## Unit 2: Graphs and Graph Theory

### 2.03 Types of Graphs

There are various types of graph. Three that we will look at today are:

- Connected Graphs
- Complete Graphs
- Complement Graphs

A graph is said to be CONNECTED if each vertex is joined (connected) to every other vertex by an edge or a series of edges.


A graph is said to be COMPLETE if there is an edge between each distinct pair of vertices.


The COMPLEMENT of a graph is the graph that completes the original when superimposed over it. (layered over it).

Example: Give the complementary graph for:
G:


$$
\begin{aligned}
& V=\{a, b, c, d\} \leftarrow \text { same as } \boldsymbol{G} \\
& \boldsymbol{C}=\{a d, b c\} \leftarrow \text { the missing edgesfrom } \boldsymbol{G}
\end{aligned}
$$

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