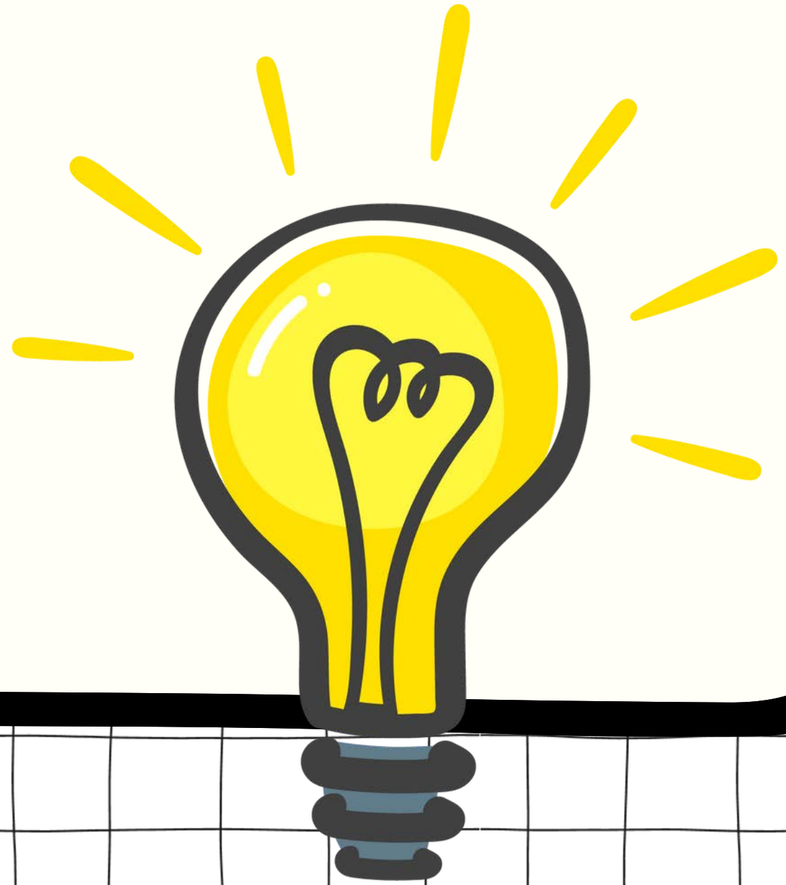
Kube-Nation

Exploring the Land of Kubernetes

Learn Kubernetes by building a nation

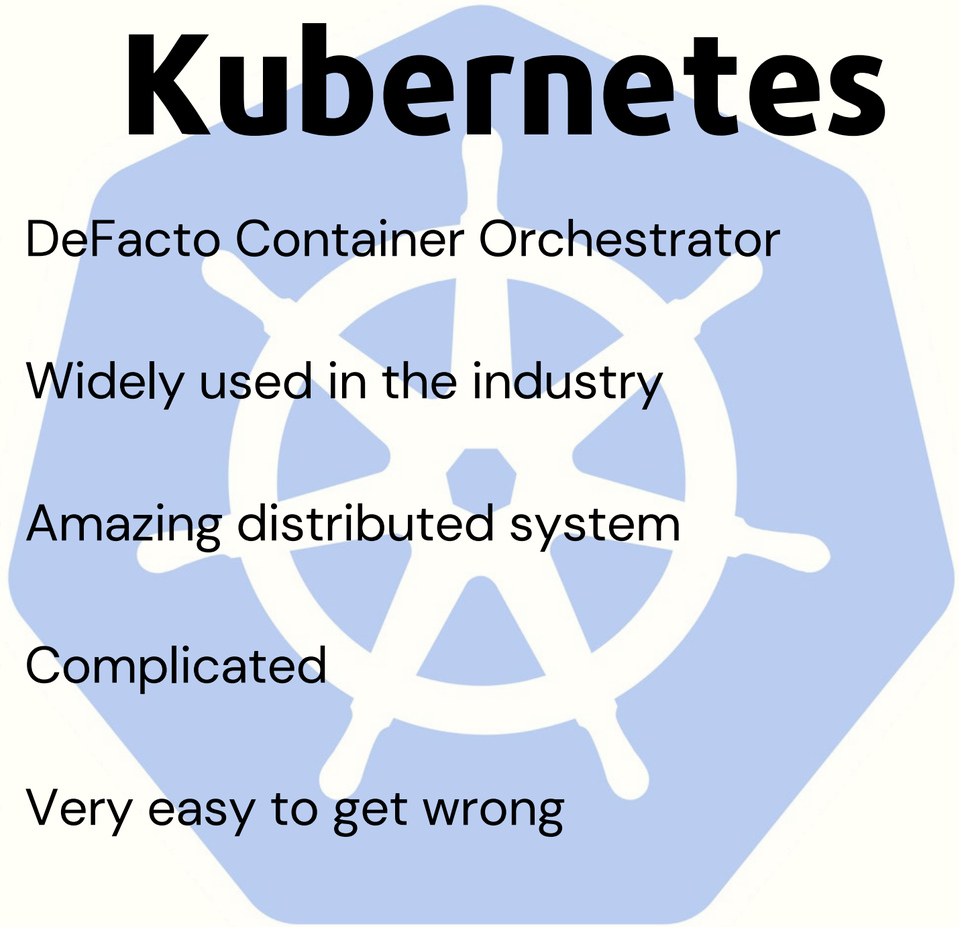


About us

Siddhant Khisty
Developer Advocate
@SigLens

Aakansha Priya
Developer Relations
@EmpathyOps

Kubernetes



- DeFacto Container Orchestrator
- Widely used in the industry
- Amazing distributed system
- Complicated
- Very easy to get wrong

NO!!

