Golden Balls

1 Introduction

1.1 Name

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1.3 Class

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1.5 Subject

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2 Description

Golden Balls is a British daytime game show which was presented by Jasper Carrott. It was broadcast on the ITV network from 18 June 2007 to 18 December 2009. The following is a terminal based version of the aforementioned game show.

For convenience the project is split into three parts :

1. Setup file
2. Manual file
3. Game file

2.1 Setup file

The setup file is what will primarily be used for one-time to initially setup the program. It has basic functionality like setting up a SQL database and respective tables

2.2 Manual file

This is a basic text file which can be accessed from within the main program file

2.3 Program file

The main game file which executes the game. Written in python and sql so the aforementioned are a prerequisite install on any device running the file.

3 Source Code

```
import time
import random
import mysql.connector
db=mysql.connector.connect(
      host='localhost',
      user='home',
      passwd='home',
      database='data_dump'
      )
print(db)
mycursor=db.cursor()
mycursor.execute("update run set count=count+1")
db.commit()
ra=rb=rc=rd=0
r1_players=[]
r1_vote=[]
r2_vote=[]
ballpit=[10,50,75,100,125,250,300,500,750,1000,1200,1500
#print(len(ballpit))
```

```
man=input("do you want to review the rulebook? y/n : ")
if man == 'y' or man=='Y':
    fo=open("manual.txt","r")
    rules=fo.readlines()
    for z in rules:
        print(z)
    continue1=input("continue game? y/n : ")
    if continue1=='n':
        quit()
p1=p2=p3=p4=""
p1=input("player one : ")
r1_players.append(p1)
p2=input("player two : ")
r1_players.append(p2)
p3=input("player three : ")
r1_players.append(p3)
p4=input("player four : ")
r1_players.append(p4)
playing_lot=random.sample(ballpit,12)
n=0
while n<4:
    playing_lot.append("KILLER")
    n+=1
#print(playing_lot)
###r1p1
p1_lot=random.sample(playing_lot,4)
for i in playing_lot:
```

```
    if i == p1_lot[0]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p1_lot[1]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p1_lot[2]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p1_lot[3]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
#print("player 1 lot")
#print(p1_lot)
###r1p2
p2_lot=random.sample(playing_lot,4)
for i in playing_lot:
    if i == p2_lot[0]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p2_lot[1]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
```

```
for i in playing_lot:
    if i == p2_lot[2]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p2_lot[3]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
#print("player 2 lot")
#print(p2_lot)
###r1p3
p3_lot=random.sample(playing_lot,4)
for i in playing_lot:
    if i == p3_lot[0]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p3_lot[1]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p3_lot[2]:
        a=playing_lot.index(i)
        playing_lot.pop(a)
for i in playing_lot:
    if i == p3_lot[3]:
        a=playing_lot.index(i)
```

```
            playing_lot.pop(a)
#print("player 3 lot")
#print(p3_lot)
###r1p4
p4_lot=playing_lot
p4_lot.append("KILLER")
#print("player 4 lot")
#print(p4_lot)
print("arranging balls in two slots")
time.sleep(2)
print("revealing front row for each player")
time.sleep(1)
i=0
print()
print("front row for",p1)
while i<2:
    print(p1_lot[i])
    i+=1
i=0
print()
print("front row for",p2)
while i<2:
    print(p2_lot[i])
    i+=1
i=0
print()
print("front row for",p3)
```

```
while i<2:
    print(p3_lot[i])
    i+=1
i=0
print()
print("front row for",p4)
while i<2:
    print(p4_lot[i])
    i+=1
time.sleep(45)
###backrow for p1
print()
print("all players except",p1,"must look away")
fp1=open(p1,"w")
p1_lotw1=str(p1_lot[2])
p1_lotw2=str(p1_lot[3])
fp1.writelines(p1_lotw1)
fp1.writelines(" | ")
fp1.writelines(p1_lotw2)
fp1.close()
time.sleep(15)
print(p1,"check the file with your name on it to see th
p1brow1=input("reveal your first ball : ")
p1brow2=input("reveal your second ball : ")
print("revealing backrow for",p1)
print(p1brow1)
print(p1brow2)
```

```
###backrow for p2
print()
print("all players except",p2,"must look away")
fp2=open(p2,"w")
p2_lotw1=str(p2_lot[2])
p2_lotw2=str(p2_lot[3])
fp2.writelines(p2_lotw1)
fp2.writelines(" | ")
fp2.writelines(p2_lotw2)
fp2.close()
time.sleep(15)
print(p2,"check the file with your name on it to see th
p2brow1=input("reveal your first ball : ")
p2brow2=input("reveal your second ball : ")
print("revealing backrow for",p2)
print(p2brow1)
print(p2brow2)
###backrow for p3
print()
print("all players except",p3,"must look away")
fp3=open(p3,"w")
p3_lotw1=str(p3_lot[2])
p3_lotw2=str(p3_lot[3])
fp3.writelines(p3_lotw1)
fp3.writelines(" | ")
fp3.writelines(p3_lotw2)
fp3.close()
```

