

# Homework 7

Colt Bradley

## 1 Explanation

This code simulates a simple gambling experience. A statement is printed, introducing the user to the environment. The user is then prompted to decide between default variables or choosing their own. This gives the user the option to change the goal and the original bet, or the user can decline and use default values.

The actual betting is managed by a while loop that runs while the user's money lies between 0 and their goal. I use a simple remainder calculation to determine if the random number is even or odd, then a message is printed and variables are reset depending on the result. When the while loop breaks, a message is printed to inform the user if they won or lost.

## 2 Code

Note: Some lines of code are wrapped because they extended beyond the page.

```
#Colt Bradley
#2.2.16
#Homework 7

#import random
import random as r

#Interact with the user, explain what is going on.
print "Welcome to the Casino! We've a special on the martingale"
print "betting system, want to play? I see you have $20, buy in"
print "is $2."

ans = " "
```

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#Determine starting values for the variables
while ans != ("n" or "N" or "no" or "No" or "y" or "Y" or "yes" or "Yes"):
    ans = raw_input("Would you like to use default values? Bet = $2, Goal =
    $40 (Y or N): ")

    if ans == ("n" or "N" or "no" or "No"):
        goal = raw_input("How much money would you like to win? ")
        goal = int(goal)
        bet1 = raw_input("What do you want as your starting bet? ($2 min,
        $20 max) ")

        bet1 = int(bet1)
    elif ans == ("y" or "Y" or "yes" or "Yes"):
        goal = 40
        bet1 = 2
        break
    else:
        print "What? It's a simple yes or no question!"

#define vars
money = 20
bet = bet1
it = 0

#while loop to simulate betting.
while (0 < money < goal):
    rand = r.randint(1,38)
    #this section defines the 0 and 00 numbers
    if rand == 37:
        rand = 0
    elif rand == 38:
        rand = 39 #We'll change this to 00 later
    else:
        if rand%2 == 0: #this case is if the number is even
            money = money + bet
            rand = str(rand)
            print "Your bet is {}".format(bet)
            print "ball lands on {}".format(rand)
            print "you win {}, you have {} dollars".format(bet,money)

```

```

        print
        bet = bet1
        it = it+1
    elif rand%2 ==1: #This is the case that the number is odd
        money = money - bet
        if rand == 39:
            rand = "00"
        else:
            rand = str(rand)
        it = it+1
        print "Your bet is {}".format(bet)
        print "ball lands on {}".format(rand)
        print "you lose {}, you have {} dollars".format(bet,money)
        print
        bet = 2*bet

#when money is outside of selected values, we get results as follows
if money <= 0:
    print "You've lost everything after {} tries!".format(it)
    print "What will you tell the kids?"
else:
    print "Congrats! It took you {} tries, but now you have {} dollars!"
    .format(it,money)

```