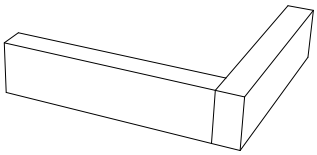
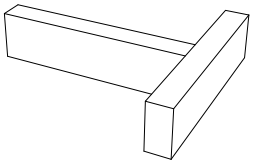
Frame Joinery

Butt Joints

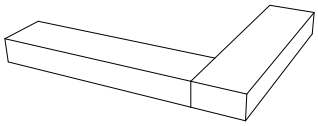
need screws or dowels



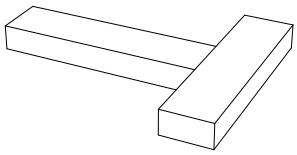
Very Weak



Very Weak



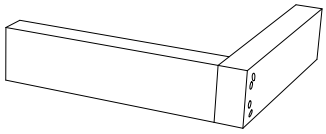
Very Weak



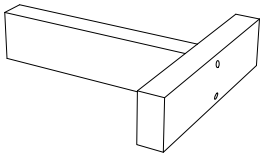
Very Weak

Dowel

Must taper for strength
Capped Screw, or Nail
can be substituted



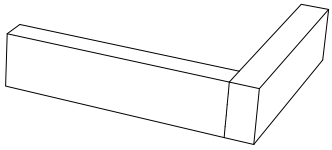
Strong



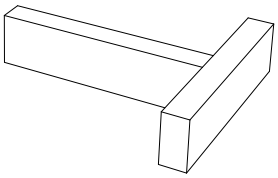
Strong

Mortise and Tenon

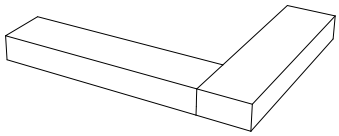
Must consider grain direction



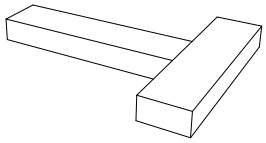
Very Strong



Very Strong

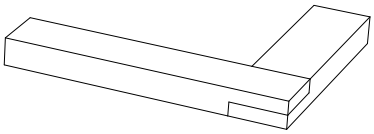


Very Strong

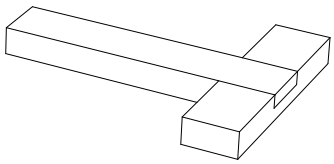


Very Strong

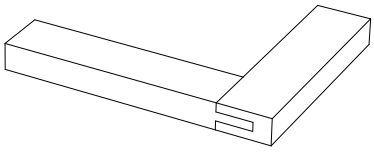
Lap Joint



Half Lap
Very Strong



Full Lap
Very Strong

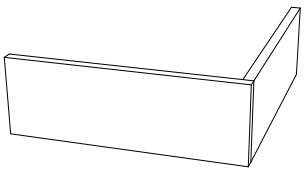


Very Strong

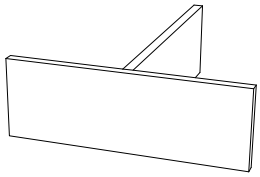
Carcass Joinery

Butt Joint

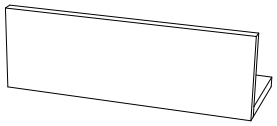
Glue only, no screws or dowels



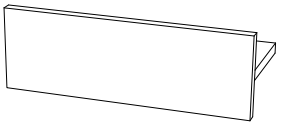
Very Weak



Very Weak



Strong

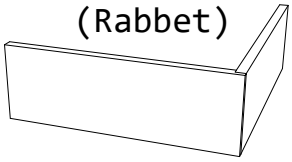


Strong

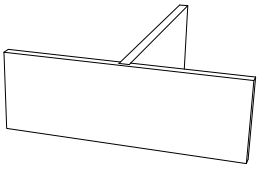
Dado

1/3 to 1/2
Material Thickness

(Rabbet)

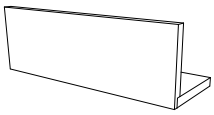


Weak

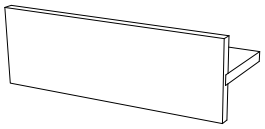


Weak

(Rabbet)

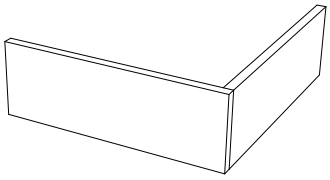


Strong

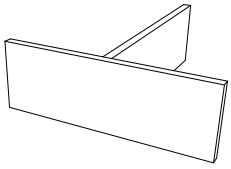


Strong

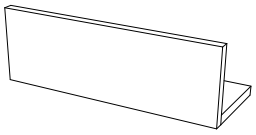
Blind Dowel



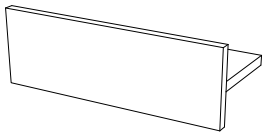
Weak



Weak

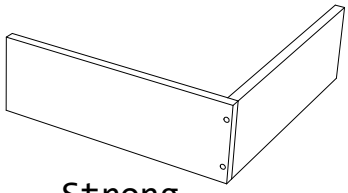


Strong

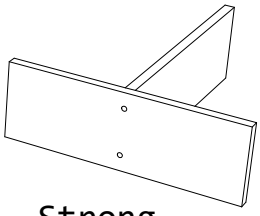


Strong

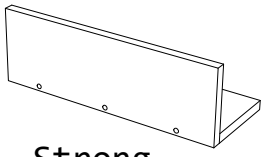
Capped Screw



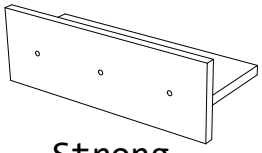
Strong



Strong



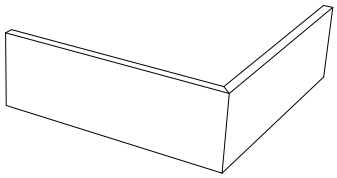
Strong



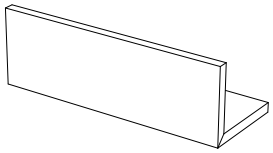
Strong

Carcass Joinery

Miter

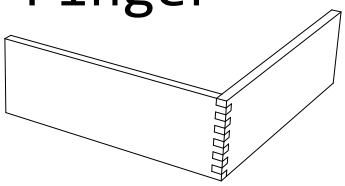


Weak

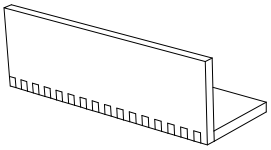


Strong

Finger



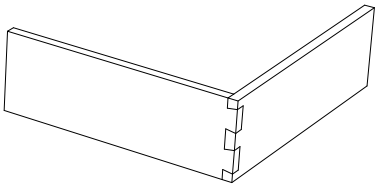
Very Strong



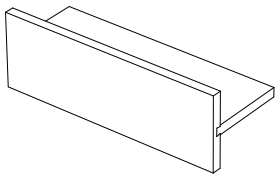
Extremely Weak

Dovetail

Between 8 and 17 degrees
all same strength



Slotted Dovetail



Halfblind Dovetail