```
time.sleep(15)
print(p3,"check the file with your name on it to see th
p3brow1=input("reveal your first ball : ")
p3brow2=input("reveal your second ball : ")
print("revealing backrow for",p3)
print(p3brow1)
print(p3brow2)
###backrow for p4
print()
print("all players except",p4,"must look away")
fp4=open(p4,"w")
p4_lotw1=str(p4_lot[2])
p4_lotw2=str(p4_lot[3])
fp4.writelines(p4_lotw1)
fp4.writelines(" | ")
fp4.writelines(p4_lotw2)
fp4.close()
time.sleep(15)
print(p4,"check the file with your name on it to see th
p4brow1=input("reveal your first ball : ")
p4brow2=input("reveal your second ball : ")
print("revealing backrow for",p4)
print(p4brow1)
print(p4brow2)
###voting and deliiberation round
print("each player will now have 45 seconds to defend w
print(p1,"has the floor for the next 45 seconds")
```

```
time.sleep(45)
print(p2,"has the floor for the next 45 seconds")
time.sleep(45)
print(p3,"has the floor for the next 45 seconds")
time.sleep(45)
print(p4,"has the floor for the next 45 seconds")
time.sleep(45)
###round one voting
print("now the voting round will begin")
print("enter total number of votes for",p1)
p1_vote=int(input())
r1_vote.append(p1_vote)
print("enter total number of votes for",p2)
p2_vote=int(input())
r1_vote.append(p2_vote)
print("enter total number of votes for",p3)
p3_vote=int(input())
r1_vote.append(p3_vote)
print("enter total number of votes for",p4)
p4_vote=int(input())
r1_vote.append(p4_vote)
#print(r1_vote)
max_votes_r1=max(r1_vote)
for i in r1_vote:
    if i == max_votes_r1:
        player_elim=r1_vote.index(i)
        if player_elim == 0:
```

```
            ###sql injection
            mycursor.execute("update player_elim set co
            db.commit()
            print(p1,"has been eliminated")
            r1_players.pop(0)
            ra+=1
        elif player_elim == 1:
            mycursor.execute("update player_elim set co
            db.commit()
            print(p2,"has been eliminated")
            r1_players.pop(1)
            rb+=1
        elif player_elim == 2:
            mycursor.execute("update player_elim set co
            db.commit()
            print(p3,"has been eliminated")
            r1_players.pop(2)
            rc+=1
        else:
            print(p4,"has been eliminated")
            mycursor.execute("update player_elim set co
            db.commit()
            r1_players.pop(3)
            rd+=1
#print(r1_players)
###round two begins
round2_lot=r1_players
```

```
#print(round2_lot)
print("round two is beginning")
print("our players for round 2 are :")
for i in r1_players:
    print(i)
print()
r2p1=round2_lot[0]
r2p2=round2_lot[1]
r2p3=round2_lot[2]
r2_playing_lot=[r2p1,r2p2,r2p3]
#print(r2_playing_lot)
r2_ballpit=[]
r2_ballpit2=[]
r2_ballpit.append(p1_lot)
r2_ballpit.append(p2_lot)
r2_ballpit.append(p3_lot)
r2_ballpit.append(p4_lot)
#print(r2_ballpit)
for m in r2_ballpit:
    for n in m:
        r2_ballpit2.append(n)
#print(r2_ballpit2)
#print(len(r2_ballpit2))
if ra == 1 :
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
```

```
        r2_ballpit2.pop(0)
    elif rb == 1:
        r2_ballpit2.pop(4)
        r2_ballpit2.pop(4)
        r2_ballpit2.pop(4)
        r2_ballpit2.pop(4)
    elif rc == 1:
        r2_ballpit2.pop(8)
        r2_ballpit2.pop(8)
        r2_ballpit2.pop(8)
        r2_ballpit2.pop(8)
    elif rd == 1:
        r2_ballpit2.pop(12)
        r2_ballpit2.pop(12)
        r2_ballpit2.pop(12)
        r2_ballpit2.pop(12)
    print()
    #print(r2_ballpit2)
    #print(len(r2_ballpit2))
    r2_ballpit2.append(ballpit[0])
    r2_ballpit2.append(ballpit[20])
    r2_ballpit2.append('KILLER')
    print()
    #print(r2_ballpit2)
    #print(len(r2_ballpit2))
    r2_ballpit3=random.sample(r2_ballpit2,15)
    r2p1_li=[]
```

```
r2p2_li=[]
r2p3_li=[]
n=0
while n<5:
        r2p1_li.append(r2_ballpit3[n])
        n+=1
#print(r2p1_li)
m=0
while m<5:
        r2p2_li.append(r2_ballpit3[m+5])
       m+=1
#print(r2p2_li)
o=0
while o<5:
        r2p3_li.append(r2_ballpit3[o+10])
        o+=1
print("revealing frontrow for round 2 ")
print()
###front row for p1 for round 2
#print(r2p3_li)
print("front row for",r2p1)
print(r2p1_li[0])
print(r2p1_li[1])
print()
###front row for p2 for round 2
print("front row for",r2p2)
print(r2p2_li[0])
```

```
print(r2p2_li[1])
print()
###front row for p3 for round 2
print("front row for",r2p3)
print(r2p3_li[0])
print(r2p3_li[1])
print()
###backrow for p1 for round 2
print()
print("all players except",p1,"must look away")
fp1r2=open(p1,"w")
p1_lotw1=str(r2p1_li[2])
p1_lotw2=str(r2p1_li[3])
p1_lotw3=str(r2p1_li[4])
fp1r2.writelines(p1_lotw1)
fp1r2.writelines(" | ")
fp1r2.writelines(p1_lotw2)
fp1r2.writelines(" | ")
fp1r2.writelines(p1_lotw3)
fp1r2.close()
print(r2p1,"check the file with your name on it to see
p1brow1=input("reveal your first ball : ")
p1brow2=input("reveal your second ball : ")
p1brow3=input("reveal your third ball : ")
