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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: \_\_\_\_\_

## Joining Techniques and Furniture 1



Two panel door: Typical use for rebated frame:

Image courtesy of ebay.com ([ebay incorporated, 2013](#))

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## Introduction

The given Assignment was a frame construction which consists of three rails and two stiles as per details of dimension and design (see Appendix 1) and an accompanying 'Detailed diary of events & Reflection' which makes up the body of this report.

## Main Body

After having received the Assignment brief and accompanying drawing details of the frame, the material needed was identified. The next task was to conduct a visual inspection and selection of pieces based upon a visual inspection and the picking of pieces with the least defects or none present. Examples of defects found were shakes, knots on timber edge or ends where joints would be needed, twist, surface tear out, off square and non-uniform dimensions.

Having selected all the necessary material the next task undertaken was to identify all of the joints needed and to list out a sequence of events plan and estimate of the time needed to complete each of these tasks.

The sequence of events identified and associated estimated and actual times are as follows:-

No.	<u>Frame Construction Sequence of Events</u>	<u>Timing (mins)</u>	
		Estimate	Actual
1	Look at design, think and talk it through identifying any potential problems with tutor and peers. Made initial selection of necessary material and exchange any pieces found to have flaws detrimental to making finished piece.	30	30
2	Plan out sequence of events and estimates of associated times	15	20
3	Recheck material for squareness, mark face sides, face	5	5

	edges, use triangles to identify stile & rail positions and layout.		
	<b><u>Frame Construction Sequence of Events (cont'd)</u></b>	<b><u>Timing (mins)</u></b>	
No.		Estimate	Actual
4	Check design dimensions and calculate all necessary sizes	10	5
5	Check stile end for squareness	2	2
6	Mark out positions of bridle mortise and tenons	10	25
7	Mark out positions of middle rail mortise and tenons	10	20
8	Mark positions of dowels on bottom rail & stiles	5	5
9	Mark positions or rebates	5	15
10	Mark position of shoulders on bottom rail	5	5
11	Cut cheeks of tenons	10	15
12	Cut small rebate on router table	5	15
13	Cut large rebate on spindle moulder	5	10
14	Cut shoulders on 4 tenons and mortise out stiles	30	40
15	Test fit tenons to mortise joints and adjust as necessary	20	40
16	Mark positions of mitres on inside of frame	10	15
17	Cut rebate off each stile to mitre marks	20	30
18	Cut and fit mitre joint in each inside corner of frame	30	60
19	Dry fit frame and check dimensions, flatness & squareness, unclamped followed by clamped	10	20
20	Glue joints and clamp frame squarely and level in sash clamps	10	15
21	Clean off excess glue from joints	5	5
22	Sand off marks & clean up	10	15
23	Cut off joggles and check final dimensions	15	15
	Totals mins	277	427
	Hours (approx.)	4.75	7

### Pictorial sequence of events



Event no 3



Event no 11



Event no 12



Event no 14

When each of the machines were used to complete necessary tasks and operations, proper Health and Safety procedures were followed, where guards, push sticks/blocks, finger boards, dust & chip extraction and personal protective equipment was utilised to reduce and minimise the associated risks with the use of the machines.

### Conclusion

The assignment raised a few unforeseen and unexpected aspects to the project; these included the challenge of setting out a sequence of events and putting an estimate of the time to complete each of these tasks individually. It can be seen from the differences in the estimated and actual times taken noted in the main body, that a lot of room for improvement of skills is needed for production if the estimates are to be

matched. Errors both have time and cost implications to project like these. And therefore the importance of good marking out and identification of pieces was also seen in helping to reduce potential errors in dimensions, squareness, twist and gaps in joints.

It was also found that the process of setting out this sequence of events & estimate of times did help toward keeping focus on the project and its direction towards completion. Keeping a note of the times taken was beneficial and an accompanying photographic record, as long as the camera is remembered! As well as the necessary time needed to record the shots.

### **Works Cited**

ebay incorporated. (2013). Retrieved November 21, 2013, from Ebay.com:  
<http://www.ebay.com/itm/2-panel-Solid-Wood-Clear-Pine-arch-top-door-interior-Stain-grade-/231046581669>

### **Appendix**

Appendix 1 – Dimension details of frame.