

packet tracer notes (my own)

packet tracer is like this cisco program where u build networks without buying real routers
u can drag devices and connect them with cables and check if stuff works
pretty cool but sometimes buggy and slow lol

what i learned so far

adding devices

- left side has routers switches pcs etc
- u just drag them into the workspace
- rename them by clicking the name under the icon (i always forget where to click)

connecting cables

types of cable i keep mixing up:

- **copper straight-through** = pc to switch
- **copper crossover** = pc to pc or switch to switch (usually)
- **console cable** = for configuring router via terminal

there is also “auto” cable mode if u dont wanna think too hard (i use this alot)

configuring IP on a PC

click PC → Desktop tab → IP Configuration

then u type IP, subnet mask, gateway

dont forget gateway or ping wont work and you think everything is broken

configuring router (cli)

router cli scares me first time but its ok

basic steps:

```
enable
configure terminal
interface gig0/0
ip address 192.168.1.1 255.255.255.0
no shutdown
exit
```

i always forget **no shutdown**, then i cry wondering why link is red

saving config

dont forget **write** or **copy run start**
packet tracer reset everything if u dont save (pain)

testing connection

- **ping** from a pc: Desktop → Command Prompt → ping 192.168.x.x
- if u get “Request timed out” maybe wrong gateway or cable or no ip

building simple LAN

stuff i learned:

- all PCs in same subnet can talk via switch
- switch dont need IP unless u doing management
- router needed if two networks want talk (router on stick or many interfaces)

static routing

on a router:

```
ip route <network> <mask> <next-hop>
```

example:

```
ip route 192.168.2.0 255.255.255.0 10.0.0.2
```

(i keep writing mask wrong lol)

common mistakes i made

- wrong cable type (happens too much)
- forgetting to change router interface from “shutdown”
- typing IP outside subnet
- mixing up /24 and /25
- setting wrong gateway on pcs
- connecting to the wrong port and then staring at it for 10 minutes

simulation mode

packet tracer has that weird simulation mode where u watch packets move
kinda slow but good for understanding
u can see if packet get dropped and why
i use it when i have no clue why ping not working