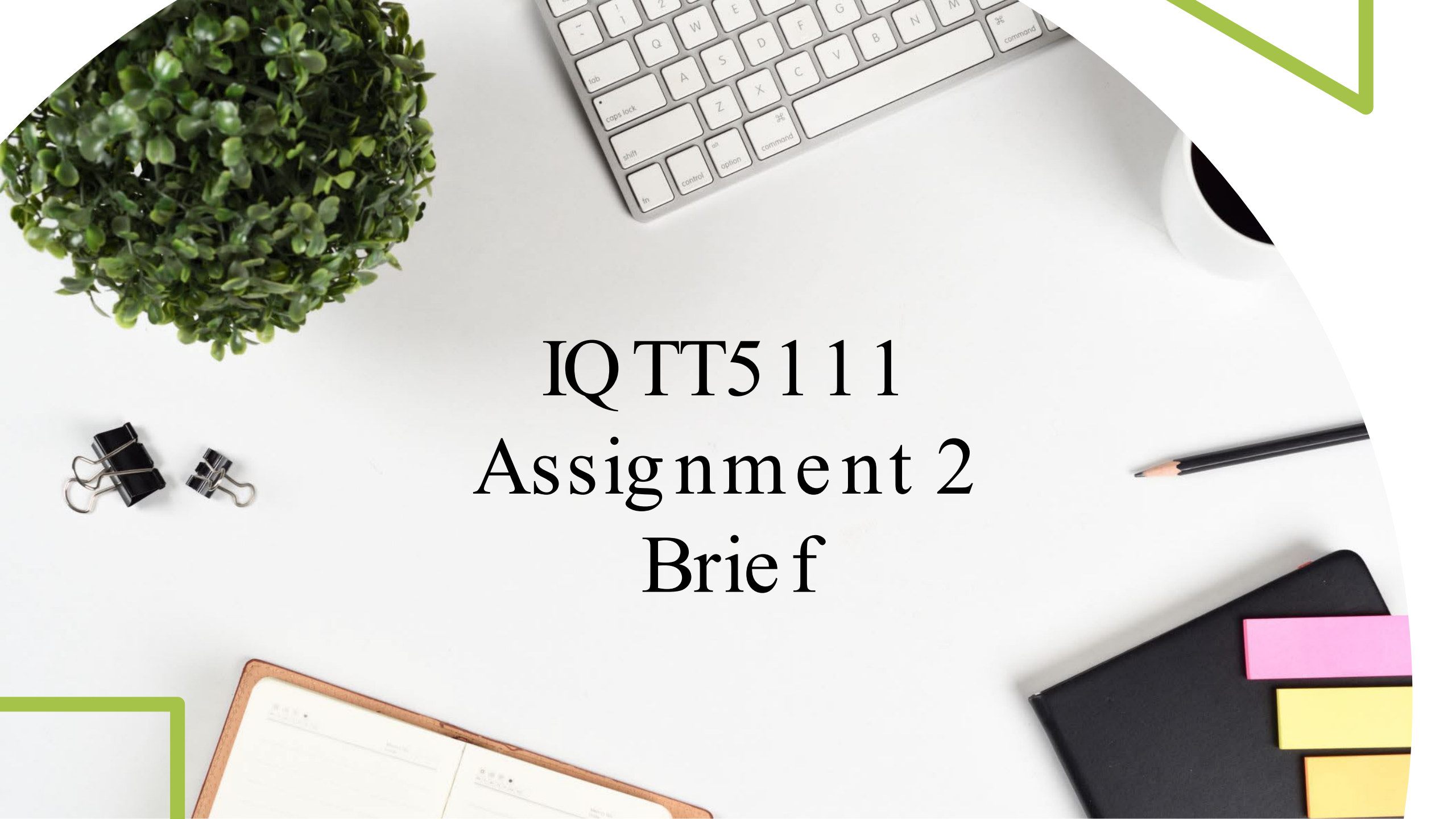
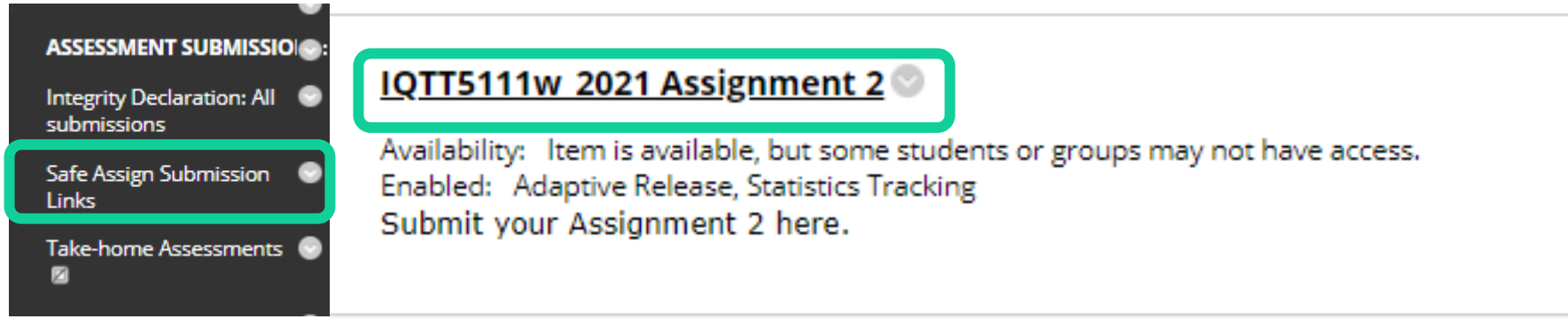


