Covalent disulphide bonds ("bridges") can be formed between pairs of cysteine residues (–CH$_2$-SH).

The location of these bonds is regarded as part of the primary structure - but they can have an important influence on tertiary structure...

e.g. Lysozyme – structure stabilised by 4 disulphide bonds...

http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/L/Lysozyme.html
A protein’s 3D structure is absolutely essential for it to carry out its biological function...

Proteins do NOT simply consist of a randomly coiled chain of amino acids – they usually have a very well defined structure.

2. Secondary structure

Associations between amino acids (particularly hydrogen bonds between the C=O and N-H of different peptide bonds) can lead to formation of a number of simple and stable repetitive conformations.

The best known of these are the α-helix and the β-strand (or β-sheet).
Hydrogen bonds stabilize the helix structure.

The helix can be viewed as a stacked array of peptide planes hinged at the α-carbons and approximately parallel to the helix.

From *Biochemistry* 2nd Ed. by Garrett and Grisham
3. Tertiary Structure

The **folding** of a protein in **three dimensions** is referred to as **tertiary structure**.