print("revealing backrow for",r2p1)
print(p1brow1)
print(p1brow2)
```

```
print(p1brow3)
###backrow for p2 for round 2
print()
print("all players except",p2,"must look away")
fp2r2=open(p2,"w")
p2_lotw1=str(r2p2_li[2])
p2_lotw2=str(r2p2_li[3])
p2_lotw3=str(r2p2_li[4])
fp2r2.writelines(p2_lotw1)
fp2r2.writelines(" | ")
fp2r2.writelines(p2_lotw2)
fp2r2.writelines(" | ")
fp2r2.writelines(p2_lotw3)
fp2r2.close()
print(r2p2,"check the file with your name on it to see
p2brow1=input("reveal your first ball : ")
p2brow2=input("reveal your second ball : ")
p2brow3=input("reveal your third ball : ")
print("revealing backrow for",r2p2)
print(p2brow1)
print(p2brow2)
print(p2brow3)
###backrow for p3 for round 2
print()
print("all players except",p3,"must look away")
fp3r2=open(p3,"w")
p3_lotw1=str(r2p3_li[2])
```

```
p3_lotw2=str(r2p3_li[3])
p3_lotw3=str(r2p3_li[4])
fp3r2.writelines(p3_lotw1)
fp3r2.writelines(" | ")
fp3r2.writelines(p3_lotw2)
fp3r2.writelines(" | ")
fp3r2.writelines(p3_lotw3)
fp3r2.close()
print(r2p3,"check the file with your name on it to see
p3brow1=input("reveal your first ball : ")
p3brow2=input("reveal your second ball : ")
p3brow3=input("reveal your third ball : ")
print("revealing backrow for",r2p3)
print(p3brow1)
print(p3brow2)
print(p3brow3)
###voting and deliberation round
print("each player will now have 45 seconds to defend w
print(r2p1,"has the floor for the next 45 seconds")
time.sleep(45)
print(r2p2,"has the floor for the next 45 seconds")
time.sleep(45)
print(r2p3,"has the floor for the next 45 seconds")
time.sleep(45)
###voting for round two
print("now the voting round will begin")
print("enter total number of votes for",r2p1)
```

```
p1_vote=int(input())
r2_vote.append(p1_vote)
print("enter total number of votes for",r2p2)
p2_vote=int(input())
r2_vote.append(p2_vote)
print("enter total number of votes for",r2p3)
p3_vote=int(input())
r2_vote.append(p3_vote)
#print(r2_vote)
r2v=0
round3_lot=[]
r2v_max=max(r2_vote)
r2v_ind=r2_vote.index(r2v_max)
print()
#print(r2v_max)
#print(r2v_ind)
print()
#print(round2_lot)
print(round2_lot.pop(r2v_ind),"has been eliminated")
print()
#print(round2_lot)
#print("ballpit  r2")
#print(r2_ballpit2)
round3_lot=round2_lot
print(round3_lot[0],"and",round3_lot[1],"will head into
print("round 3 .... bin or win")
bin_li=[]
```

```
win_li=[]
prize_pool=0
#print(len(r2_ballpit2))
if r2p1 not in round3_lot:
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
    r2_ballpit2.pop(0)
elif r2p2 not in round3_lot:
    r2_ballpit2.pop(5)
    r2_ballpit2.pop(5)
    r2_ballpit2.pop(5)
    r2_ballpit2.pop(5)
    r2_ballpit2.pop(5)
elif r2p3 not in round3_lot:
    r2_ballpit2.pop(10)
    r2_ballpit2.pop(10)
    r2_ballpit2.pop(10)
    r2_ballpit2.pop(10)
    r2_ballpit2.pop(10)
#print(r2_ballpit2)
r3_ballpit=r2_ballpit2
r3_ballpit.append("KILLER")
prize_pool=[]
prize_pot=0
balls=['BALL','BALL','BALL','BALL','BALL','BALL','BALL'
```

```
i=0
while i < 5:
    print(balls)
    print()
    bin0=int(input("enter a ball to be binned : "))
    r3_ballpit.pop(bin0-1)
    balls.pop(bin0-1)
    print(balls)
    print()
    win0=int(input("enter a ball to add to the prize po
    prize_pool.append(r3_ballpit[win0-1])
    r3_ballpit.pop(win0-1)
    balls.pop(win0-1)
    print(balls)
    print()
    i+=1
print()
if prize_pool[0]=='KILLER':
    prize_pool.pop(0)
print()
for i in prize_pool:
    if (str(i)).isalpha():
        prize_pot=prize_pot//10
    else:
        prize_pot+=i
print("prize pool : ",prize_pot)
###split or steal
```

```
r3p1=round3_lot[0]
r3p2=round3_lot[1]
print("each player will no vote split or steal")
print("if both people split the prize pool is divided i
print("if both people steal none of them get the prize
print("if one of you split and the other steal the latt
print("you now have 60 seconds to deliberate with each
time.sleep(60)
print("enter 1 to steal and 0 to split")
print("now",r3p1,"will vote")
v1=int(input("please enter your vote :"))
print("now",r3p2,"will vote")
v2=int(input("please enter your vote :"))
if v1==0 and v2==0:
    print("both of you have won",prize_pot//2)
    mycursor.execute("update split_steal set count=coun
    db.commit()
    print("sharing is caring afterall")
elif v1==1 and v2==1:
    print("looks like you're taking home 0 dollars")
    mycursor.execute("update split_steal set count=coun
    db.commit()
    print("There is no fire like passion, there is no s
elif v1 != v2:
    if v1<v2:
        print("***",r3p2,"***")
        print("you are the (not so) proud owner of",pri
```

```
        mycursor.execute("update split_steal set count=
        db.commit()
        print("If you steal something small you are a p
    elif v1>v2:
        print("***",r3p1,"***")
        print("has just stolen",prize_pot)
        mycursor.execute("update split_steal set count=
        db.commit()
        print("You shall not steal, nor deal falsely, n
```

