

# Excel assignment -4

## 1.What is the benefit of Microsoft 365?

### Answer:

#### **1. The Ability to Work Remotely**

70% of modern professionals work remotely at least one day a week, and 53% do at least half of the week—so as more and more businesses adopt remote work policies, it's important that you're able to give your virtual teams access to the tools and technologies necessary to work effectively on-the-go.

One of the main advantages of Office 365 is that it allows users to work from anywhere as long as they have internet connectivity. Because Office 365 is entirely cloud-based, emails, files, and popular Office programs (such as Word, PowerPoint, and Excel) can be accessed from any location and any device. This is especially beneficial for companies with a lot of employees who work remotely or travel often.

#### **2. Subscription-Based Model for Scalable Business Growth**

Office 365 gives you enhanced flexibility and can quickly scale as your business does. For starters, you'll be able to mix and match business apps to create your own custom solution to meet the exact needs of each user or department. Plus, one of the main benefits of Office 365's subscription-based model is that you can add or remove users by simply adding or removing licenses.

This way, if an employee leaves, you can stop paying for the software-as-a-service rather than continuing to pay for an account that is no longer being used. If a new employee is hired, you can add a new account without having to change the entire system. Without having to make a permanent commitment to a software license for each employee, your business can scale in a simplified, cost-effective way.

#### **3. Streamlined Business Collaboration**

If you have a lot of remote employees in your business, collaboration can suffer when every team member isn't working from the same location. Without that constant face-to-face interaction, your employees will need access to modern business collaboration tools that make it possible to brainstorm, work together on a project, or go over edits and approvals remotely and in real-time.

Since Office 365 is a subscription-based service that uses online connectivity features, its collaboration features are designed with remote workers in mind. For example, with Office 365 Business Premium, your employees will be able to utilize Microsoft Teams,

Microsoft's all-in-one collaboration hub. Users will be able to work on and edit online documents simultaneously, share notes and go over edits in-real time, and join audio or video conferences to discuss changes or give approvals—even when all the team members involved aren't physically together.

#### 4. Simplified Virtual Communication

***According to Buffer's 2019 State of Remote Work Report, 17% of remote workers claim communication and collaboration is the biggest struggle of working remotely.***

So, giving your remote employees the tools they need to communicate with their teams effectively can mean the difference between engaged, successful teams and isolated, unhappy employees.

Many of Office 365's features and benefits are designed to make effective remote communication possible. With Microsoft Teams, Skype for Business, Outlook Groups, Sway, Yammer, SharePoint, and other Office 365 apps, users will be able to communicate more effectively than ever before—no matter where they are working from or what device they're using.

#### 5. Reduced Software Expenses

One of the biggest advantages of Office 365 is that it can help your business save big on software expenses. As a subscription-based software, you only need to pay for the software you're actually using. Since not every employee will need the same tier of software based on their job role or security clearance, you can mix and match plans as needed.

For example, you could use Business Premium or Office 365 Enterprise E3 for your highest-end users that need additional capabilities, such as C-Suite executives or team managers. Then, your rank-and-file employees can leverage the less expensive Office 365 Business Essentials plan—this saves you from having to pay more for all the extra tools they won't ever need to use.

#### 6. Advanced Security Features

Keeping data secure should be a priority for every digitally-driven business. One of the major benefits of having a subscription-based software like Office 365 Business Premium is that since it's continuously-updated, you'll always have the latest security patch without having to make manual updates or purchase add-ons.

Plus, by investing in the Business Premium version of Office 365, you'll get data encryption both at rest and in transit, enforced multifactor authentication for users, region-based data residency, and phishing email protection through Outlook. These

Office 365 features and benefits can give you peace of mind that your data will stay secure, even with employees accessing it from various locations and devices.

## 7. Office 365 Email Benefits

With Outlook 365 for Business, your emails, calendars, and contact information are automatically synced so the most up to date versions can be accessed from any device you log into. Plus, you can customize every email by creating a custom format, including images, and using your own domain name, and store all the emails you need to keep on hand with 100 GB of storage.

With a simplified admin center, Outlook 365 for Business lets you set up new user emails, restore deleted accounts, create custom scripts, and more from any location. Industry-leading anti-malware protection and anti-spam filtering can help guard your business and its employees from email threats such as phishing schemes to keep your precious information safe and secure.

## 8. File Storage and Sharing Capabilities

Another major benefit of Office 365 for Business is its file storage and sharing capabilities. With OneDrive, you'll be able to access all your files no matter what device you're logged into, whether it's a Windows, Mac, or mobile device. You'll also be able to securely share files both inside and outside your organization, meaning coworkers, customers, and clients alike will be able to access the information they need to keep business moving along.