What we need

01 Land

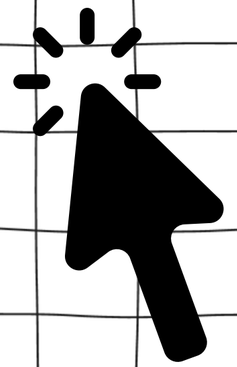
02 Authority

03 People

04 Homes

05 Communication

06 Builders



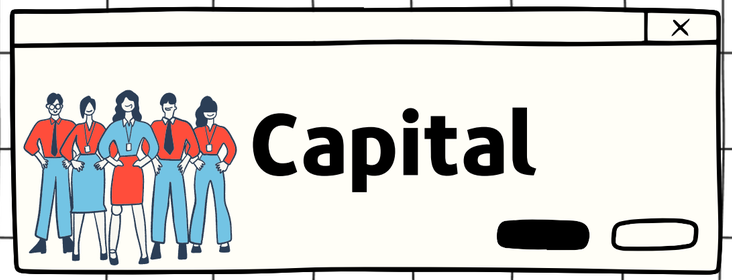
Land

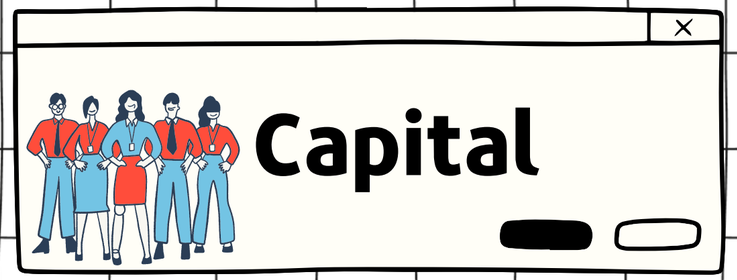
Buy

Rent

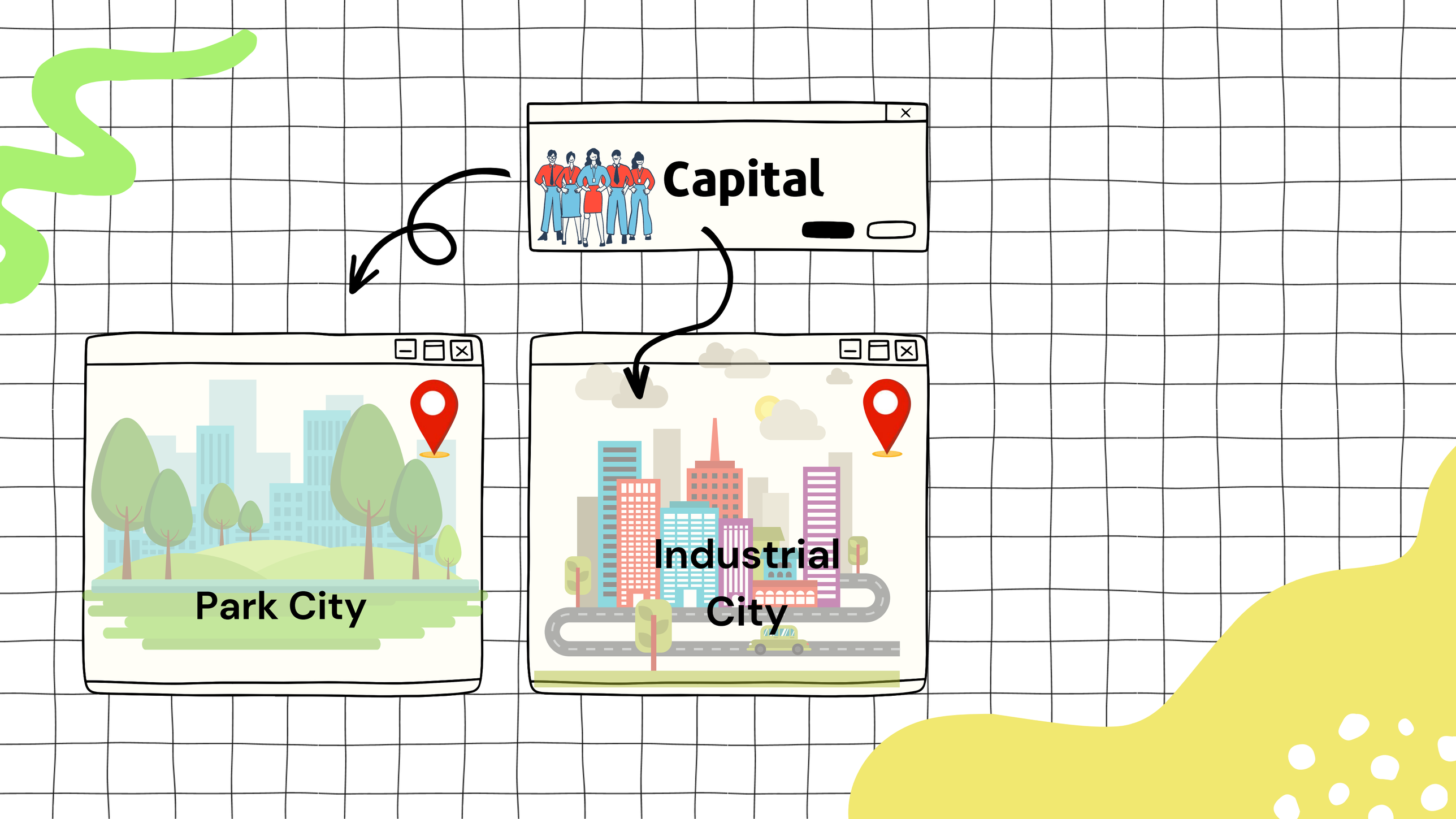
Conquer

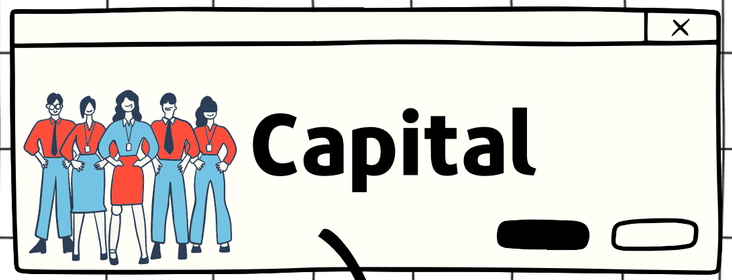
Steal


Capital


Capital

Park City


Capital
Park City
Industrial City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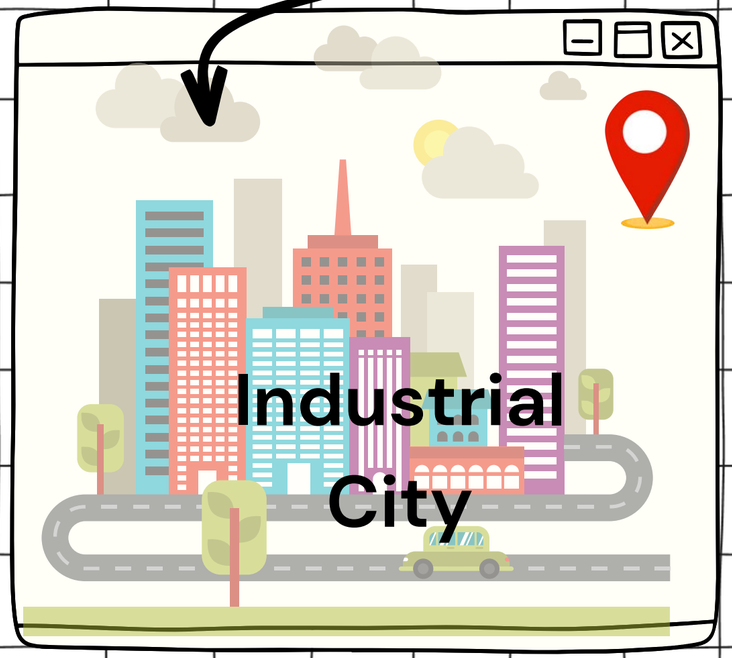
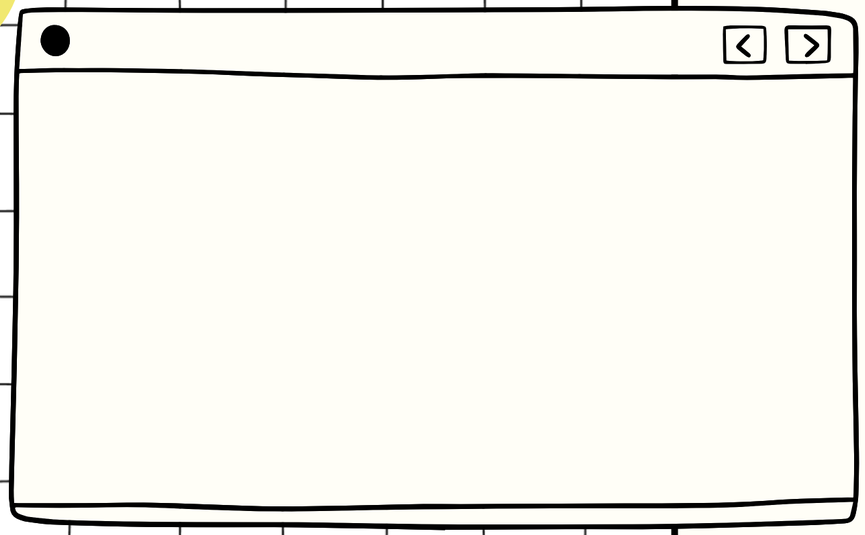

Industrial City

Night City

Important stakeholders



Important stakeholders

- Who makes the decisions?

