HARDWARE DESIGN ASSIGNMENTS

1.What are the complementing components for screws and the different types?

**Head**:It prevents the entire  from sinking into the cancellous bone screw bone and comes with a buttress whose size can be altered by using a washer between the head and the bone. This enables the screw to spread the load and is ideal to be used on a soft bone

**Shaft**:The core diameter is the smallest, the shaft diameter, and the thread diameter, which is the widest. When it comes to strength, it can be determined with the help of the smallest diameter.

**Core**:The threads of are projected through this part with are also the solid section. The size of the core helps in determining the resistance and the strength of the screw. Moreover, the size of the drill is also similar to that of the core diameter.

**Thread**:The thread is an inclined plane that can be rotated in the threaded hole so that the screw can move with a twist. Moreover, the design also helps in maximizing the contact with the screw, which eventually increases its strength.

**Tip**:The tip of the screw helps in cutting the thread and insert back for fixation.

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Types of Screws:

1.Wood screw:Wood screws arent made of actual wood. Rather they are used to connect two or more solid wooden objects. Wood screws have a sharp point thats able to dig into wood making them highly useful for woodworking applications.

2.Machine Screw: is a type of screw thats used in machining applications. There are many different types of machine screws, one type is a stove bolt. Machine screws are used to hold heavy-duty metal objects together. machine screws can have a diameter up to 0.75 inches, making them bigger than most other screws.

3. Lag Screw: Also known as lag bolts or coach bolts, they are essentially jumbo-sized wood screws coated with zinc. A zinc layer is applied to lag screws to protect them against rust and corrosion..

4.Sheet Metal Screw:are designed to be driven into sheet metal. They can still be used on other materials, such as wood, but they are primarily used for sheet metal. Sheet metal screws have threading all the way up to the shank at the top, allowing them to easily dig into sheet metal.

5.Twinfast screws :it is a unique design consisting of two threads rather than just one. With twice the threading they can be driven into objects twice as quickly when compared to traditional screws. Most drywall screws are twinfast screws. twinfast screws can be used for other applications besides the installation and hanging of drywall.

6.Security Screws: are designed to protect against removal or tampering.Rather they generally require a specialized tool like a spanner or square driver to remove. This design makes them an excellent choice for security applications.

2.WHICH METHODS CAN YOU USE TO JOIN THE FOLLOWING PARTS:

a)Wood and Sheet metal- Rivets.

b)Plastic and metal sheets- Mechanical fastener

c)Plastic and Plastics.Solvent Bonding-involves coating plastics with a solvent and clamping them together. The solvent softens the plastics and when it evaporates, the plastics are bonded together.