# ASSIGNMENT-4

## DATASET:

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 |

**Q1: Use INDEX and MATCH to find the sales for Product C in March.**

**OUTPUT: =INDEX(E1:E7,MATCH(A4,A1:A7,0))**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q1** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | 220 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |

**Q2: Use INDEX and MATCH to find the category for Product E.**

**OUTPUT: =INDEX(B2:B7,MATCH(A6,A2:A7,0))**

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q2** | |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | Furniture | |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | | |

**Q3: Use INDEX and MATCH to find the maximum sales for Product B across all months.**

**OUTPUT: =MAX(INDEX(B2:G7, MATCH(A3, A2:A6, 0), 0))**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q3** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | 190 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |

**Q4: Use INDEX and MATCH to find the month with the maximum sales for Product A.**

**OUTPUT:**
**=INDEX($C$1:$G$1,MATCH(MAX(INDEX($C$2:$G$7,MATCH("101PRODA",$A$2:$A$7,0),0)),INDEX($C$2:$G$7,MATCH("101PRODA",$A$2:$A$7,0),0),0))**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q4** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | May Sales |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |

**Q5: Use INDEX, MATCH, and SUMIF to sum the sales for all products in the "Electronics" category for April.**

**OUTPUT: =SUMIF(B:B, "Electronics", E:E)**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q5** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | 510 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |
| 8 | | | | | | | | |

**Q6: Use INDEX and MATCH to calculate the average sales for Product D across all months.**

**OUTPUT:**
**=AVERAGE(INDEX($C$2:$G$7,MATCH("104PRODD",$A$2:$A$7,0),0))**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q6** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | 110 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |
| 8 | | | | | | | | |

## Q7: Use INDEX and MATCH to find the sales for Product ID 105 in May.

**OUTPUT: =INDEX(C2:G7,MATCH(A6,A2:A7,0),5)**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Product ID** | **Product Category** | **Jan Sales** | **Feb Sales** | **Mar Sales** | **Apr Sales** | **May Sales** | **Q7** |
| 2 | 101PRODA | Electronics | 120 | 130 | 140 | 150 | 160 | 250 |
| 3 | 102PRODB | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103PRODC | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104PRODD | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105PRODE | Furniture | 220 | 230 | 240 | 240 | 250 | |
| 7 | 106PRODF | Electronics | 130 | 140 | 150 | 160 | 170 | |
| 8 | | | | | | | | |

**NAME: DASHMEET SINGH**