President

- Governs the Nation
- Makes important decisions
- Decide who should know
- Face of the Nation

Important stakeholders

- Who makes the decisions?
- Who makes sure everything is done?

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Manager

- Makes sure everyone works
- Check if cities are working
- Do people have phones?
- Is the Nation healthy?

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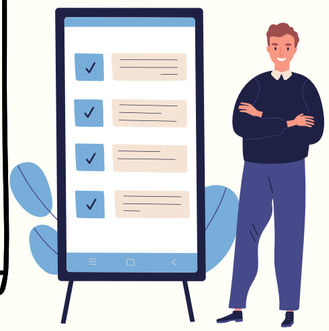

Task Manager

- Decide who does the work
- Assign tasks to people
- Decide where to give task

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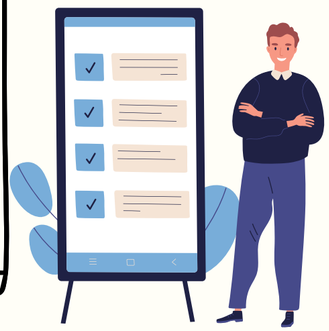

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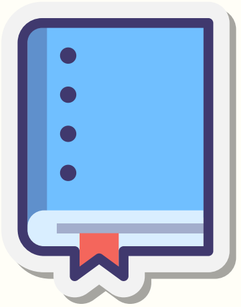

Central Reserve

- What were past commands?
- Who is doing the task?
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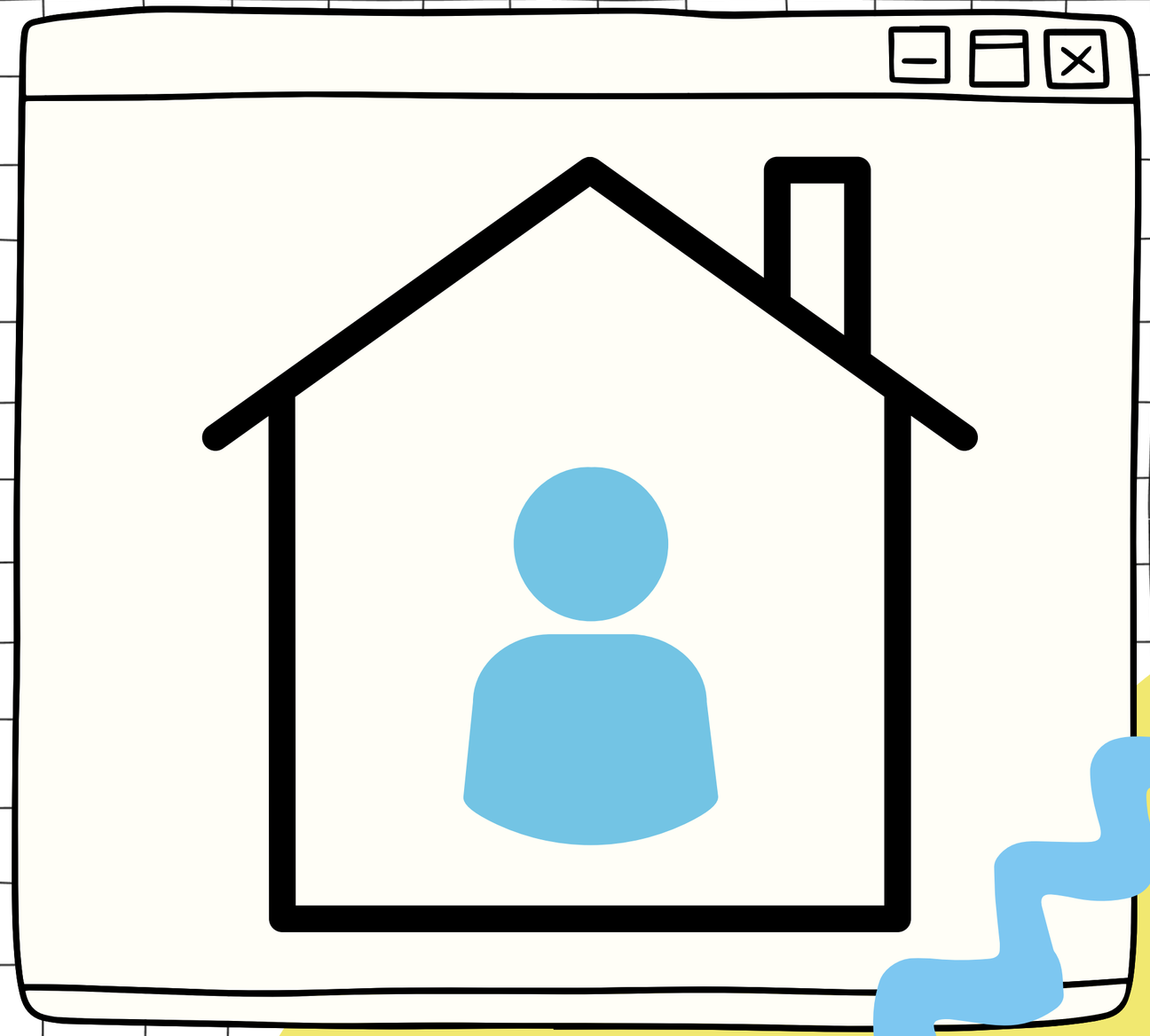