4 Installation

1. Ensure python3 and mysql client installation
2. Open terminal and run the setup.py file

5 Usage

1. Open terminal or a python IDE of your choice
2. Run the game.py file

When you run the program at first it gives you a message informing the user that a connection to the SQL database has been established. (See first line of figure 1)

The next line asks the user if they want to review the rule book, to view the rulebook(manual) simply type 'y' or 'Y' from

the keyboard. Upon this a line of text is printed alongside it also asks the user whether they'd like to continue to the game or exit. To continue simply type 'y' or 'Y' from the keyboard and to exit the game enter 'n' from the keyboard. Figure 1 shows an screenshot of what the rulebook looks like.

After the user is satisfied with the rules of the game and continues with the game, the user is asked to enter four names as the game is a four player game. As shown in Figure 2

After the players have all entered their names each player is randomly assigned two balls for their front row (Figure 3) which are visible to all players and at the same time they each receive two balls in the back row which only they are supposed to see. For viewing the backrow the players each must check the file that has been created in the parent folder with their name on it. The file will contain two more balls for Round 1, and when prompted the players must enter what balls are there on their backrow. Please note the players may tell the truth or lie when they reveal the backrow as a part of the game. (Figure 4 and Figure 5)

Now we move on to the voting round, now all four players deliberate as to who they want to vote out, the goal is to minimize the number of 'KILLER' balls and maximise cash balls. Each player will get 45 seconds to speak as to why they should not be voted out.(Figure 6) Since, there is no internal mechanism for voting please ensure that there are no ties. (Figure 7)

