

4:00 Excel Batch -02

What is Excel?

Excel is spreadsheet. Spreadsheet is a way to arrange data in row and column.

It is used solve the mathematical problem.

Application of Excel:

- 1) Data Entry
- 2) Data Analysis
- 3) Accounting
- 4) Finance
- 5) Data Visualization

Data Types:

- 1) Integer -> 1,25,1,-1,-5
- 2) Float -> 1.2, 2.363574, -2.3654
- 3) Character -> "A", "1"
- 4) String -> "A quick brown fox jumps over the lazy dog."
- 5) Date -> 11/13/2023
- 6) Boolean -> True/False

Selection:

- 1) Single Cell Select
- 2) Multiple Cell Select
- 3) Range Select
- 4) Column/Row Select

Formatting:

- 1) Fill / Background Color
- 2) Font Color
- 3) Alignment
- 4) Merge Cell

Data Filling:

- 1) Copy
- 2) Sequence
- 3) Date
- 4) Function

Built-in Function



How to write a function/Formula in excel:

- 1) Type = sign
- 2) If you use built-in function then type **function name with parentheses**.
- 3) Enter a value
- 4) Type an arithmetic sign -> +, -, x, /
- 5) Enter Value and Hit Enter

What is Nested Function?

If a function contains another function then it is known as nested function.

Brackets:

- 1) Parentheses -> ()
- 2) Curly Bracket -> {}
- 3) Square Bracket -> []

Cell Reference/Location:

- Relative
- Absolute

Built-in Functions:

- ➔ Sum(Data Range)
- ➔ Product(Data Range)
- ➔ Max(Data Range)
- ➔ Min(Data Range)
- ➔ Average(Data Range)
- ➔ Averageif(All Category, Specific Category, All Value)
- ➔ Averageifs(All Value, All Category 1, Specific Category 1, All Category 2, Specific Category 2,)
- ➔ And(Conditional Statement)
- ➔ Count(Data Range)
- ➔ Countblank(Data Range)
- ➔ Counta(Data Range)
- ➔ Concatenate(Cell Location 1, Cell Location 2,)
- ➔ left(Cell Location, Number of Character)
- ➔ Right(Cell Location, Number of Character)
- ➔ if(Condition ,True ,False)
- ➔ Vlookup(input,table data range,output,0)

Salary Sheet

- **Allowances** are 30% of the basic salary.
- To calculate the **Total Earnings**. This will be the summation of Basic salary and Allowances.
- The **Provident Fund (PF)** is 5% of the basic salary.

Tax Calculation

- If the basic salary is greater than \$1250, the tax rate is 15% of the basic salary.
- If the $1100 \leq \text{basic salary} < \1000 , tax rate is 10% of the basic salary.
- If the basic salary is below \$1000, the tax rate is 0%.
- **Total deduction** by adding PF and Tax.
- **Net Salary** -> Total Earnings – Total Deduction.

Salary Sheet							
Name	Basic	Allowances	Total Earnings	Net Salary	PF	Tax	Total Deduction
Afnan	\$1,500.00	\$450.00	\$1,950.00	\$1,650.00	\$75.00	\$225.00	\$300.00
Niloy	\$1,400.00	\$420.00	\$1,820.00	\$1,540.00	\$70.00	\$210.00	\$280.00
Rohan	\$1,000.00	\$300.00	\$1,300.00	\$1,250.00	\$50.00	\$0.00	\$50.00
Akib	\$900.00	\$270.00	\$1,170.00	\$1,125.00	\$45.00	\$0.00	\$45.00
Samin	\$1,200.00	\$360.00	\$1,560.00	\$1,380.00	\$60.00	\$120.00	\$180.00