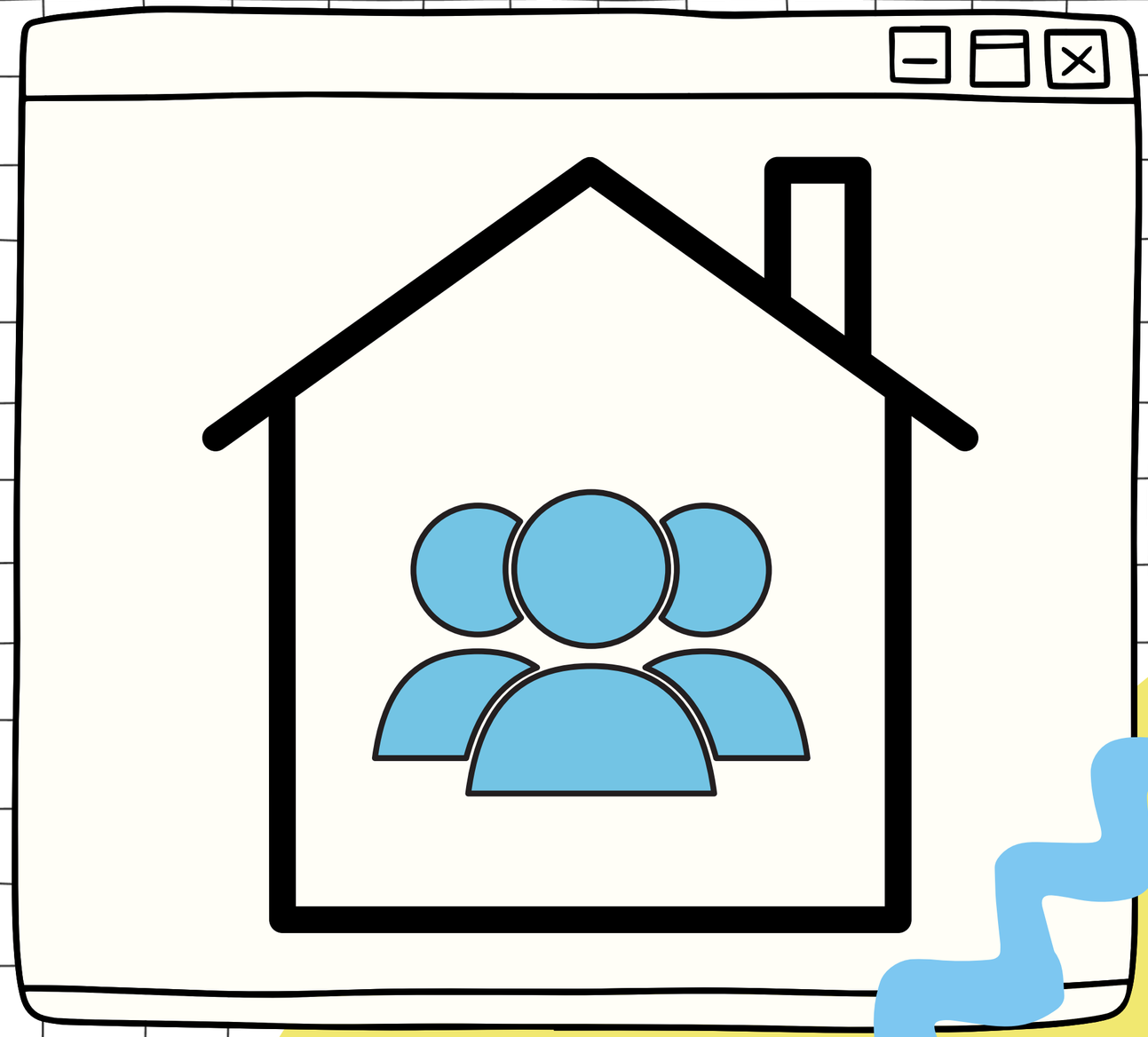

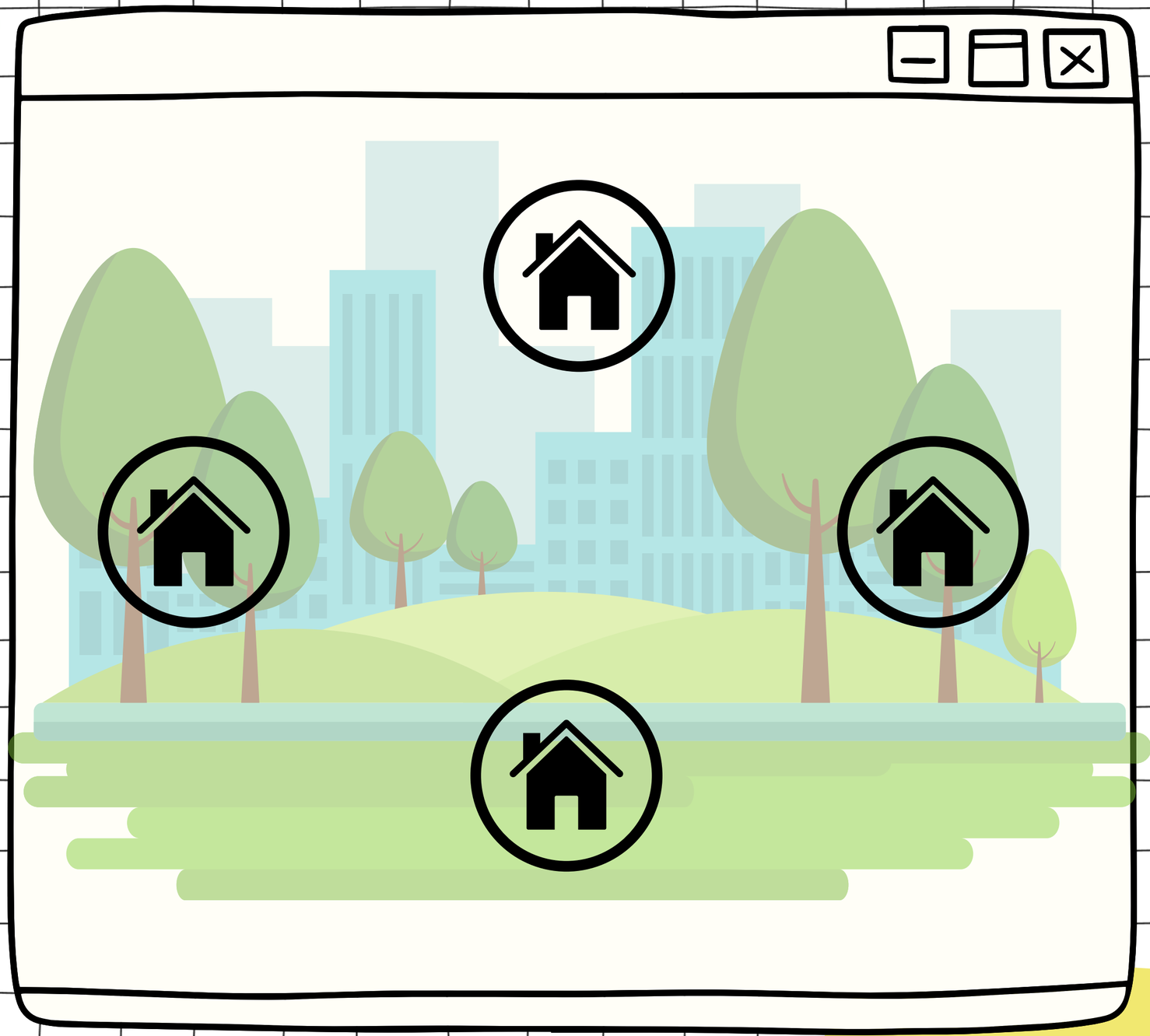

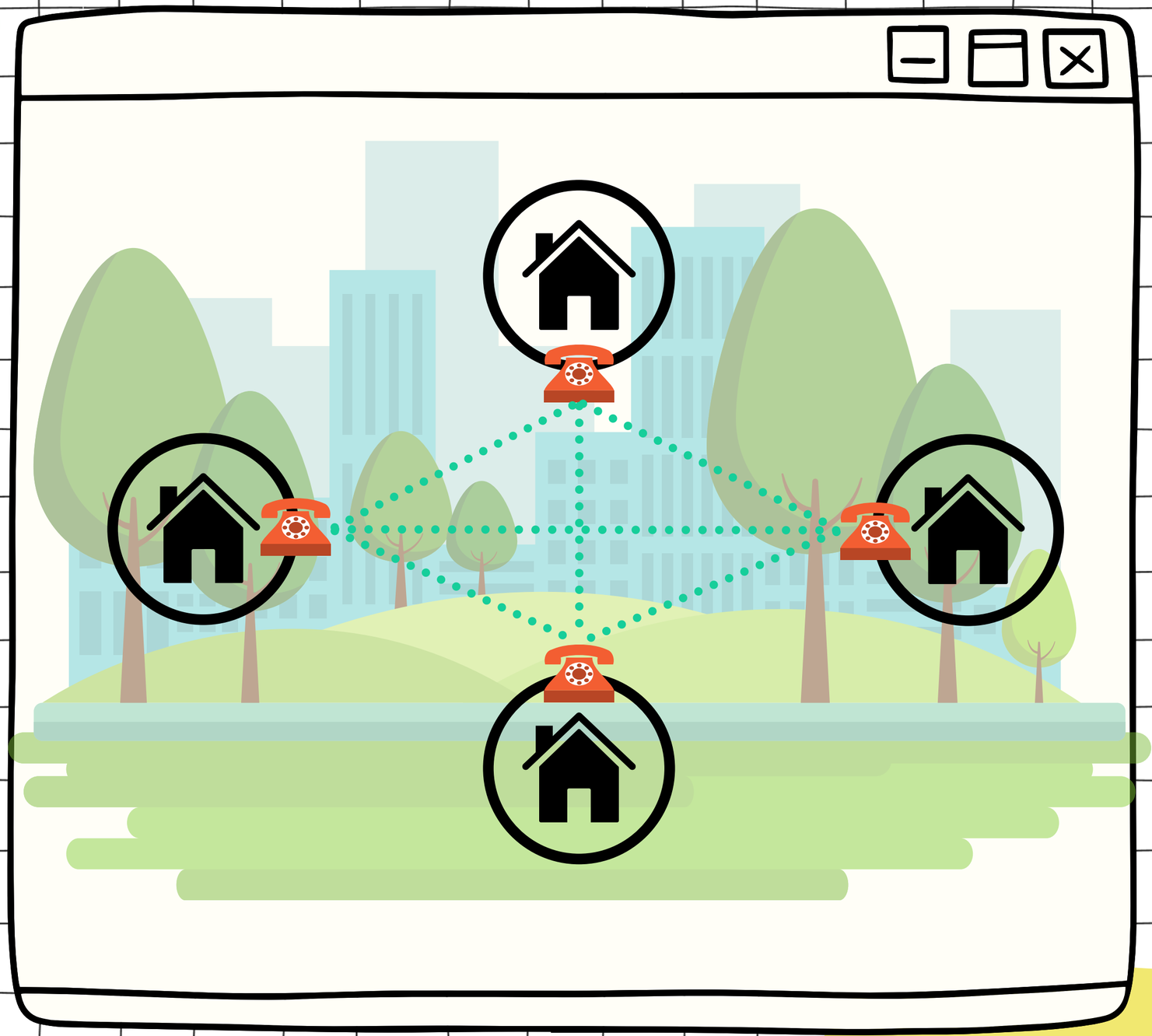

The hard workers

The ones who do the dirty work to build and maintain the Nation

Builder

- Builds houses
- Rebuilds destroyed houses based on a contract
- Make sure people stay in houses
- Exist in every city

Communications

- Make sure everyone can talk
- Delivers messages to people
- Enforce comm rules
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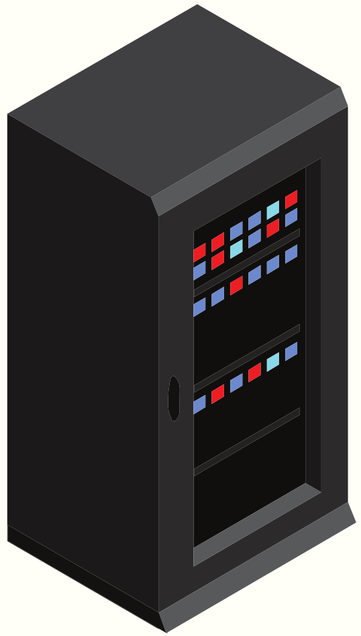
Congratulations