Round 2 begins. (Figure 8) Now the program will collect all

the balls from the 3 remaining players and mix them up while also adding some more balls. Now the balls will be re-distributed such that each player now gets 5 balls, 2 for their front row which will be visible to everyone and 3 for their backrow which shall only be known to the player and then round 2 proceeds the same as round 2 right after the voting round where one more player is eliminated. (Figure 9 and Figure 10)

Now the remaining two players move on to the final round, the program collects all the remaining balls and are hidden such that the players are not able to tell which balls are cash prizes and which one are 'KILLERS', Both the players will choose balls to 'bin' or 'win' alternatively (Figure 11); The goal here would be to bin the 'KILLER' balls and win the cash prize.

If in case one of the players wins a 'KILLER' ball then the current prize pool is divide by ten- essentially knocking a zero off. After the total prize is calculated the game moves on to a voting round. The voting is different in this round.

Each player essentially has two option 'split' or 'steal' represented by '0' and '1' respectively. The player can either vote a 1 or a 0. The following tables explains the outcome of the game on the basis of the combination of votes that are possible. (Figure 12)

Player 1	Player 2	Outcome
Split	Split	Each player takes half the cash prize
Steal	Split	Player 1 takes all
Split	Steal	Player 2 takes all
Steal	Steal	Both players get nothing

See Figure 13, Figure 14 and Figure 15

6 Output

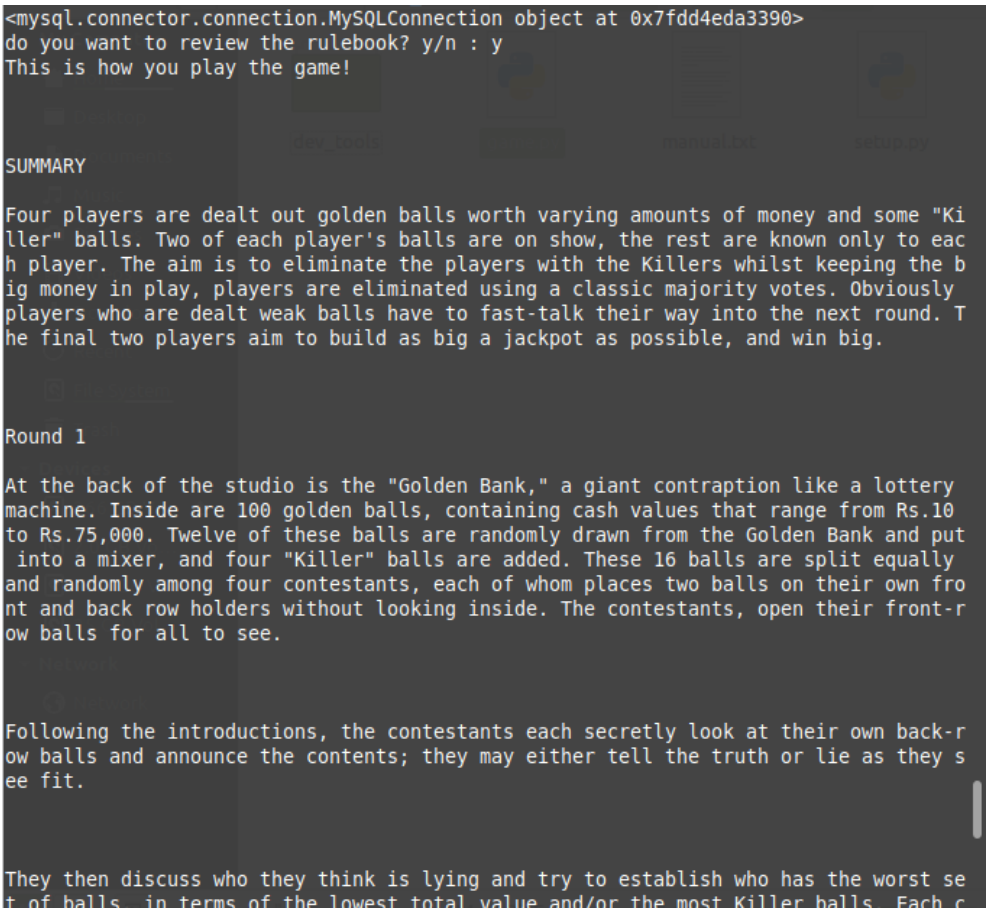

Figure 1 Manual

```
do you want to review the rulebook? y/n : n
player one : adhyan
player two : angela
player three : lana
player four : frost
```