IQTT5111
Assignment 2
Brief

Assignment Details

Due Date: 15 June 2021 @23h30

- Use the Excel answer template provided (HAP students: you will find this in More Resources > Module Information and Assessments > IQTT5111 Assignment 2 Answer Book. HHU students: chat to your OT)
- Please reference your IQTT5111 Module Manual (MM) as follows: IIE 2021. Introduction to Quantitative Thinking and Techniques. Module Manual. The Independent Institute of Education.
- Label your Excel file as: Surname_Initial_Student number_Module code
- Submit one complete Excel file on VCLearn (a Safe Assign report will not be generated as you are submitting an Excel file).



Question 1

	A	B	C	D
1	**Item**	**Price (Rands)**	**Quantity**	**Total Cost (Rands)**
2	Firelighters	18	1	
3	Charcoal	50	2	
4	Meat Pack	127	4	
5	Bottle Of Coke	26	3	
6	Bag Of Chips	22	3	
7	Bottle Of Water	16	5	
8			**Overall Total Cost (Rands) =**	
9				
10			**Discount =**	
11				
12			**Overall Total Cost Minus Discount =**	
13				
14			**Average Cost Per Person =**	

Use multiplication to calculate the total cost of each of the items.

Addition: summing the total costs together to get the overall total cost (=SUM)

Calculate the percentage amount. What is 12% of the overall total cost.

Subtract the discount from the overall total cost.

Calculate average cost per person by dividing the overall total cost minus discount by the number of people.

	A	B	C	D
1	**Day And Date**	**Temperature (°C)**		
2	Monday the 1st	-4		
3	Tuesday the 2nd	-1		
4	Wednesday the 3rd	-7		
5	Thursday the 4th	-5		
6	Friday the 5th	-3		
7	Saturday the 6th	-2		
8	Sunday the 7th	-6		
9				
10			**Day And Date Of Highest Minimum Nightly Temperature =**	
11			**Highest Minimum Nightly Temperature =**	
12				
13			**Day And Date Of Lowest Minimum Nightly Temperature =**	
14			**Lowest Minimum Nightly Temperature =**	
15				
16			**Average Minimum Nightly Temperature =**	
17				
18			**Minimum Nightly Temperature on the 9th and the 10th =**	

Question 2

Observe & copy. There are no calculations involved for these first four questions

Here you need to calculate the average/mean (=AVERAGE).

We have the average, -5, so if we multiple -5 by 10 then we will get the sum of all 10 nights' temperatures. Then if we subtract -8 (the temp on the 8th day) and the sum of the 7 nights what's leftover is the sum of the unknown 9th and 10th night temperatures. Because we are told that the temp is the same on both days, we can divide this amount by 2 to get the missing temperatures.

Refer to question 2.3 from Assignment 1 as the method used there is the method that must be applied in this case. You can construct the formula in the cell or alternatively use the Insert > Equation option in Excel to construct an appropriate equation.

Question 3

	A	B	C	D	E	F	G	H	I
1	Student	Maths	% Mark	Science	% Mark	English	% Mark	Student's Average Mark (%)	
2	Vusi	186		45		72			
3	Beth	184		48		76			
4	Tebogo	156		39		68			
5	Heather	176		57		72			
6	Adel	174		36		72			
7	Bianca	142		42		60			
8	Candice	140		36		64			
9	Dylan	138		33		52			
10									
11								Average Maths Mark (%) =	
12			/200		/60		/80	Average Science Mark (%) =	
13								Average English Mark (%) =	
14								Average Overall Mark (%) =	

Here you need to calculate the percentage rate.

Here you need to calculate the students' average percentage mark by using the =AVERAGE function or by adding the three percentages together and dividing by 3.

Here you need to calculate averages/mean for each subject (using the % Mark columns for each subject) and then the overall average mark (using the Student's Average Mark (%) column).

