

★ n8n — Complete Course Notes

📖 1. n8n Kya Hai? (Introduction)

✓ Simple Definition

n8n ek **automation tool** hai jo tumhe **apps ko connect** karne, **data ko move** karne, aur **kaam automatically karwane** me madad karta hai — wo bhi **drag & drop** se, bina coding ke.

✓ Real Meaning

Jo kaam tum roz manually karte ho (email bhejna, sheet update, data save karna), n8n **wo kaam khud kar deta hai**.

✓ n8n Ka Full Form

n8n = “**nodemation or node to node=node has 4 character ka word hai tho 4+4**”
(Automation using nodes)

✓ Example (Simple)

- Jab website par koi “contact form” submit kare → n8n automatically uska data **Google Sheet** me daal de
- Aur tumhe **email bhi send** kar de

Yeh **FULL automation** hai.

★ 2. n8n Kyu Use Karte Hai? (Why Use n8n)

✓ Reason 1: Free + Powerful

Zapier jaise tools ke contrast me n8n **free aur open-source** hai.

✓ Reason 2: 300+ Nodes

Har service ke liye ready node:

- Gmail
- Google Sheets
- WhatsApp API
- Facebook
- Telegram

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- Database
- Webhooks
- Cron Jobs
- File Upload
- And 300 more

✓ Reason 3: Low-Code

Code matlab optional, chahe to **Function Node** use karke JS likh sakte ho.

✓ Reason 4: Self Hosting

Apne server par FREE me chal sakta hai.

★ 3. n8n Kaise Kaam Karta Hai? (Working)

✓ n8n me “Workflow” bante hain

Workflow = **Trigger + Action Nodes**

◆ 3.1 Trigger Node

Trigger woh hota hai jo workflow **start** karta hai.

Examples:

Trigger	Meaning
Webhook Trigger	Jab kisi URL par request aaye
Cron Trigger	Daily/scheduled time par start
Email Trigger	Jab naya email aaye
Form Trigger	Jab user koi form submit kare

✓ Example:

Daily 9AM par report email send karna

→ Trigger = Cron Node

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◆ 3.2 Action Node

Action woh hota hai jo kaam **perform** karta hai.

Examples:

- Email send karna
 - Data Google Sheet me daalna
 - Database me save karna
 - WhatsApp msg bhejna
 - API ko call karna
-

✓ Example:

Webhook → Google Sheet → Email

1. Webhook se data receive
 2. Sheet me store
 3. Email confirmation send
-

★ 4. n8n Interface Samajhna (Editor View)

Main Hissa:

1. **Nodes Panel (Left)** – All nodes list
 2. **Canvas (Center)** – Jaha workflow banta hai
 3. **Node Settings (Right)** – Node ka data mapping
 4. **Execution Panel (Bottom)** – Live output
-

★ 5. n8n ke Important Nodes (With Examples)

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◆ 5.1 Webhook Node

Ye node data receive karta hai kisi URL par.

✓ Example

Form Submit → Webhook URL par hit → Data receive

```
{  
  "name": "Rohit",  
  "email": "rohit@gmail.com"  
}
```

◆ 5.2 HTTP Request Node

Kisi bhi API ko call karne ke liye.

✓ Example

Weather API call karna:

GET <https://api.weather.com/city=delhi>

Response me temperature mil jayega.

◆ 5.3 Google Sheets Node

Sheets me data add, read, update kar sakte ho.

✓ Example

Webhook se data aaya → Sheet me row add:

Name: {{\$json.name}}

Email: {{\$json.email}}

Date: {{\$json.date}}

◆ 5.4 Email Send Node

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Gmail / SMTP se email bhej sakte ho.

✓ Example

Subject: "Welcome!"

Body: Hello {{\$json.name}}, thanks for signup.

◆ 5.5 IF Node

Condition check karta hai.

✓ Example

Agar price > 5000

→ Customer ko discount message bhejo

◆ 5.6 Function Node

JavaScript code likhne ke liye.

✓ Example

Array ko sort karna:

```
return [  
  {  
    json: {  
      sorted: [3,1,2].sort()  
    }  
  }  
];
```

★ 6. Data Mapping (MOST IMPORTANT)

n8n me data ko use karne ke liye **Expressions** use hota hai.

Syntax:

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{{\$.fieldName}}

✓ Example

Webhook se email aaya:

{{\$.email}}

Sheet me daalne ke liye direct map kar do.

★ 7. Real-Life Examples (Very Important)

✓ Example 1: Form Submit → Email Notification

Workflow:

1. Webhook → form data receive
 2. Email Node → owner ko email bhejo
-

✓ Example 2: New Order → WhatsApp Message

1. WooCommerce webhook
2. HTTP request to WhatsApp API
3. Message:

Hello {{\$.name}}, your order is confirmed!

✓ Example 3: Daily Attendance Email

1. Cron (9AM)
 2. Google Sheet get attendance
 3. Email send
-

✓ Example 4: Auto Database Backup

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1. Cron (night 12)
 2. MySQL node → dump data
 3. Upload to Google Drive
-

★ 8. n8n Hosting (Free & Paid)

✓ Cloud (Paid + Easy)

Website: n8n.io

✓ Self Hosting (100% Free)

- Docker
- Ubuntu Server
- Local Machine

Docker Command:

```
docker run -it --rm -p 5678:5678 n8nio/n8n
```

★ 9. Advanced Concepts

◆ 9.1 Multiple Items Processing

Ek se zyada data items ko loop me process kar sakte ho.

◆ 9.2 Error Workflow

Agar koi node fail ho jaye → fallback workflow run karo.

◆ 9.3 Binary Data

Files handle karna (PDF, images, Excel).

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◆ 9.4 Environment Variables

Sensitive data hide karne ke liye.

★ 10. Full n8n Learning Path (Beginner to Pro)

Day 1: Interface + Basic Nodes

Day 2: Webhooks + Google Sheets

Day 3: Email + Conditions

Day 4: APIs + Authentication

Day 5: Databases

Day 6: Real Projects

Day 7: Deployment + Error Handling

★ 11. Summary (Short Revision)

- n8n = automation tool
- Trigger → Action nodes
- 300+ integrations
- Webhooks, APIs, Sheets, Email
- Very easy and powerful
- Real-life me bahut kaam ata hai
- Free me self-host hota hai