Person's Data

First Name	Last Name	Full Name	Subject	Marks	Grade	Gender
Mr Sami	Uddin	Mr Sami Uddin	Bangla	59	B+	Male
Mr Maruf	Islam	Mr Maruf Islam	English	64	A-	Male
Mr Sojib	Alam	Mr Sojib Alam	Math	24	F	Male
Mr Sabbir	Hasan	Mr Sabbir Hasan	Bangla	45	B	Male
Mr Sumon	Bro	Mr Sumon Bro	English	86	A+	Male
Mrs Salma	Sis	Mrs Salma Sis	Math	97	A+	Female
Mrs Srity	Sis	Mrs Srity Sis	Bangla	34	D	Female
Mr Sami	Uddin	Mr Sami Uddin	English	64	A-	Male
Mr Maruf	Islam	Mr Maruf Islam	Math	64	A-	Male
Mr Sabbir	Alam	Mr Sabbir Alam	Bangla	67	A-	Male
Sojib	Hasan	Sojib Hasan	Bangla	45	B	Others
Sabbir	Bro	Sabbir Bro	English	63	A-	Others
Sumon	Bro	Sumon Bro	Math	63	A-	Others
Sami	Bro	Sami Bro	Bangla	63	A-	Others
Srity	Sis	Srity Sis	English	63	A-	Others
Sami	Islam	Sami Islam	Math	62	A-	Others

AverageIF/AverageIFS

Student Name	Subject	Marks
sojib	Bangla	45
Sabbir	English	63.46429
Sumon	Math	63.14286

Student Information					
Name	ID	Program	CGPA/GPA	Payment	Credit
Ashik	1011	HSC	5.00	BDT 100.00	45
Sami	1022	B.A in English	4.00	BDT 500.00	4
Salma	1033	Hons	4.00	BDT 600.00	564
Srity	1044	Hons	4.00	BDT 800.00	456
Afnan	1055	HSC	5.00	BDT 500.00	654

Sum BDT 4,223.00
 Product 30275700480
 Max BDT 800.00
 Min BDT 4.00
 Average BDT 500.00

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Pivot Table

Pivot table is used in summarizing the data stored in a table.

To create a pivot table:

- Select a table
- Go to insert tab->PivotTable->Ok

Division	Zone	Expense	Profit	Month
Chittagong	Potiya	\$2,000.00	\$54,645.00	Jan
Chittagong	Shitakunda	\$6,533.00	\$54,654.00	Feb
Dhaka	Narayanganj	\$5,414.00	\$46,546.00	Mar
Dhaka	Gazipur	\$6,565.00	\$54,654.00	Apr
Dhaka	Munshiganj	\$6,565.00	\$54,654.00	May
Chittagong	Cox's Bazar	\$5,654.00	\$55,465.00	Jun
Chittagong	Bandharban	\$5,546.00	\$54,654.00	Jul
Chittagong	Sandwip	\$5,546.00	\$54,654.00	Aug

The screenshot shows an Excel spreadsheet with a PivotTable and the PivotTable Field List task pane on the right.

PivotTable Data:

Sum of Profit	Month	Jan	Feb	Mar	Jun	Jul	Aug	Sep	Oct	Grand Total
Bandharban						54654				54654
Cox's Bazar						54654				54654
Potiya		54645	56773.96429			55465			55177.53571	166596.5
Sandwip							54654			54654
Shitakunda			54654	57093.25					55496.82143	167244.0714
Grand Total		54645	111427.9643	57093.25		55465	54654	54654	55177.53571	498613.5714

PivotTable Field List:

- Choose fields to add to report:
 - ☒ Division
 - ☒ Zone
 - ☐ Expense
 - ☒ Profit
 - ☒ Month
- Drag fields between areas below:
 - Report Filter: Division
 - Column Labels: Month
 - Row Labels: Zone
 - Values: Sum of Profit
- ☐ Defer Layout Update
- Update

Shortcuts in Excel:

Insert a column -> ALT + H + I + C

Insert a row -> ALT + H + I + R

Delete a column -> ALT + H + D + C

Delete a row -> ALT + H + D + R

Auto Column Resize -> ALT + H + O + I

Background/fill color -> ALT + H + H

Font color -> ALT + H + F + C

To Add Dollar(\$) sign -> CTRL + SHIFT + 4