Question 4

	A	B	C	D	E	F	G	H
1		John	Paul	George	Richard			
2	Contribution to start-up capital (in rands) =	80000	60000	40000	20000			
3								
4	Contributions as ratio =							
5								
6	Share of first year's profit of R50 000 =							
7								
8	Share of second year's profit =		54000				Second year's profit =	

Refer to question 5 of Assignment 1 for a reminder of how to answer a profit-share question.

Another example…

George, Jan and Zizi start a new company. They agree to share any profit/loss made by the company in the same ratio as their initial contributions to the start-up capital of the company. If George, Jan and Zizi's respective contributions to the start-up capital are R250 000,00, R150 000,00, and R100 000,00, and total profit in the company's first year of operation is R120 000,00, how much did each of the partners receive that year?

$$250\,000 : 150\,000 : 100\,000 = 5 : 3 : 2$$

$$\text{George's share} = \frac{5}{10} \times 120\,000\ [1] = R60\,000,00\ [1]$$

$$\text{Jan's share} = \frac{3}{10} \times 120\,000\ [1] = R36\,000,00\ [1]$$

$$\text{Zizi's share} = \frac{2}{10} \times 120\,000\ [1] = R24\,000,00\ [1]$$

Question 5

	A	B	C	D	E
1	**Shareholder**	**Proportion Of Shares**	**Percentage Of Shares**		
2	Stuart	1/28			
3	Kenneth	1/8			
4	Dominic	3/14			
5	Gary	13/56			
6	Gregg	2/7			
7	Jeff	3/28			
8					
9				**Owner of highest proportion of shares =**	
10				**Gregg and Gary's combined % shareholding =**	
11				**Gregg, Gary and Stuart's combined % shareholding =**	

Convert the fractions to percentages.

Compare the percentage of shares and write down the name of the shareholder with the highest percentage.

Add/sum the percentages (=SUM).

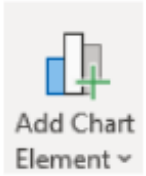
Creating a Bar Chart in Excel

Bar charts are figures used to indicate how often each particular category of a qualitative (non-numerical) variable occurs.

Step 1 → **Step 2** → **Step 3**

Highlight the relevant cells (do not include the 'Total' row).

Select the 'Insert' tab > create a Column Chart > select the '2-D Column' option > then select the 'Cluster Column' type (1st option).



Click on 'Add Chart Element' and add the following:

- Chart Title (above chart)
- Axis Titles (Horizontal & Vertical)
- Data Labels (Outside End)

Creating a Pie Chart in Excel

Pie charts provide an alternative to bar charts as a means by which to indicate how often each particular category of a qualitative (non-numerical) variable occurs.

Step 1 → **Step 2** → **Step 3** → **Step 4**

Highlight the relevant cells (do not include the 'Total' row).

Select the 'Insert' tab > create a Pie Chart > select the '2-D Pie' option > then select the 'Pie' graph type (1st option).

Click on the title at the top of the chart and type in an appropriate title for the given data set.

Click on 'Add Chart Element' and add 'Data Labels' selecting the 'Data Callout' label type.

Question 6

Bar Graph
Marks awarded for the following:

1. Correct chart type
2. Suitable descriptive title
3. Suitable axes labels
4. Correct data values
5. Aesthetic Presentation

Pie Chart
Marks awarded for the following:

1. Correct chart type
2. Suitable descriptive title
3. Correct segment labels
4. Correct segment percentage values
5. Aesthetic Presentation

Creating a Histogram in Excel

A histogram provides a graphical means by which to indicate how often a number or a grouped class of numbers occurs.

Step 1 → Step 2 → Step 3

Step 1

Highlight the relevant cells.

Step 2

Select the 'Insert' tab > create a Column Chart > select the '2-D Column' option > then select the 'Cluster Column' type (1st option).

Step 3

Click on 'Add Chart Element' and add the following:

- Chart Title (above chart)
- Axis Titles (Horizontal & Vertical)
- Data Labels (Outside End)

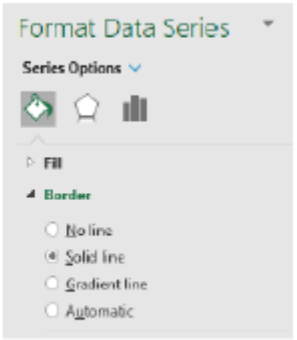
Step 4 → Step 5

Step 4

Right-click on one of the columns in the chart. Select 'Format Data Series'. Next to 'Gap Width' drag the slider all the way to the left, signifying that there should be no gap between the bars in the chart.

Step 5

Click on the Border option in the 'Format Data Series' dialog box. Choose the 'Solid line' border option. Click on the drop-down menu next to the Colour option and choose the colour black. Click on the Close button on the dialog box.



Question 7

Histogram

Marks awarded for the following:

1. Correct chart type
2. Suitable descriptive title
3. Suitable axes labels
4. Correct data values
5. Aesthetic presentation