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I declare that the work contained in this submission is my own work and has not been taken from the work of others save to the extent that such work has been cited within the text of this submission.

Signed: _____ Date: _____

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Introduction

This assignment consisted of a frame with six joints. They were two bridle joints, two mortise and tenon joints and two dowel joints. The bridle joints were the top two joints, the mortise and tenon joints were the middle two joints and the bottom two joints were the dowel joints. Each of the six joints had mitres on them. When all joints were finished and fitting together the frame was to be glued and sanded.

Cutting List

No	Length	Width	Thickness	Material
2 (Stiles)	550 mm	45 mm	22 mm	Red Deal
2 (Top & Middle Rails)	370 mm	45 mm	22 mm	Red Deal
1 (Bottom Rail)	300 mm	80 mm	22 mm	Red Deal

Sequence of Events

- Selected timber
- Checked for sizes and defects such as knots, splits and cracks etc.
- Checked that pieces where square
- Marked face side and face edge
- Marked stiles
    - Marked mortises
    - Marked mitres
    - Marked where the holes went for the dowel joints
- Marked rails
    - Marked tenons on top and middle rails
    - Marked the holes for the dowels on the bottom rail
    - Marked the mitres on all three rails
- Cut mortises
    - Used mortise machine
    - Two mortises went all the way through, this was for the bridle joints
    - The other two did not go all the way through, these were for the mortise and tenon joints.
- Cut tenons
    - First I marked the shoulders of the tenons with a Stanley knife
    - Then I cut the tenons with a tenon saw
    - Cut the shoulders with tenon saw
- Checked mortise and tenon and bridle joints
- Pared tenons until the fitted nicely into the mortises
- Bored out holes for dowels on stiles
- Bored out holes for dowels on bottom rail
- Checked dowel joints with four dowels
- Cut mitres on the stiles
- Cut mitres on the rails to match the mitres on the stiles
- Marked the rebates on the back of each piece
    - The middle rail had two rebates on the back
    - Cut the rebates on the back of each piece
- Marked rebates on the front of each piece
    - The middle rail also had two rebates on the front
    - Cut the rebates on the front of each piece using table router.

    - The material had to be pushed through the table router at a slower rate than the spindle moulder, this was because the table router had has no scoring tool and if the material is fed in too quick it will damage the piece, but if the material is fed through too slow it will burn the timber
- Sanded each piece with a sanding block and sand paper until there was no pencil marks left on any of the pieces
- Dry clamped frame to make sure everything fitted together before gluing
- Used PVA glue on each joint and put frame together
- Used sash cramps to tighten the frame up until glue had set and then I removed the sash cramps
- When the sash cramps were removed I cut the waste pieces off the frame and sanded where the waste was cut off from
- The piece was then finished

Tools Used

Below is a list of tools that I used to mark out and make the frame:

- Ruler
- Try Square
- Marking Gauge
- Mortise Gauge
- Stanley Knife
- Tenon Saw
- Chisels
- Mortise Machine
- Spindle Moulder
- Table Router
- Sash Cramps
- PVA Glue
- Sand Paper
- Sanding Block
- Boring Machine

Reflection

If I was to make this frame again there are a few things that I would have done differently as I feel some parts of my frame could have gone better. The things that I would have done differently are:

- Taken more care when using the tenon saw
    - When I was using the tenon saw in some places I tried to cut too close to the line I was cutting to and this left small saw marks on the piece. This takes from the overall appearance of the frame. If I hadn't of cut too far then these saw marks would not be left in the piece and I still would have been able pear down to the line with a chisel.
- Taken more care when marking the tenons
    - When I was marking the tenons with the mortise gauge I didn't mark it the correct size so when I cut the tenons the gauge lines from the mortise gauge can still be clearly seen on the frame. This also takes from the overall appearance of the frame.