

Dr. Hassan Issa  
Dr. Aliaa Hamadi  
Lect. Mustafa Ayad

## Examples of Bill of Quantities

أمثلة عن إعداد جداول الكميات

The example of the (4x5) m room with the roof

No.	Activity/Item	Unit	Dimensions			Quantity	Notes & Calculations
			Length	Width	Height		
1	<b><u>Earth works:</u></b> Excavation works	m <sup>3</sup>	18.96	0.6	0.6	6.83	$Z = (0.6 - 0.24) / 2 = 0.18$ m Length of excavation = $2(5.48 + 2 \times 0.18) + 2(4.00 - 2 \times 0.18) = 18.96$ m
2	Earth filling	m <sup>3</sup>	5	4	0.1	2	
3	<b><u>Concrete works:</u></b> Pouring concrete for foundation base (1:2:4)	m <sup>3</sup>	18.96	0.6	0.2	2.28	
4	Pouring reinforced concrete for lintel beams above the openings (1:2:4) - for the door - for the windows	m <sup>3</sup>					Beam length = $1 + 2 \times 0.2 = 1.4$ m No. of doors = 1 No. of windows = 3
5	Pouring reinforced concrete for the slab (1:2:4)	m <sup>3</sup>	5.48	4.48	0.15	3.68	
6	Pouring reinforced concrete for the ground base (1:2:4)	m <sup>3</sup>	5	4	0.05	1	
7	D.P.C with 0.1 m height	L.m	18.96	--	--	18.96	Length of d.p.c = $2(4.24 + 5.24) = 18.96$
8	<b><u>Brick works:</u></b> Blinding layer for footing with 0.08 m thickness	m <sup>2</sup>	18.96	0.6	--	11.38	
9	Blinding layer for the ground base with 0.08 m thickness	m <sup>2</sup>	5	4	--	20	
10	Building with bricks and cement mortar (1:3) under the D.P.C - the 0.48 m step - the 0.36 m step - the 0.24 m step up to the D.P.C level	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	18.96 18.96 18.96	0.48 0.36 0.24	0.08 0.08 0.32	0.73 0.55 1.46	$Y = (0.48 - 0.24) / 2 = 0.12$ m $X = (0.36 - 0.24) / 2 = 0.06$ m - Length at 0.48 m step = $2(5.48 + 2 \times 0.12) + 2(4 - 2 \times 0.12) = 18.96$ m - Length at 0.36 m step = $2(5.48 + 2 \times 0.06) + 2(4 - 2 \times 0.06) = 18.96$ m - Length at 0.24 m step = $2(5.48) + 2(4) = 18.96$ m

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11	Building with bricks and cement mortar (1:3) above the D.P.C level	m <sup>3</sup>	18.96	0.24	4	18.2	Length of brick works above the d.p.c level (centre line) = $2(5.24+4.24) = 18.96$ m
	<u>With the subtraction of the following:</u>						
	- Volume of the door opening	m <sup>3</sup>	2.1	1	0.24	- 0.5	
	- Volume of the window opening	m <sup>3</sup>	1.5	1	0.24	- 1.08	
	- Volume of the lintel beams above openings (from item No.4)	m <sup>3</sup>	--	--	--	- 0.2	
						16.42	
12	Building with bricks and cement mortar (1:3) for the parapet wall	m <sup>3</sup>	18.96	0.12	0.45	1.02	
13	<u>Roofing works:</u> Covering with asphalt layer with no less than 0.02 m thickness	m <sup>2</sup>	5.24	4.24	--	22.22	Length = $5.48-2 \times 0.12=5.24$ m Width = $4.48-2 \times 0.12=4.24$ m
14	Covering with two layers of isolation	m <sup>2</sup>	5.24	4.24	--	22.22	
15	Covering with isolated earth layer with no less than 0.1m	m <sup>2</sup>	5.24	4.24	--	22.22	
16	Roofing with concrete tiles(0.9x0.9)m	m <sup>2</sup>	5.24	4.24	--	22.22	
17	<u>Finishing &amp; Painting:</u> Gypsum plastering:						
	- for the internal walls	m <sup>2</sup>	18	--	3.88	69.84	Length = $2(5+4) = 18$ m Height = $4 - 0.12 = 3.88$
	- for the ceiling	m <sup>2</sup>	5	4	--	20	
	- for the area surrounding the windows	m <sup>2</sup>	5	0.1	--	1.5	The length surrounding the windows = $2(1+1.5) = 5$ m
	- for the area surrounding the door	m <sup>2</sup>	5.20	0.1	--	0.52	The length surrounding the door = $2 \times 2.1 + 1 = 5.2$ m
	With subtraction of:						
	- windows openings	m <sup>2</sup>	--	1	1.5	-4.5	No. of windows = 3
	- door opening	m <sup>2</sup>	--	1	2.1	-2.1	No. of doors = 1
						85.26	