Then, with SharePoint, you can share and manage documents, files, and applications through secure portals to enhance teamwork and collaboration. Whether two remote employees are working together on a project or you're sending content back and forth with a client for edits and approvals, SharePoint through Office 365 makes it simple.

## 9. Business Intelligence

Office 365 can provide you with valuable data insights that help you do business better, from customer-generated data to information about how your employees are working. The Office 365 business apps your employees use daily will help you gather, organize, and analyze data so you can quickly identify inefficiencies or areas for improvement.

With simple-to-read data dashboards, you'll be able to understand the analytics you're gathering and apply them in ways that make it possible to work smarter, not harder. Plus, with AI-powered presentation capabilities, Office 365 can suggest layouts, designs, and images for client-facing presentations or internal team workshops or briefs. This way, all your digital presentations will look polished and professional—without you having to spend countless hours manually formatting them yourself.

## 2. Use two datasets and perform join on specific columns.

## Answer:

Whatever task you need to perform in your worksheets, where do you look for a solution in the first place? Like many users, I usually go to the *Formulas* tab and open a list of functions. Merging tables is no exception :)

### How to join tables with VLOOKUP

If you are to merge two tables based on **one column**, [VLOOKUP](#) is the right function to use.

Supposing you have two tables in two different sheets: the main table contains the seller names and products, and the lookup table contains the names and amounts. You want to combine these two tables by matching data in the *Seller* column:

	A	B	C
1	Seller	Product	Amount
2	Adam	Bananas	
3	Harry	Oranges	
4	Luis	Apples	
5	Nick	Lemons	
6	Pete	Bananas	
7	Rob	Lemons	
8	Ron	Apples	
9	Steve	Bananas	
10	Tom	Lemons	

Main table

	A	B
1	Seller	Amount
2	Ron	\$510
3	Luis	\$520
4	Nick	\$550
5	Steve	\$600
6	Harry	\$605
7	Rob	\$605
8	Adam	\$705
9	Pete	\$735
10	Tom	\$920

Lookup table

As you see, the order of the names in the main table does not correspond with that in the lookup table, therefore a simple copy/pasting technique won't work.

To combine two tables by a **matching column** (*Seller*), you enter this formula in C2 in the main table:

```
=VLOOKUP($A2,'Lookup table'!$A$2:$B$10,2,FALSE)
```

Where:

- \$A2 is the value you are looking for.
- 'Lookup table'!\$A\$2:\$B\$10 is the table to search (please pay attention that we lock the range with [absolute cell references](#)).
- 2 is the number of the column from which to retrieve the value.

Copy the formula down the column, and you will get a **merged table** consisting of the main table, plus the matched data pulled from the lookup table:

`=VLOOKUP($A2, 'Lookup table'!$A$2:$B$10,2,FALSE)`

	A	B	C	D	E
1	<b>Seller</b>	<b>Product</b>	<b>Amount</b>		
2	Adam	Bananas	\$705		
3	Harry	Oranges	\$605		
4	Luis	Apples	\$520		
5	Nick	Lemons	\$550		
6	Pete	Bananas	\$735		
7	Rob	Lemons	\$605		
8	Ron	Apples	\$510		
9	Steve	Bananas	\$600		
10	Tom	Lemons	\$920		

Please be aware that Excel VLOOKUP has several limitations, the most critical of which are 1) inability to pull data from a column to the left of the lookup column and 2) a hardcoded column number breaks a formula when you add or remove columns in the lookup table. On the bright side, you can easily reorder the returned columns simply by changing the number in the *col\_index\_num* argument.

### 3. How to perform string formatting in excel. Demonstrate it with examples.

#### **Answer:**

The problem is that when you join numbers in a text string, the number formatting does not follow. Take a look at the figure as an example. Note how the numbers in the joined strings (column E) do not adopt the formatting from the source cells (column C).