You just learned the entire Kubernetes architecture

Land

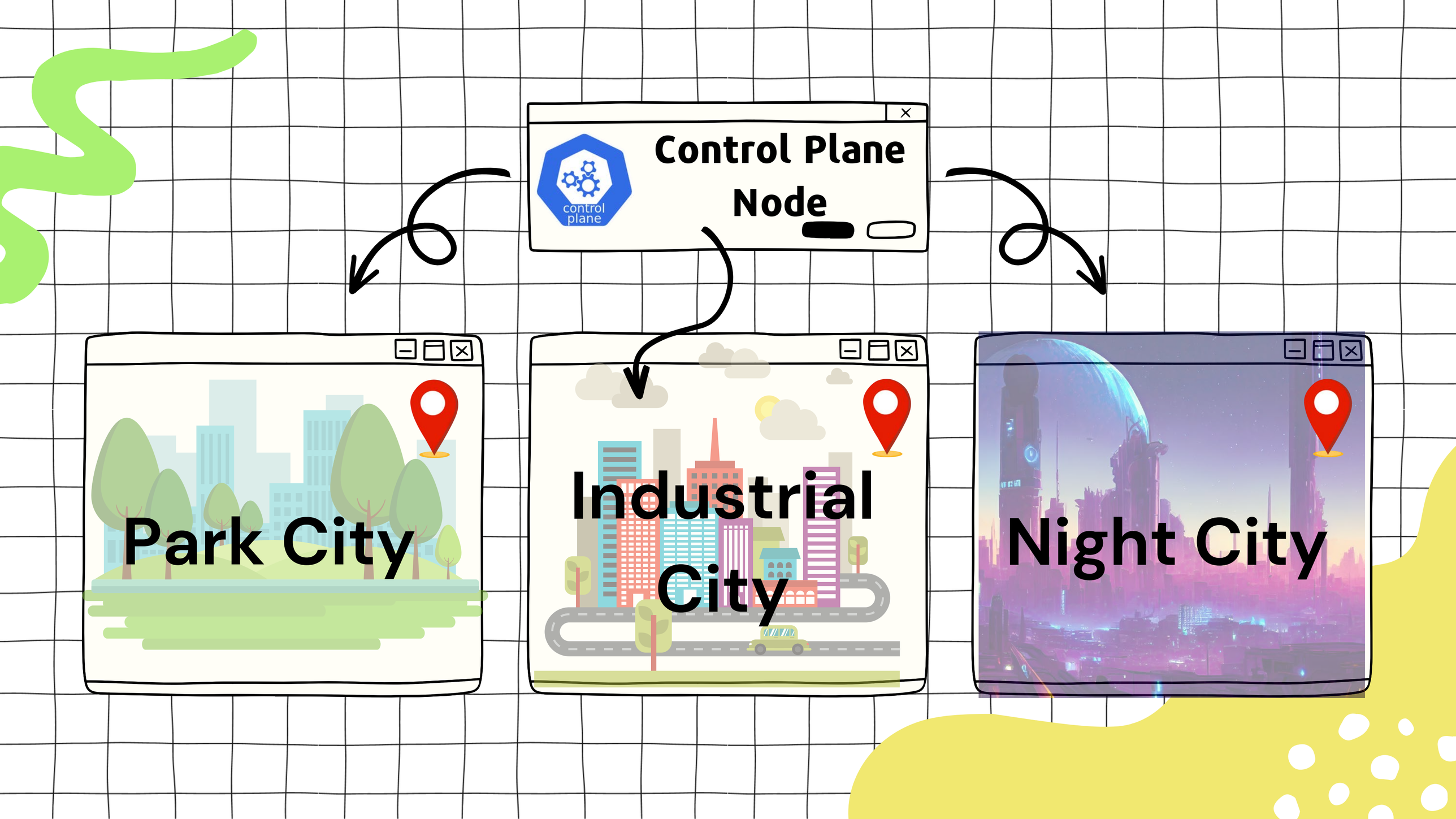


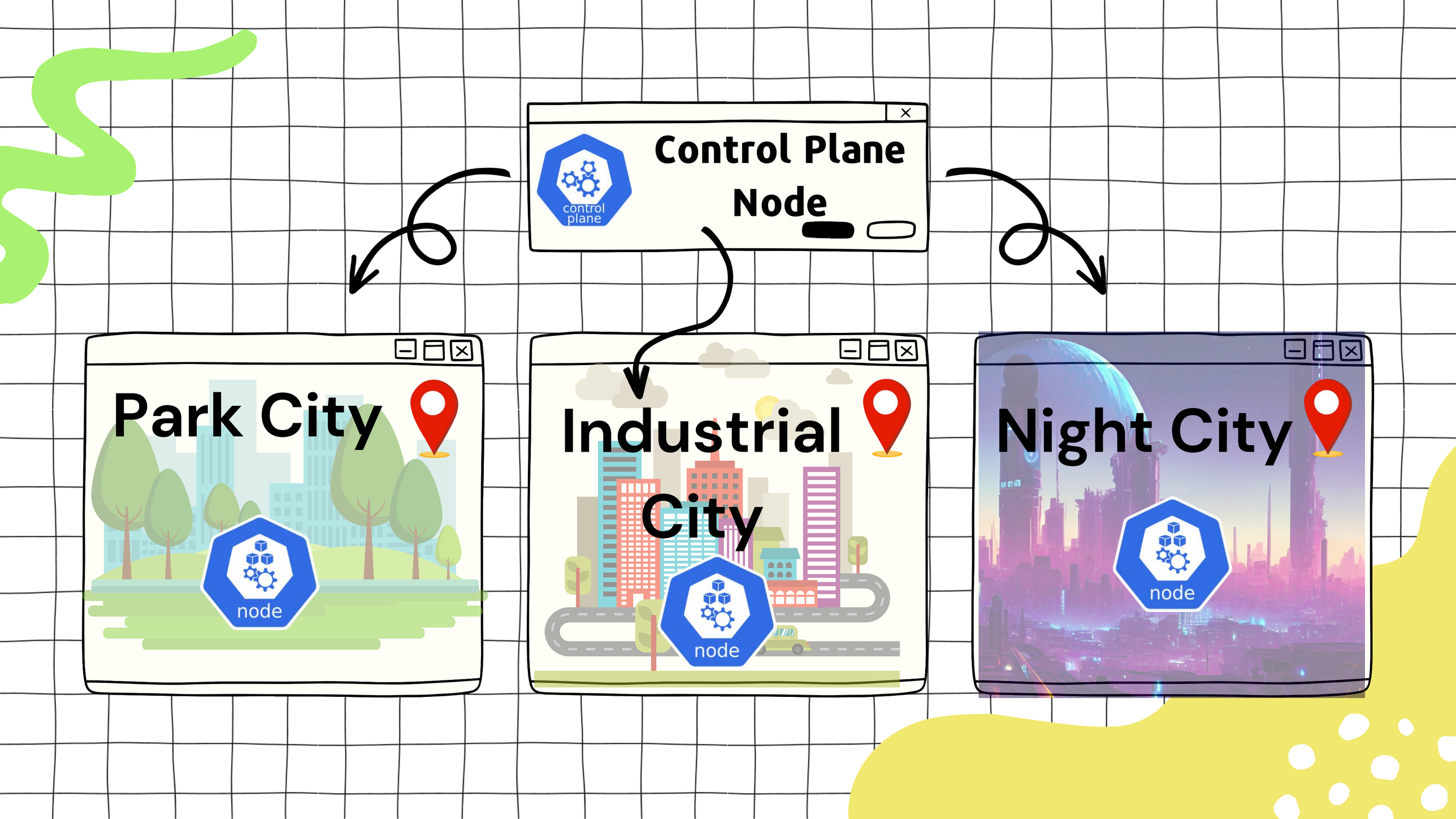
Capital

Park City

Industrial City

Night City


Control Plane Node
control plane
Park City
Industrial City
Night City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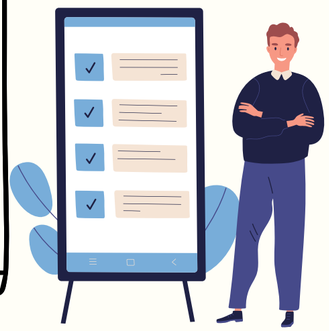

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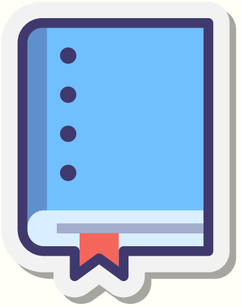

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kube-api Server

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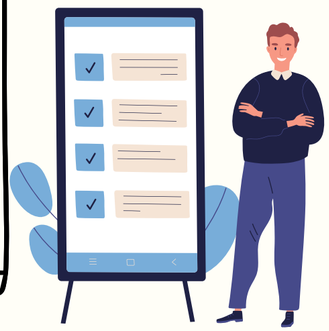

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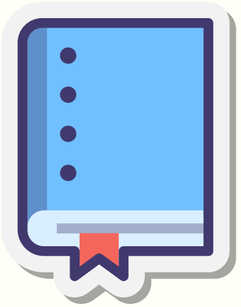

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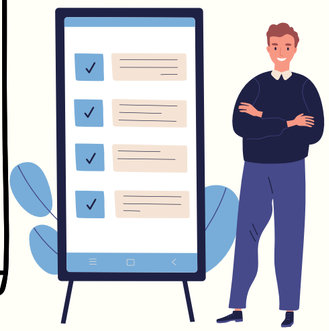

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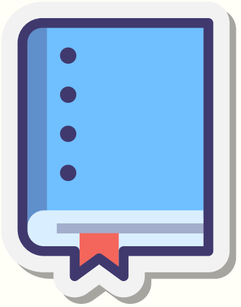

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Kube Scheduler

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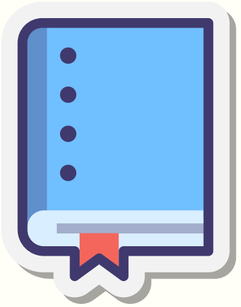