Figure 2 Entering the name of players

```
arranging balls in two slots
revealing front row for each player

front row for adhyan
40000
250

front row for angela
KILLER
10

front row for lana
35000
75

front row for frost
1500
15000
```

Figure 3 Front row being revealed for all the players

```
all players except adhyan must look away
adhyan check the file with your name on it to see the backrow
reveal your first ball : 25000
reveal your second ball : 5000
revealing backrow for adhyan
25000
5000
```

Figure 4 Player entering backrow balls after viewing them

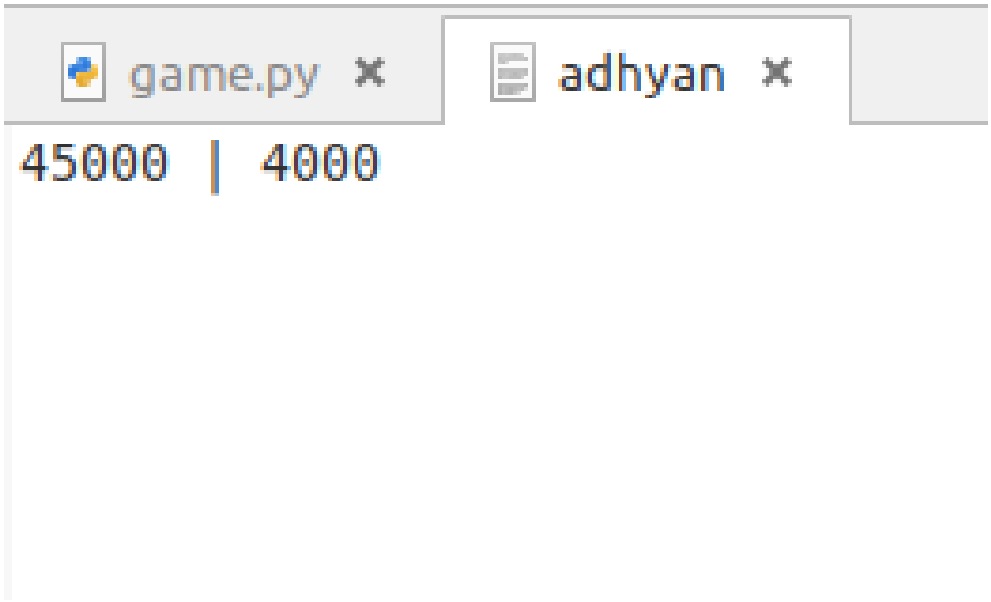

Figure 5 Backrow as seen in a text file by an user

```
each player will now have 45 seconds to defend why they should not be voted out
adhyan has the floor for the next 45 seconds
```

Figure 6 Deliberation time as given to each player

```
now the voting round will begin
enter total number of votes for adhyan
0
enter total number of votes for angela
0
enter total number of votes for lana
0
enter total number of votes for frost
4
frost has been eliminated
```

