Storage Solution

Consider that we store the data every 30 minutes

Step 1: Storage per Entry

From our previous discussion:

- **Integer (INT)**: **4 bytes**
- **Timestamp (DATETIME or INT)**: **8 bytes**
- **Total per entry** = **4 + 8 = 12 bytes**

Step 2: Entries per Day

- **Entries per Hour** = 60/30 = 2
- **Entries per Day** = 2×24 =48

Step 3: Total Storage per Day

- 48×12=576 bytes/day

Step 4: Convert 128GB to Bytes

- 128×1024×1024×1024=137,438,953,472 bytes

Step 5: Days to Fill 128GB

- 137,438,953,472/576=238,194,406.25 days

Final Answer:

It would take **over 23.82 crore days (about 6,52,328 years)** to fill 128GB at this rate.

Rate Feasibility

Average Monthly Cost Calculation:

Average monthly cost for 128 GB of storage, we consider the closest available plans:

- **Google One**: ₹130/month for 100 GB
- **Microsoft OneDrive**: ₹130/month for 100 GB
- **Apple iCloud+**: ₹219/month for 200 GB (since 50 GB is insufficient)
- **pCloud**: ₹415/month for 500 GB
- **Sync.com**: ₹665/month for 2 TB

Calculating the average:

(₹130 + ₹130 + ₹219 + ₹415 + ₹665) / 5 = ₹1,559 / 5 = **₹311.80/month**

If a person pays **₹311.80 per month** for **5 years**, the total amount paid is:

$$311.80 \times (5 \times 12) = ₹18,708$$

Where the total estimate of my project is only ₹10,000