	A	B	C	D	E
1					
2		Rep	Revenue		Rep and Revenue
3		Gilbert	\$6,820		=B3&": "&C3
4		Brown	\$5,205		Brown: 5205
5		Tamburello	\$246		Tamburello: 246
6		Walters	\$7,136		Walters: 7136
7		Alexander	\$2,921		Alexander: 2921
8		Bradley	\$8,225		Bradley: 8225
9		Dobney	\$5,630		Dobney: 5630
10		Ellerbrock	\$7,994		Ellerbrock: 7994
11		Hartwig	\$6,676		Hartwig: 6676
12		Campbell	\$5,716		Campbell: 5716

To solve this problem, you have to wrap the cell reference for your number value in the TEXT function. Using the TEXT function, you can apply the needed formatting on the fly. The formula shown here resolves the issue:

	A	B	C	D	E
1					
2		Rep	Revenue		Rep and Revenue
3		Gilbert	\$6,820		=B3&": "&TEXT(C3, "\$0,000")
4		Brown	\$5,205		Brown: \$5,205
5		Tamburello	\$246		Tamburello: \$0,246
6		Walters	\$7,136		Walters: \$7,136
7		Alexander	\$2,921		Alexander: \$2,921
8		Bradley	\$8,225		Bradley: \$8,225
9		Dobney	\$5,630		Dobney: \$5,630
10		Ellerbrock	\$7,994		Ellerbrock: \$7,994
11		Hartwig	\$6,676		Hartwig: \$6,676
12		Campbell	\$5,716		Campbell: \$5,716

=B3&": "&TEXT(C3, "\$0,000")

The TEXT function requires two arguments: a value, and a valid Excel format. You can apply any formatting you want to a number as long as it's a format that Excel recognizes.

For example, you can enter this formula into Excel to display \$99:

```
=TEXT(99.21,"$#,###")
```

You can enter this formula into Excel to display 9921%:

```
=TEXT(99.21,"0%")
```

You can enter this formula into Excel to display 99.2:

```
=TEXT(99.21,"0.0")
```

An easy way to get the syntax for a particular number format is to look at the Number Format dialog box. To see that dialog box and get the syntax, follow these steps:

#### 4. Create an advance expense distributor in excel.

**Example: Consider expenses of a person who will be entered in excel at the same time expenses must be evenly distributed among all people with the amount of money each person should return/ receive.**

**Answer:**

1

Open your income and expenses Excel worksheet.

1. 2.

Select an empty cell beneath the last item in your "income" column.

2. 3.

Type "Total Income" in this cell, then press the "Enter" key.

3. 4.

Select the cell directly beneath the "Total Income" label.

4. 5.

Type "=SUM(" into this empty cell.

5. 6.

Select the first entry in your "Income" column, press the "Shift" key, select the last income item in that column, then press the "Enter" key to calculate your income total.

6. 7.

Select an empty cell beneath the last item in your "Expenses" column.

7. 8.

Type "Total Expenses" in this cell, then press the "Enter" key.

8. 9.

Select the cell directly beneath the "Total Expenses" label.

9. 10.

Type "=SUM(" into the empty cell.

10. 11.

Select the first entry in your "Expenses" column, press and hold the "Shift" key, select the last expense item in the same column, then press the "Enter" key to calculate your total expenses

**5. Create reports to generate mark sheets of students in excel where percentages and addition of marks should be done using formulas.**

**Answer:**

How to Make Marksheet in Excel Format?

Let us understand how to create a mark sheet in Excel.

You can download this Marksheet Excel Template here – [Marksheet Excel Template](#)

Suppose we have the following data for marks in various subjects by 120 students.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	XIIth Standard												
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total	Average	Grade	Result
3	1	A	1	Akhilesh	97	36	47	13	34				
4	2	A	2	Ruchi	69	85	86	51	53				
5	3	A	3	Bhawna	19	72	41	53	40				
6	4	A	4	Isha	76	68	46	11	22				
7	5	A	5	Chetan	55	31	56	99	93				
8	6	A	6	Neeti	84	57	68	30	31				
9	7	A	7	Chanchal	18	46	51	63	22				
10	8	A	8	Preeti	93	93	31	93	20				
11	9	A	9	Richa	33	89	55	46	69				
12	10	A	10	Manish	21	27	84	82	96				
13	11	A	11	Karun	13	48	27	26	38				

We want to find the total marks scored, an average of marks (this will also help us to give students grades), and a result on whether the student passed or failed.

### #1 – SUM Function

To find out the total, we will use the **SUM** function

The syntax for the [SUM in excel](#) is as follows:

**=SUM(**

SUM(number1, [number2], ...)

This function takes 255 numbers in this way to add. But we can also give the range for more than 255 numbers as an argument for the function, to sum up.

