**Lesson 6**

**1. Name three types of visuals you can create in Power BI.**

👉 Power BI’da ko‘p turdagi vizuallar mavjud, uchta misol:

**Bar chart** – ustun shaklida taqqoslash uchun.

**Pie chart** – ulushlarni ko‘rsatish uchun.

**Line chart** – vaqt bo‘yicha o‘zgarishni ko‘rsatish uchun.

📌 Har bir vizual ma’lumotni boshqa ko‘z bilan ko‘rishga yordam beradi.

**2. How do you add a slicer to a report?**

👉 Slicer — filtr vazifasini bajaradi.

1. Visualizations panelidan **Slicer** ikonkasini tanlang.
2. Uni report sahifasiga qo‘ying.
3. Fields’dan kerakli ustunni (masalan, Quarter) olib keling.

📌 Endi foydalanuvchi slicerdan qiymat tanlab, butun sahifadagi vizuallarni filtrlaydi.

**3. What is the difference between a bar chart and a column chart?**

* **Bar chart** – ma’lumotlar yon tomonga cho‘zilib chiziladi (gorizontal).
* **Column chart** – ma’lumotlar tik ustunlar shaklida bo‘ladi (vertikal).

📌 Bar chart uzun nomli kategoriyalar uchun qulay, column chart esa vaqt yoki bosqichlarni ko‘rsatishda.

**4. How do you change the color of a visual background?**

1. Vizualni tanlang.
2. O‘ng paneldagi **Format** (rul) belgisini bosing.
3. **Background** bo‘limidan rangni tanlang.

📌 Bu dizaynni yaxshilash va vizuallarni ajratib ko‘rsatish uchun kerak.

**5. What does "drill-down" mean in a visual?**

👉 Drill-down — “chuqurlashib ko‘rish” degani. Misol: Region → Product → Quarter. Foydalanuvchi ustunga bosganda, quyi darajadagi ma’lumot ochiladi.

📌 Bu foydalanuvchiga **yuqoridan pastga** ma’lumotni ketma-ket ko‘rish imkonini beradi.

**6. Create a bar chart showing SalesAmount by Region.**

1. **Bar chart** tanlang.
2. **Axis** → Region.
3. **Values** → SalesAmount.

📌 Endi regionlar bo‘yicha savdo summasi ko‘rsatiladi.

**7. Add a slicer for Quarter to filter all visuals on the page.**

1. **Slicer** qo‘shing.
2. **Field** sifatida Quarter ustunini olib tashlang.
3. **Format → Sync slicers** orqali barcha vizuallarga qo‘llash mumkin.

**8. Format the bar chart to show data labels.**

1. Bar chartni tanlang.
2. **Format panel** → **Data labels** ni yoqing.

📌 Endi har bir ustunda qiymatlar yozib chiqadi.

**9. Use a line chart to show SalesAmount trends over Quarter.**

1. **Line chart** qo‘shing.
2. **Axis** → Quarter.
3. **Values** → SalesAmount.

📌 Bu orqali vaqt bo‘yicha savdo o‘zgarishini ko‘rasiz.

**10. Add a tooltip to display Product details when hovering over bars.**

1. **Tooltip** maydoniga Product ustunini qo‘shing.
2. Bar ustiga sichqoncha olib borganda mahsulot tafsilotlari chiqadi.

**11. Sync slicers across multiple report pages.**

1. Slicer qo‘shing.
2. **View → Sync slicers panel** ni yoqing.
3. Qaysi sahifalarga ta’sir qilishini belgilang.

📌 Bu foydalanuvchiga bir nechta sahifalarda bir xil filtrni ishlatishga imkon beradi.

**12. Create a custom visual with dynamic measure selection (e.g., Sales vs. Profit).**

👉 Buning uchun odatda **DAX** dan foydalaniladi.

1. Bir parametr jadval yarating (Sales, Profit).
2. **Selected Measure** DAX yozing:

SelectedMeasure =

SWITCH(

SELECTEDVALUE(MeasureTable[Measure]),

"Sales", SUM(Sales[SalesAmount]),

"Profit", SUM(Sales[Profit])

)

1. Ushbu measure’ni vizualga qo‘ying.

📌 Endi slicer orqali foydalanuvchi qaysi o‘lchov (Sales yoki Profit) ni ko‘rishini tanlaydi.

**13. Implement a hierarchy for Region > Product > Quarter drill-down.**

1. Fields panelida Region → Product → Quarter ustunlarini hierarchiya qilib qo‘shing.
2. Vizualga ushbu hierarchiyani bering.
3. Drill-down tugmasini yoqing.

📌 Endi foydalanuvchi Region ustidan bosib Product darajasiga tushishi mumkin.

**14. Use bookmarks to toggle between two visuals in the same space.**

1. Birinchi vizualni joylashtiring → **Bookmark 1** saqlang.
2. Ikkinchi vizualni qo‘ying → **Bookmark 2** saqlang.
3. Tugma (button) qo‘shib, uni bookmarklarga bog‘lang.

📌 Bu foydalanuvchiga bitta joyda turli vizuallarni ko‘rsatish imkonini beradi.

**15. Optimize a slow-rendering report with 10+ visuals.**

👉 Yaxshilash usullari:

* Vizuallar sonini kamaytirish yoki sahifalarga bo‘lish.
* Juda katta datasetni import emas, balki DirectQuery bilan ulash.
* O‘rinsiz vizuallarni olib tashlash.
* Har bir vizualga minimal kerakli maydonlarni qo‘shish.
* Agar mumkin bo‘lsa, **aggregated tables** yaratish.

📌 Bu ishlash tezligini oshiradi.

✅ Shu tarzda siz har bir savolga javob berdingiz, amaliy ko‘rsatmalar bilan.

Sales\_Interactive

| **Region** | **Product** | **Quarter** | **SalesAmount** |
| --- | --- | --- | --- |
| North | Laptop | Q1 | 5000 |
| South | Mouse | Q1 | 1250 |
| East | Keyboard | Q2 | 3200 |
| North | CPU | Q2 | 4500 |