Figure 7 Voting round and elimination

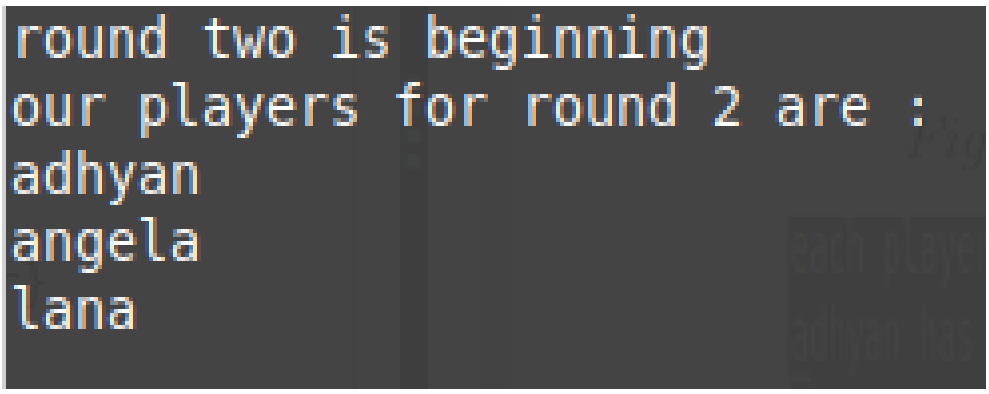

Figure 8 Round Two

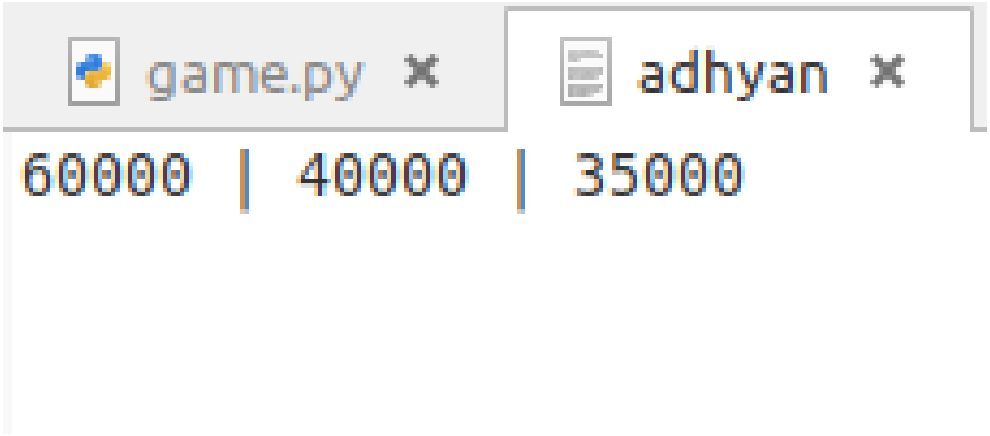

Figure 9 Backrow for Round 2 as seen by a player in a text file

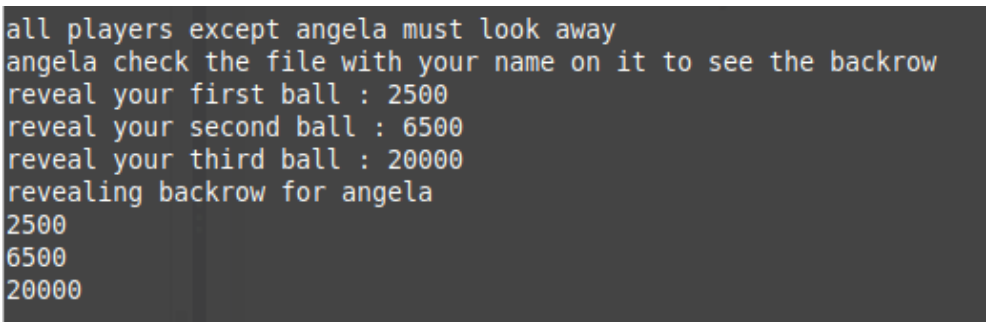

Figure 10 Player revealing backrow for round two

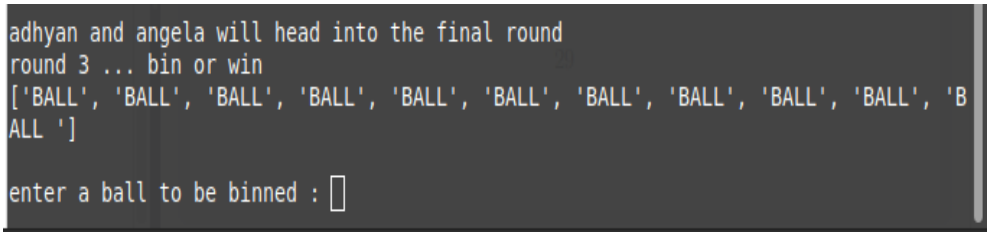

Figure 11 Final Round 'bin' or 'win'

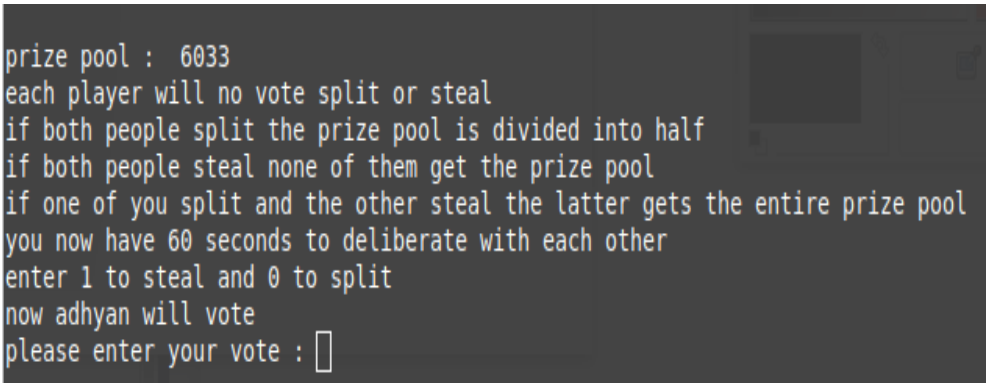

Figure 12 Final Round 'split' or 'steal'