There are various methods to specify numbers as follows:

## #1 – Comma Method

=SUM(E3,F3,G3,H3,I3)										
	A	B	C	D	E	F	G	H	I	J
1	XIIth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	=SUM(E3,F3,G3,H3,I3)
4	2	A	2	Ruchi	69	85	86	51	53	
5	3	A	3	Bhawna	19	72	41	53	40	
6	4	A	4	Isha	76	68	46	11	22	

The total will be –

=SUM(E3,F3,G3,H3,I3)										
	A	B	C	D	E	F	G	H	I	J
1	XIIth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	227
4	2	A	2	Ruchi	69	85	86	51	53	

In this method, we use commas for specifying and separating the arguments. We have fixed or selected various cells with commas.

## #2 – Colon Method (Shift Method)

In this method, we have used the “**Shift**” key after selecting the first cell (E3) and then used the right arrow key to choose cells until I3. We can select continuous cells or specify the range with the colon manually.

=SUM(E3:I3)										
	A	B	C	D	E	F	G	H	I	J
1	XIIth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	=SUM(E3:I3)
4	2	A	2	Ruchi	69	85	86	51	53	
5	3	A	3	Bhawna	19	72	41	53	40	

The total will be:



We can pass arguments to this function the same way we pass arguments to the SUM function.

For evaluating the average in the excel mark sheet, we will use the **AVERAGE function** in the following way. First, we will select marks scored by a student in all five subjects.

	A	B	C	D	E	F	G	H	I	K
1	Xlth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	=AVERA
4	2	A	2	Ruchi	69	85	86	51	53	GE(E3:
5	3	A	3	Bhawna	19	72	41	53	40	I3)
6	4	A	4	Isha	76	68	46	11	22	

The average will be –

<div> <div>K3</div> <div> <div>✕</div> <div>✓</div> <div><i>fx</i></div> </div> <div>=AVERAGE(E3:I3)</div> </div>										
	A	B	C	D	E	F	G	H	I	K
1	Xlth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	45
4	2	A	2	Ruchi	69	85	86	51	53	

We will use **Ctrl+D** to copy down the function.

Apply the above formula to all the remaining cells. We get the following result.

Formula Bar: `=AVERAGE(E3:I3)`

	A	B	C	D	E	F	G	H	I	K
1	Xlth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	45
4	2	A	2	Ruchi	69	85	86	51	53	69
5	3	A	3	Bhawna	19	72	41	53	40	45
6	4	A	4	Isha	76	68	46	11	22	45
7	5	A	5	Chetan	55	31	56	99	93	67
8	6	A	6	Neeti	84	57	68	30	31	54
9	7	A	7	Chanchal	18	46	51	63	22	40
10	8	A	8	Preeti	93	93	31	93	20	66

We can see that we have got values in decimal for average marks, which doesn't look good. So, we will use the **ROUND function** to round the values to the nearest integer.

### #3 – ROUND Function

This function is used to round the values to the specified number of digits.

The syntax for the [ROUND function in excel](#) is as follows:

**=ROUND(**

### Arguments Explanation

- **Number:** We need to provide the number we want to round for this argument. We can reference the cell containing a number or specify the number itself.
- **Num\_digits:** In this argument, we specify the number of digits we want after the point in the number. If we want a pure integer, then we define 0.

Let us use this function in the Excel mark sheet. First, we will wrap up the **AVERAGE function** with the **ROUND function** to round the number, which the **AVERAGE function** will return.

					=ROUND(AVERAGE(E3:I3),0)					
	A	B	C	D	E	F	G	H	I	K
1	Xllth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	=ROUND(AVERAGE(E3:I3),0)
4	2	A	2	Ruchi	69	85	86	51	53	
5	3	A	3	Bhawna	19	72	41	53	40	
6	4	A	4	Isha	76	68	46	11	22	

We have used the **AVERAGE function** for the **number** argument and **0** for **num\_digits**.

After pressing the "Enter" key, we will get the desired result, i.e., a number with no decimal digit.

The average will be:

K3					=ROUND(AVERAGE(E3:I3),0)					
	A	B	C	D	E	F	G	H	I	K
1	Xllth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	45
4	2	A	2	Ruchi	69	85	86	51	53	

Apply the above formula to all the remaining cells. We get the following result.

K3					=ROUND(AVERAGE(E3:I3),0)					
	A	B	C	D	E	F	G	H	I	K
1	Xllth Standard									
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average
3	1	A	1	Akhilesh	97	36	47	13	34	45
4	2	A	2	Ruchi	69	85	86	51	53	69
5	3	A	3	Bhawna	19	72	41	53	40	45
6	4	A	4	Isha	76	68	46	11	22	45
7	5	A	5	Chetan	55	31	56	99	93	67
8	6	A	6	Neeti	84	57	68	30	31	54
9	7	A	7	Chanchal	18	46	51	63	22	40
10	8	A	8	Preeti	93	93	31	93	20	66

#### #4 – IF Function

Now to find out the grade, we have the following criteria.

