the match and hence lost. The super over key can be used only once.

8. Original Project Developer:

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