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ETC-D

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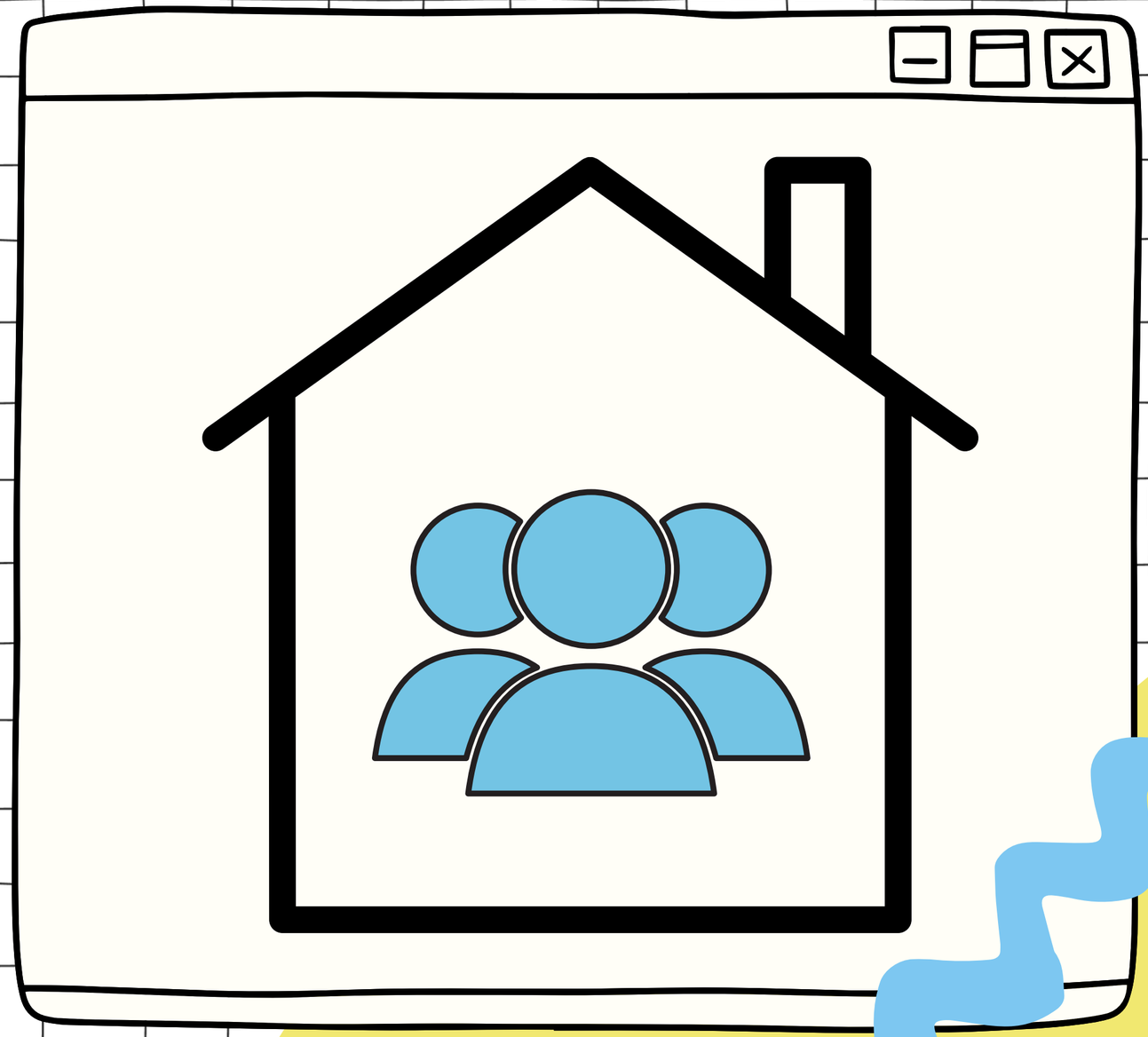