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18	<b><u>Flooring &amp; Finishing:</u></b> Terrazzo with mosaic tiles (0.25x0.25)m with 0.03 m thick	m <sup>2</sup>	5	4	--	20	
19	Tile skirting with the same type of item No.18 with 0.12 m thickness With subtracting: -the door opening	L.m	18	--	--	18	
		L.m	1	--	--	1	17
20	Plastering the exterior walls and the parapet wall (from inside & outside) with cement mortar - plastering from outside with the parapet wall - plastering the parapet wall from inside  - plastering the area surrounding the windows (from item No. 17) - plastering the area surrounding the door (from item No. 17) With subtracting : - the windows openings (item No.17) - the door opening (item No.17)	m <sup>2</sup>	19.92	--	4.86	96.81	Outer band of the exterior walls= $2(4.48+5.48)= 19.92\text{m}$ The height of the walls including the parapet wall = $4+0.6+0.1+0.16 = 4.86\text{ m}$  Inner band of the parapet wall = $2(5.24+4.24) = 18.96\text{ m}$ Height of the parapet wall = $0.6 - (0.04+0.1+0.15) = 0.31\text{ m}$
		m <sup>2</sup>	18.96	--	0.31	5.88	
		m <sup>2</sup>				1.5	
		m <sup>2</sup>				0.52	
		m <sup>2</sup>				-4.5	
		m <sup>2</sup>				-2.1	
					98.11		
21	Painting the internal walls and the ceiling with emulsion (from item No. 17)	m <sup>2</sup>				85.26	
22	Painting the external walls and the parapet wall (inside & outside) with	m <sup>2</sup>				98.11	

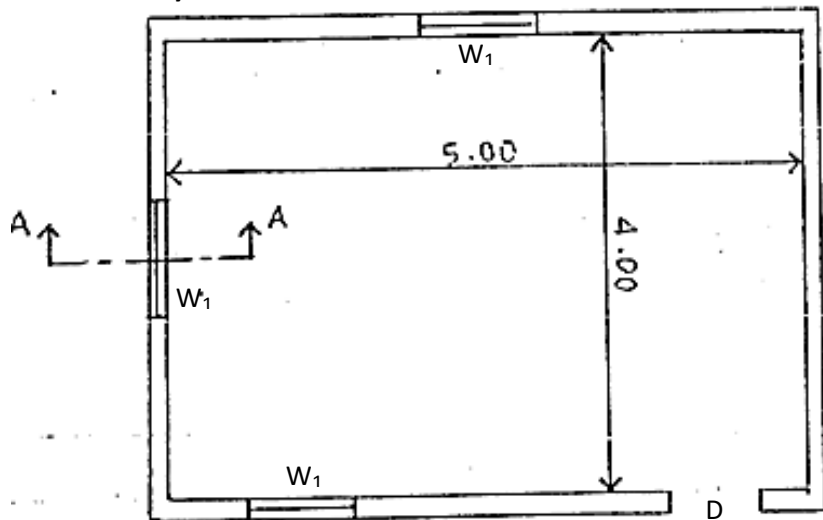
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	emulsion (from item No. 20)						
23	<u>The Door &amp; Windows:</u> Iron windows with their frame and accessories	m <sup>2</sup>	--	1	1.5	4.5	No. of windows = 3
24	Metal door with its frame and accessories	m <sup>2</sup>	--	1	2.1	2.1	No. of doors = 1

