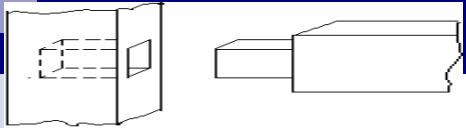
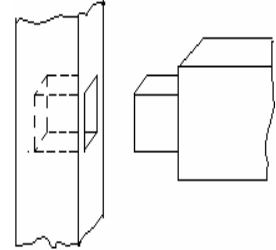


Wood Joinery



Three Main Categories of Joints

- Interlocking joint
- Third member joint
- Metal fastener enforced joint



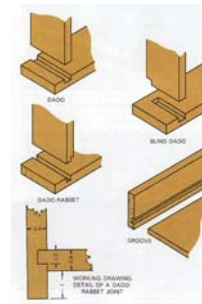
Butt and Edge Joints

- Easy to make but not as strong as other joints.
- Usually reinforced with dowel pins, screws, nails or other metal fasteners.



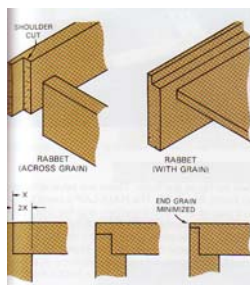
Dados and Grooves

- Dado is rectangular recess cut into the wood and runs across the wood grain.
 - Used for installing shelves, frames, and partitions in cabinets
- Groove is same type of cut but runs along the grain.
 - Used in drawer construction and panel work
- Both dado and groove are usually cut to a depth equal to one-half the thickness of the stock.



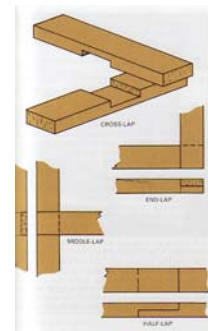
Rabbet Joints

- Made by cutting a recess in one or both of the pieces to be joined.
- Used for the corners of simple boxes, cases, and drawers.
- Commonly used to install the back panel in a cabinet.



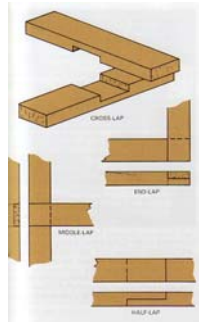
Lap Joints

- Half-lap is used to splice two pieces of wood together
- End-lap is used as the corner joint for a simple frame.
- Cross-lap used where the crossrails or braces of a table or bench join together.



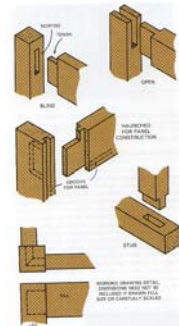
Lap Joints

- Middle-lap provides a method of joining a brace to crossrails or midsections of a frame.
- Dovetail lap is made of a wedge-shaped mating part that fits into a matching kerf.
- Interlocking joint



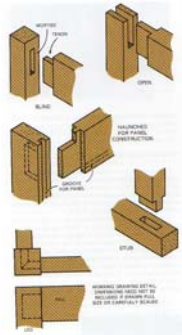
Mortise-and-tenon

- One of the strongest wood joints.
- Used to join legs and rails of tables, benches and chairs.
- Also used in quality frame and panel construction.



Mortise-and-tenon

- Types of Mortise-and tenon joints:
 - Blind – is a completely concealed joint.
 - Open – (sometimes called a slip joint) makes a strong corner joint for a frame.
 - Haunched – used for corners of a frame grooved to carry a panel.
- Interlocking joint



Mortise-and-tenon



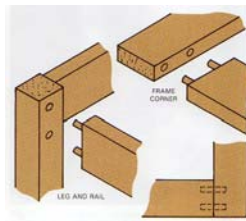
Mortising Machine



Tenoning Jig

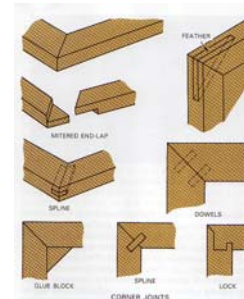
Dowel Joints

- Carefully designed and fitted dowel joints are very strong.
- Some butt and edge joints are reinforced with dowels.
- Dowling jigs save layout time and help do accurate work.
- Third member joint



Miter Joints

- Formed by cutting an equal angle (usually 45 deg.) on each of the mating parts.
- No end grain is visible using a miter joint.
- Used on picture frames and also for moldings on all kinds of furniture and cabinetwork.



Dovetail and Box Joints

- Used in high quality furniture for drawer construction and other corner joints.
- Can be made by hand but usually made with a router and dovetail fixture.
- Dovetail joint uses angled cuts
- Box joint used straight cuts.
- Interlocking joint

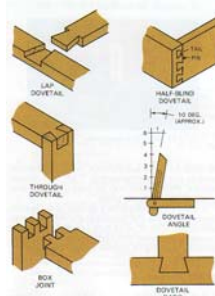


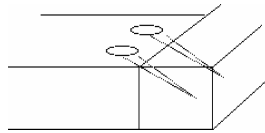
Plate Joinery

- Joint is made with biscuits, wafers, or plates inserted into slots cut by plate or biscuit joining machine.
- Biscuit sizes are:
 - #0 – 16 x 47 mm
 - #10 – 20 x 52 mm
 - #20 – 24 x 58 mm
 - All are 5/32" thick



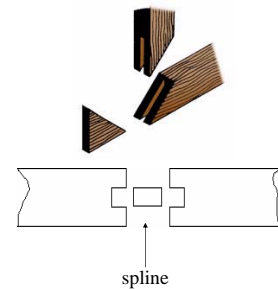
Pocket Cutter

- Both the pocket hole and the screw pilot hole are cut parallel to the face frame of the work.
- Uses face frame screws
- Effective in plywood and butt joint face frames
- Metal fastener joint



Spline Joint

- A form of butt and edge joint.
- A spline is glued in a groove cut into two mating edges.
- Third member joint.



Cope joint – (Rail and Stile)

- Uses a set of router bits or shaper cutters to cut matching joints into mating rails and stiles also creating a groove for the door panel.
- Used mainly on doors
- Interlocking joint