- If the student has scored average marks greater than or equal to 90, then the student will get a grade of S
- If the student has scored average marks greater than or equal to 80, then the student will get a grade of A+
- If the student has scored average marks greater than or equal to 70, then the student will get a grade A
- If the student has scored average marks greater than or equal to 60, the student will get a grade of B+.
- If the student has scored average marks greater than or equal to 35, then the student will get a grade of B
- If the student has scored average marks less than 35, the student will get a grade of F.

We will [use the IF function in excel](#) multiple times to apply these criteria. It is called [NESTED IF in excel](#), also as we will use the IF function to give an argument to the IF function itself.

We have used the following formula to evaluate the Excel mark sheet grades.

=IF(K3>=90,"S",IF(K3>=80,"A+",IF(K3>=70,"A",IF(K3>=60,"B+",IF(K3>=35,"B","F")))))											
	A	B	C	D	E	F	G	H	I	K	L
1	XIIth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average	Grade
3	1	A	1	Akhilesh	97	36	47	13	34	45	=IF(K3>=90,"S",IF(K3>=80,"A+",IF(K3>=70,"A",IF(K3>=60,"B+",IF(K3>=35,"B","F")))))
4	2	A	2	Ruchi	69	85	86	51	53	69	
5	3	A	3	Bhawna	19	72	41	53	40	45	
6	4	A	4	Isha	76	68	46	11	22	45	
7	5	A	5	Chetan	55	31	56	99	93	67	
8	6	A	6	Neeti	84	57	68	30			
9	7	A	7	Chanchal	18	46	51	63	22	40	

Let us understand the logic applied in the formula.

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As we can see for “**logical\_test**,” which is the criterion, we have given a reference to the K3 cell containing AVERAGE of marks and have used logical operators, “**Greater Than**” and “**Equal To**,” then compared the value with 90.

If the average mark scored by the student is greater than or equal to 90, then write the value which we will specify in the “**value\_if\_true**” argument. On the other hand, if this criterion is not satisfied by the average marks, what should be written in the cell as “**Grade**,” that we will specify for the “**value\_if\_false**” argument.

For the “**value\_if\_true**” argument, we will specify text (Grade) within double quotes, “**S**.”

	A	B	C	D	E	F	G	H	I	K	L
1	Xllth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average	Grade
3	1	A	1	Akhilesh	97	36	47	13	34	45	=IF(K3>=90,
4	2	A	2	Ruchi	69	85	86	51	53	69	"S")
5	3	A	3	Bhawna	19	72	41	53	40	45	
6	4	A	4	Isha	76	68	46	11	22	45	

For the “**value\_if\_false**” argument, we will start writing the **IF function** again as we have many more criteria and the corresponding grade to assign if this criterion is not satisfied.



K3												=IF(K3>=90,"S",if(K3>=80																																																																																																																																			
A												B												C												D												E												F												G												H												I												K												L																							
1												Xlth Standard																																																																																																																																			
2												Sr. No.												Division												Roll No												Name												Accountancy												English												Maths												Economics												Business Studies												Average												Grade											
3												1												A												1												Akhilesh												97												36												47												13												34												45												=IF(K3>=90,"S",if(K3>=80											
4												2												A												2												Ruchi												69												85												86												51												53												69																							
5												3												A												3												Bhawna												19												72												41												53												40												45												80											
6												4												A												4												Isha												76												68												46												IF(logical_test, [value_if_true], [value_if_false])																																															
7												5												A												5												Chetan												55												31												56												99												93												67																							

We have started writing the **IF function** again for the “**value\_if\_false**” argument and specified the criteria to compare average marks with 80 this time.

The result will be:

L3											
	A	B	C	D	E	F	G	H	I	K	L
1	Xlth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average	Grade
3	1	A	1	Akhilesh	97	36	47	13	34	45	B
4	2	A	2	Ruchi	69	85	86	51	53	69	

If average marks are greater than or equal to 70 but less than 80 (first IF function criteria), the student will get an “**A**” grade.