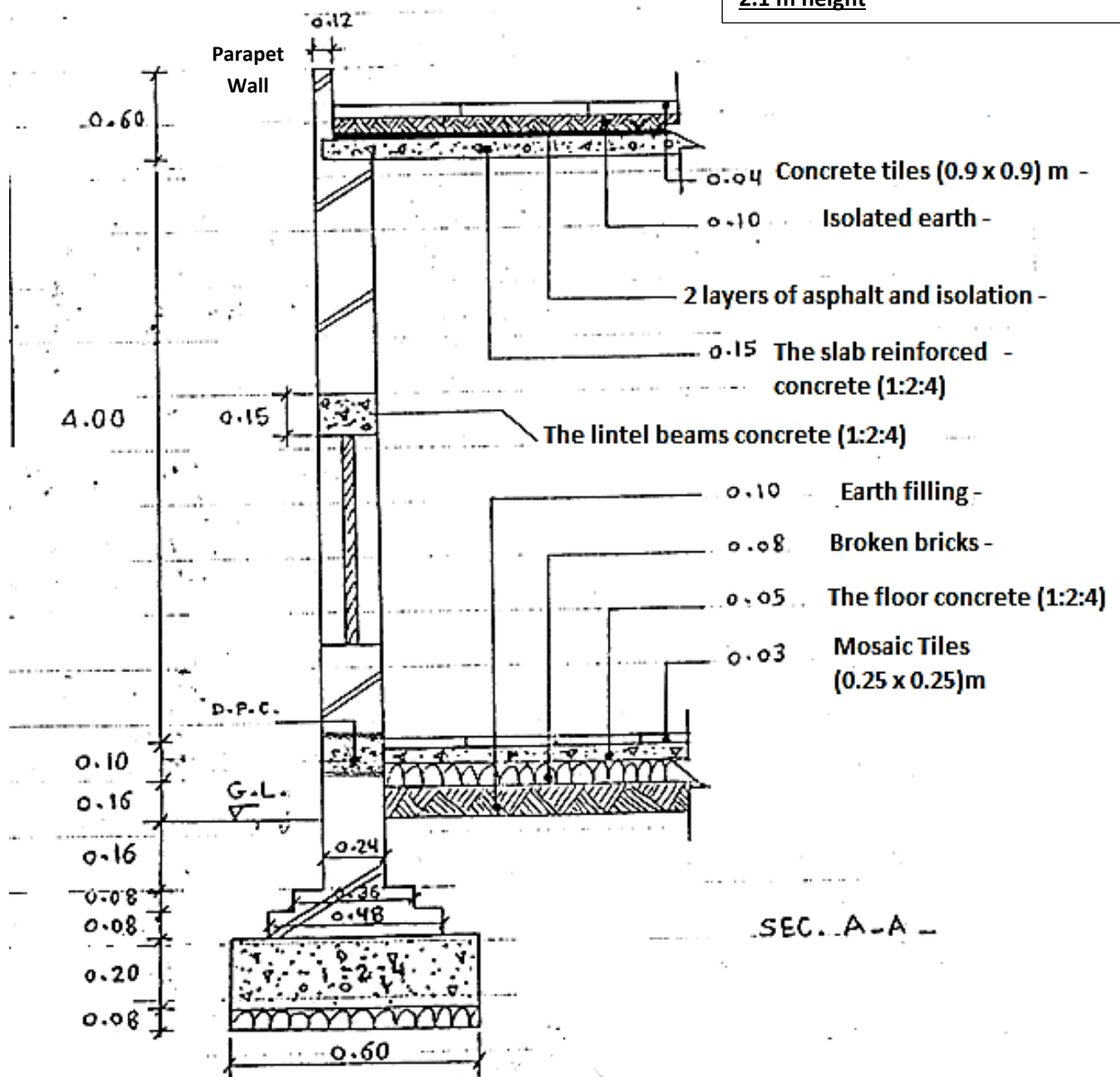
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- PLAN -

4 x 5 m Room  
 with roof

Note that: there are three windows with 1.0 m width and 1.5 m height  
With one door of 1.0 m width and 2.1 m height



SEC. A-A