Definition 1 A **bolt**, is a type of fastener with a **straight**, external thread designed to mate with a complementary thread in a nut, a type of fastener with a hole with an internal thread.

Axiom 2 Nuts and bolts are almost always used together to fasten a stack of parts together. The two partners are kept together by a combination of their threads' friction, a slight stretch of the bolt, and compression of the parts.

Definition 3 The geometry of a nut is (largely) determined by its **height** and the the **flat**size, i.e. the size of the wrench use to tighten it on a bolt.

There are many types of nuts: acorn, hex, or wing nut.

Definition 4 The **acorn nut** is a type of nut which gets its name from its shape. It is a nut that has a domed top to prevent contact with the external thread of the corresponding bolt.

Definition 5 The **hex nut** is a type of nut that has an internal thread and a hexagonal outer shape.

Definition 6 A **wing nut** is a type of nut with two large metal "wings", one on each side, so it can be easily tightened and loosened by hand without tools.

Definition 7 The geometry of a bolt is determined by its **length**, **head**, **thread**, and **thread**length.

There are also many types of boltss: hex, or wing bolt.