LOTTERY SIMULATION: PROFIT OR LOSS 06

Alright guys so you had seen what happens if you play this game lottery game for one year continuously so let us visualise what happens rather than seeing the net profit or a net loss let us visualise it. So let me say i will by visualisation i mean let us plot a graph basically graph with x-axis and y-axis, x-axis be on which day what do you win or what do you lose, on day one what is the amount you have on your account, on day two what is the amount you have in your account let us plot that and let us observe the trends so to plot will have a package that is amt plot lib i hope you had used the same package i guess it is in your crowd computing experiment the jelly beans experiment i had i hope you had used this package let's just reuse the same package will import it, import matplotlib dot pyplot the name is very big and even that we need to use it lot of times difficult for us to type this big name so let us use a shorter name and alias name to use that you will have key word as you have to say as and use your shorter name so let me say plt so instead of telling matplotlib dot plyplot i will be telling plt this is an instruction this is what this means so i have imported it and now i need to plot it right so i need x-axis and y-axis so i need two lists x denotes the x axis quantity and let y denote the y axis quantity so on being of each day i have to increase one value in my x axis at day one day two day three something like that so at the beginning of the loop i will add that to my x list x dot append is the functionality to add some element into your list so what should i have? It is the first day means i have to add one second day two third day three something like that but you're for loop is starts counting from zero that you want given that this is a visualisation for humans we need the counting to start from one so how can we tackle it just add one to it and append it so if i is zero i want one, i is one i want two so i basically want the values of i plus one let me append it i plus one ok so i have the day has started i bet something organiser draw something if it is equal i win some amount else i don't win anything but to play this game given by that i am paying hundred rupees i am deducting hundred from each instance and after the game what should i do? I have to whatever the amount i have in my game account i have to append this to my y axis that is i have to plot the corresponding thing in my y axis so let me append that to the y axis list so that is y dot append i have to add it to the list the account, account has some amount right so let me say i have to append this value i have done that at the end of three sixty five days what will be there in this x list the corresponding day count day one day two day three up to day three sixty five and in y axis the list have whatever the amount your account contain the particular day that will be available and i want to plot it this is the net profit or net loss you have and after that you have to plot it so what should i say plt dot plot this is the function plot it i can say x and y i want to plot these two things and i want to show the plot so i will say plt dot show plt dot show so it will plot the values with taking the days in x axis we had set and the amount in y axis and it will generate a plot and show us the plot this is what these two lines are doing, let us observe visually what happens with these days let us save the program now let me maximise this side let me maximise the pane maximise the current pane and now let me run the file see so there are sometimes you have increase in your account sometimes you have a money but there is a huge fall if you could see, see this is really a very huge fall so you as you keep playing you encounter more a loss if you could see this if you analyse the fall is very huge so that is what makes it a that is why they say lottery don't work ok this is

just once let us try again say see even here you could see there is a loss at the end loss and every time you just observe the y axis the amount positive values are very less negatives are very high especially observe this particular graph just zero to thousand is the maximum you had gain but loss some six thousand something some days you has even had such a heavy loss so that is why the take home message from this is lottery doesn't work it amount they say you pay hundred if you win nine hundred nine times of what you pay this is a tempting statement but if you analyse the interfaces its not that you will win they are actually cheating you tempting you to lose a lot so it mostly the case that you will lose that is the take home message from this programming screen cast we had simulated and we had seen and for those who are interested the next avenue would be there is some probability involved here you could look into the map of it why is that happening? Why is that you lose a lot of time? So if you would analyse the probability of winning and probability of loosing you can get some insides for those who are interested you can check the math behind it why is it that most of the times we lose, i run once more this time i won i run once more this time there is a loss again loss, loss see there is a lot of loss and win i had run some probably six times just once i had won that is by one i say i have a net profit most of the times net profit or loss what i gain out of the game is a loss why this happens? You can Del deep into the probability aspects mathematical aspects that can be done as an extension to what you have learn in the programming screen cast this you had simulated and shown that it will be a loss why that happens that is being explained by the mathematical part, you can look into it alright guys thanks for watching this programming screen cast have a nice day.