L24											
	A	B	C	D	E	F	G	H	I	K	L
1	Xlth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Average	Grade
24	22	A	22	Diskha	65	55	75	95	71	72	A
25	23	A	23	Deepak	41	54	22	51	78	49	B
26	24	A	24	Chinki	87	69	42	52	67	63	B+
27	25	A	25	Chhavi	19	32	20	62	80	43	B
28	26	A	26	Manisha	50	95	93	57	31	65	B+
29	27	A	27	Priya	74	68	61	86	64	71	A
30	28	A	28	Seema	87	60	62	100	54	73	A

We will apply the **IF function** in the same formula five times, as we have **6** criteria.

Make sure we have opened brackets for the **IF function** five times. After that, we need to close all brackets.

### # 5 – COUNTIF

To find out whether a student is "PASSED" or "FAILED," we have to apply the following criteria:

- If the student has scored greater than 200 as total marks and scored greater than 33 in all subjects, then the student is "PASSED."
- If a student has scored less than 33 in 1 or 2 subjects and total marks are greater than 200, the student has got "ER" (Essential Repeat).
- If the student has scored less than 33 in more than 2 subjects or less than or equal to 200 as total marks, then the student is "FAILED."

We need to evaluate several subjects where a student has scored less than 33. Then, we need to use the **COUNTIF function** to count numbers based on the specified criterion.

The [syntax for the COUNTIF function](#) is as follows:

**=COUNTIF(**  
**COUNTIF(range, criteria)**

#### Arguments

- **Range:** We need to reference the cells containing a number to compare the criterion with.
- **Criteria:** To specify the criterion, we can use logical operators to count only those numbers to satisfy the criterion.

#### AND Function

The syntax for [AND function excel](#) is as follows:

**=AND(**  
**AND(logical1, [logical2], ...)**

In the AND function, we must specify the criteria. If all the criteria are satisfied, then only TRUE comes. We can set up 255 criteria.

The formula which we have applied is as follows:

<div> <div></div> <div>✕ ✓ fx</div> <div>=IF(AND(J3&gt;200,COUNTIF(E3:I3,"&gt;=33")=5),"PASSED",IF(AND(COUNTIF(E3:I3,"&gt;=33")&gt;2,J3&gt;200),"ER","FAILED"))</div> </div>											
	A	B	C	D	E	F	G	H	I	J	M
1	Xlth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total	Result
3	1	A	1	Akhilesh	97	36	47	13	34	227	=IF(AND(J3>200,COUNTIF(E3:I3,">=33")=5),"PASSED",IF(AND(COUNTIF(E3:I3,">=33")>2,J3>200),"ER","FAILED"))
4	2	A	2	Ruchi	69	85	86	51	53	344	
5	3	A	3	Bhawna	19	72	41	53	40	225	
6	4	A	4	Isha	76	68	46	11	22	223	
7	5	A	5	Chetan	55	31	56	99	93	334	
8	6	A	6	Neeti	84	57	68	30	31	270	
9	7	A	7	Chanchal	18	46	51	63	22	200	

As this can be seen, we have used the **AND function** inside the **IF function** to give multiple criteria and the **COUNTIF function** inside the **AND function** to count the number of subjects in which a student has scored greater than or equal to 33.

The result will be:

<div> <div>M3</div> <div>✕ ✓ fx</div> <div>=IF(AND(J3&gt;200,COUNTIF(E3:I3,"&gt;=33")=5),"PASSED",IF(AND(COUNTIF(E3:I3,"&gt;=33")&gt;2,J3&gt;200),"ER","FAILED"))</div> </div>											
	A	B	C	D	E	F	G	H	I	J	M
1	Xlth Standard										
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total	Result
3	1	A	1	Akhilesh	97	36	47	13	34	227	ER
4	2	A	2	Ruchi	69	85	86	51	53	344	

Apply the above formula to all the remaining cells. We get the following result.

M3												=IF(AND(J3>200,COUNTIF(E3:I3,">=33")=5),"PASSED",IF(AND(COUNTIF(E3:I3,">=33")>2,J3>200),"ER","FAILED"))
	A	B	C	D	E	F	G	H	I	J	M	
1	Xlth Standard											
2	Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies	Total	Result	
3	1	A	1	Akhilesh	97	36	47	13	34	227	ER	
4	2	A	2	Ruchi	69	85	86	51	53	344	PASSED	
5	3	A	3	Bhawna	19	72	41	53	40	225	ER	
6	4	A	4	Isha	76	68	46	11	22	223	ER	
7	5	A	5	Chetan	55	31	56	99	93	334	ER	
8	6	A	6	Neeti	84	57	68	30	31	270	ER	
9	7	A	7	Chanchal	18	46	51	63	22	200	FAILED	