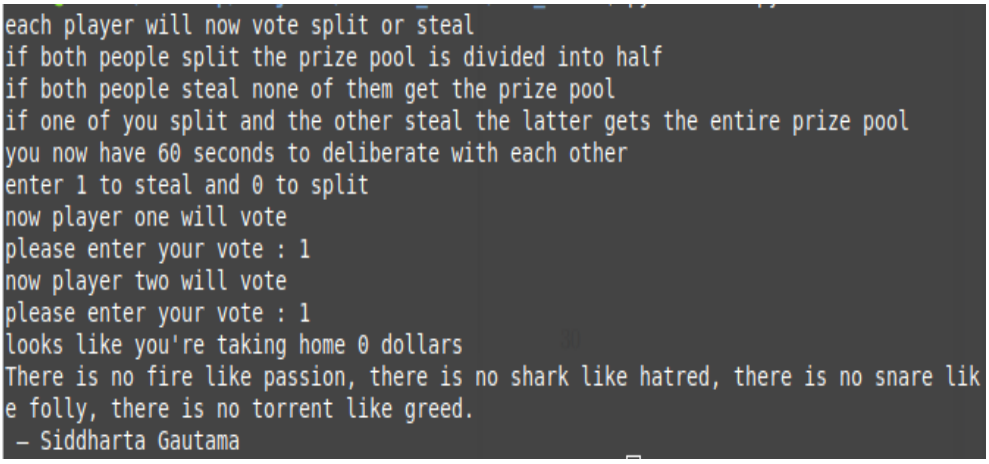

Figure 13 Both players steal

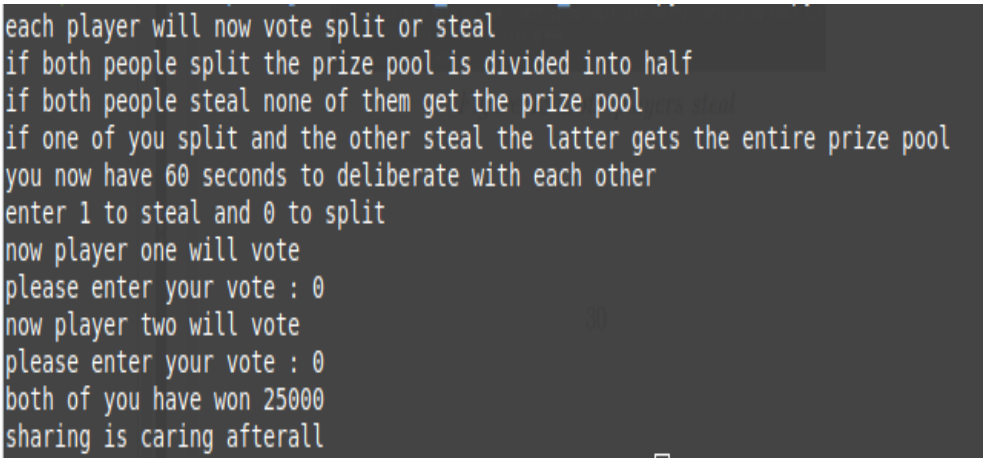

Figure 14 Both players split

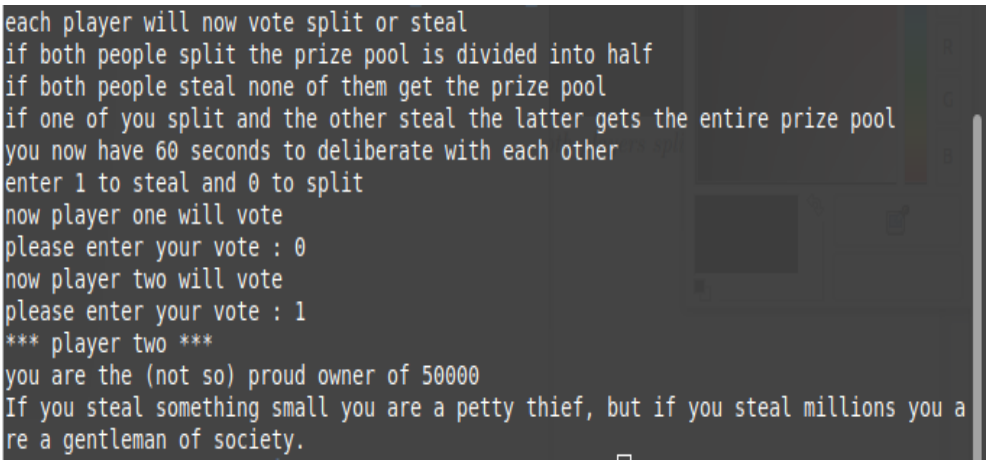

Figure 15 One player steals and another splits