*Good afternoon, mates and our respected sir. It is an honor and a privilege to speak before you today. *Today we are going to give a presentation on C program we created to generate a random undirected graph represented in adjency matrix which calculate its total edges, total degrees and verifies the handshaking logic also with the computing of time complexity of the calculation.

*We have also made a graph computing time vs n according different vertices and got a function of n which we compared with the theoretically determined time complexity.

*But before going to that I would like to inform that * the greeting I used in the starting of my presentation good afternoon and many more greeting we give to our beloved one online those greetings reach in their *system because we are connected to them and *to make that connection graph are used widely. *For example, we can take Facebook's graph API.

On The Graph API, everything is a vertices or node. This are entities such as Users, Pages, Places, Groups, Comments, Photos, Photo Albums, Stories. Anything that has properties that store data is a vertices.

And every connection or relationship is an edge. This will be something like a User posting a Photo, Video or Comment etc., also your greetings to your beloved ones.

*Not only Facebook graph API but Googles Knowledge Graph, Flight Networks all are the real-life use of graph.

*Hope Now We know that why graph is important: -

Here on our mini project, we created a program on C language to generate a random undirected graph with which represented by adjency matrix. * Then we calculated its total edges, total degree and * ensured that it holds the handshaking logic. *Then computed its computational time in milliseconds except its printing time. For the first try we used vertices of 1000. *Then we used 2000, 3000, 4000, and 5000 vertices and got this *values. Then we created the graph showing computational time vs. n. And * from its polynomial we got an equation of $6*10^6x^2 + 0.029x - 23.51$ and determining the equation as a function of n we got

$f_n = 6*10^6n^2 + 0.029n - 23.51.$

If we consider the worst case, we get f(n)= O g(n). for this f(n)<= c*g(n)

$6*10^6n^2 + 0.029n - 23.51 <= 6*10^6n^2 + 0.029n^2 - 23.51\ n^2$

$[n <= n^2, 1 <= n^2]$

$6*10^6n^2 + 0.029n - 23.51 <= 5999976.519\ n^2$

$6*10^6n^2 + 0.029n - 23.51 <= 5.99998*10^6\ n^2$

$F(n)= 6*10^6n^2 + 0.029n - 23.51 = O(n^2)$

*Next One Was Other mate Speech.

Important:

* The following key hit on the keypad will initiate next process. one pressing.