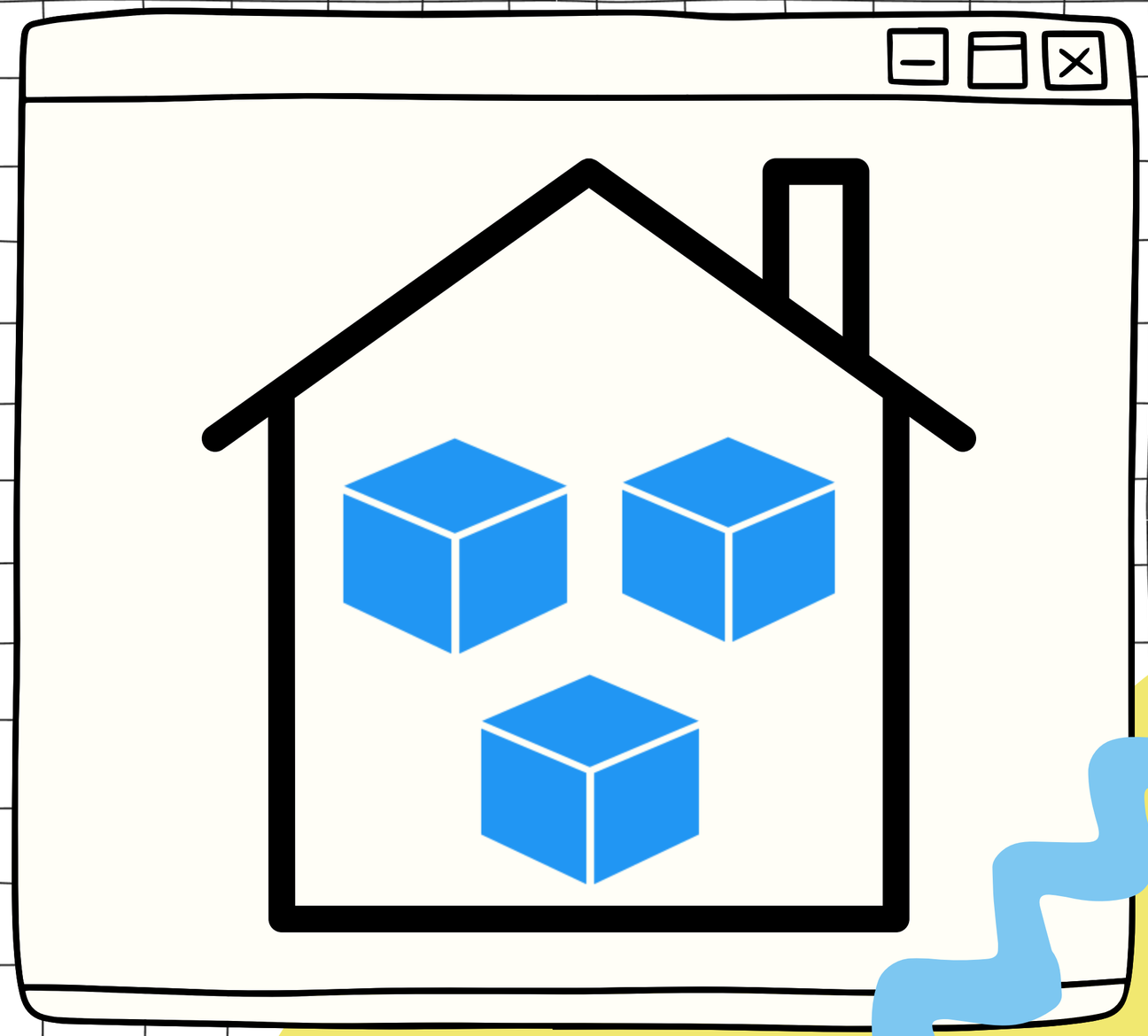
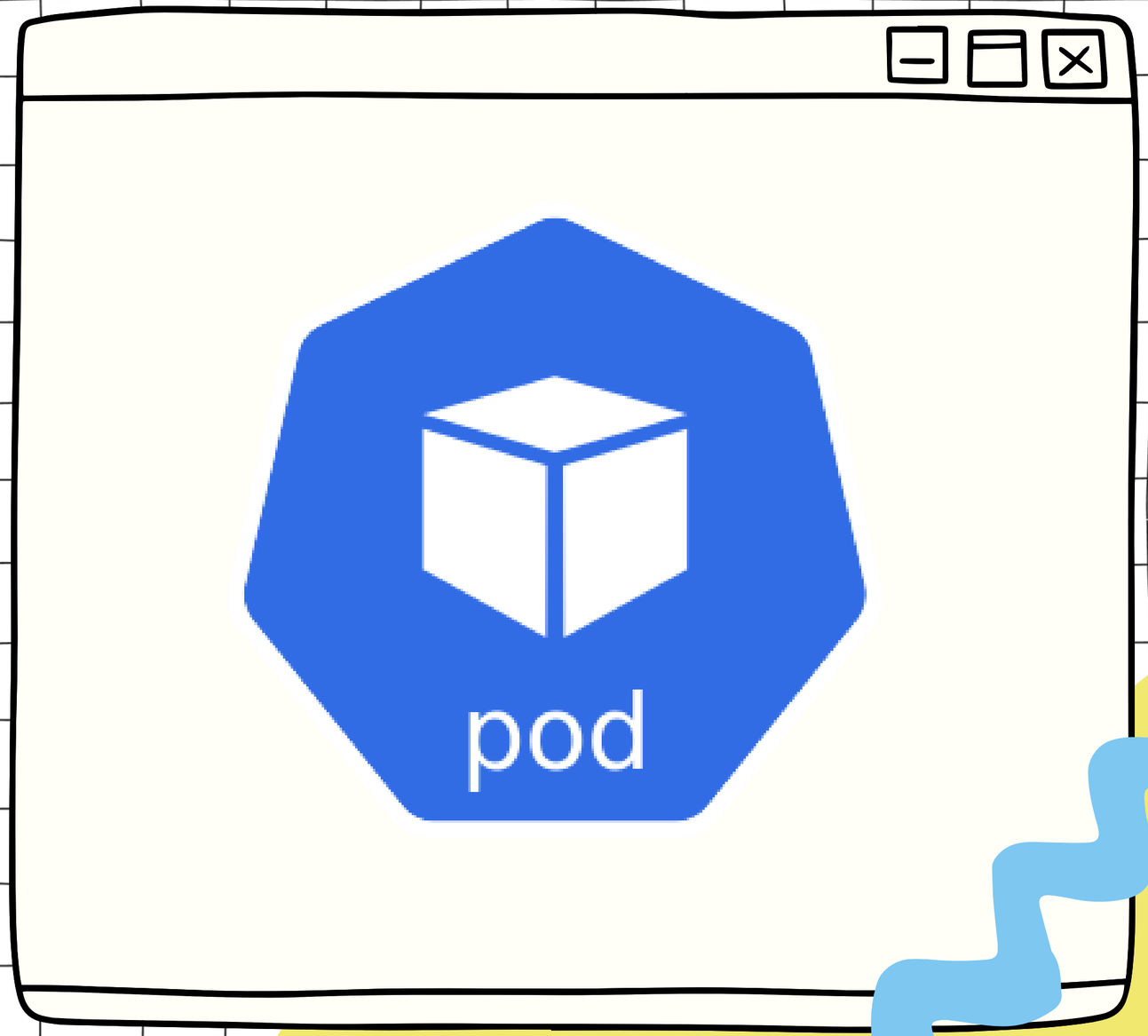
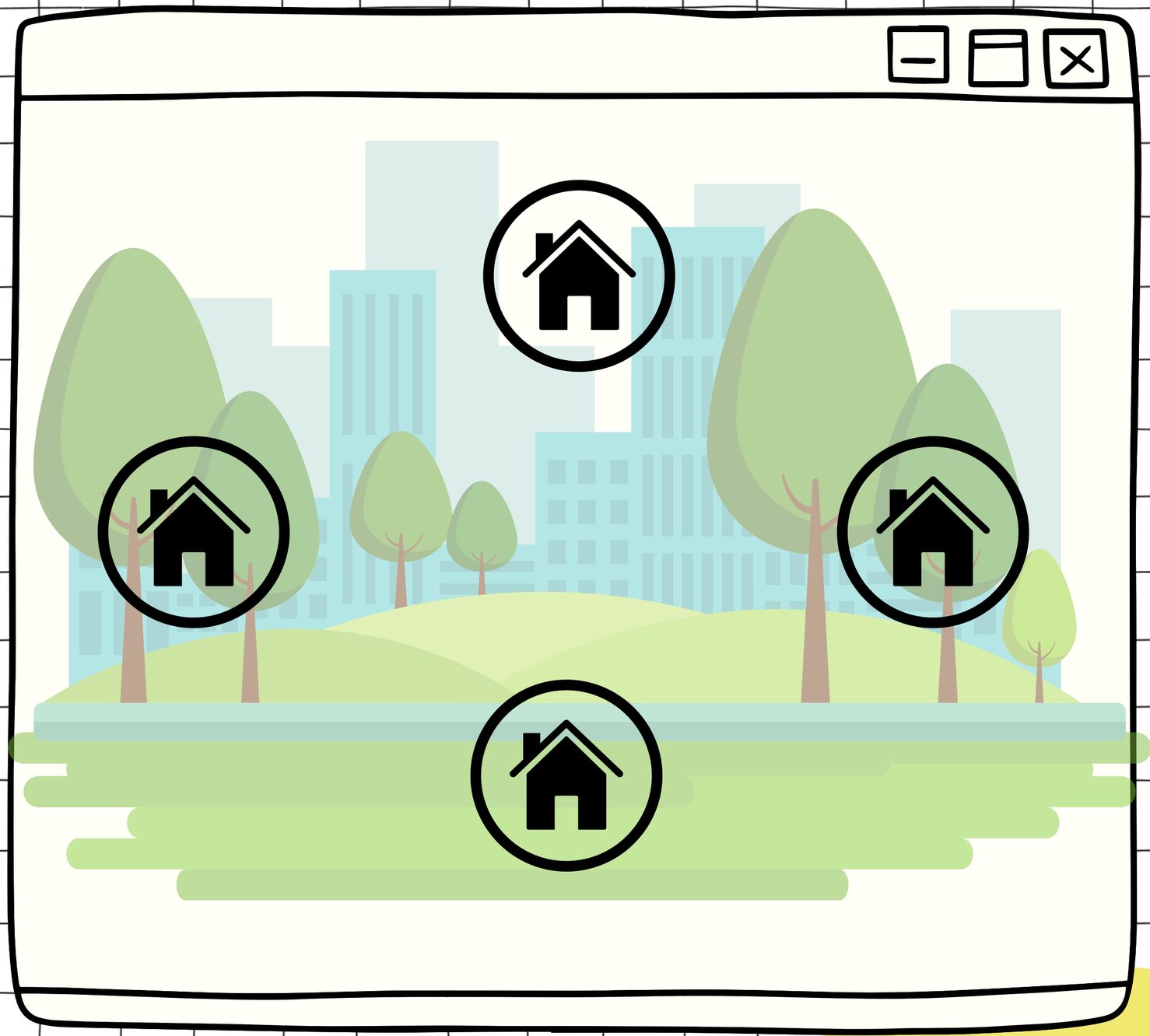
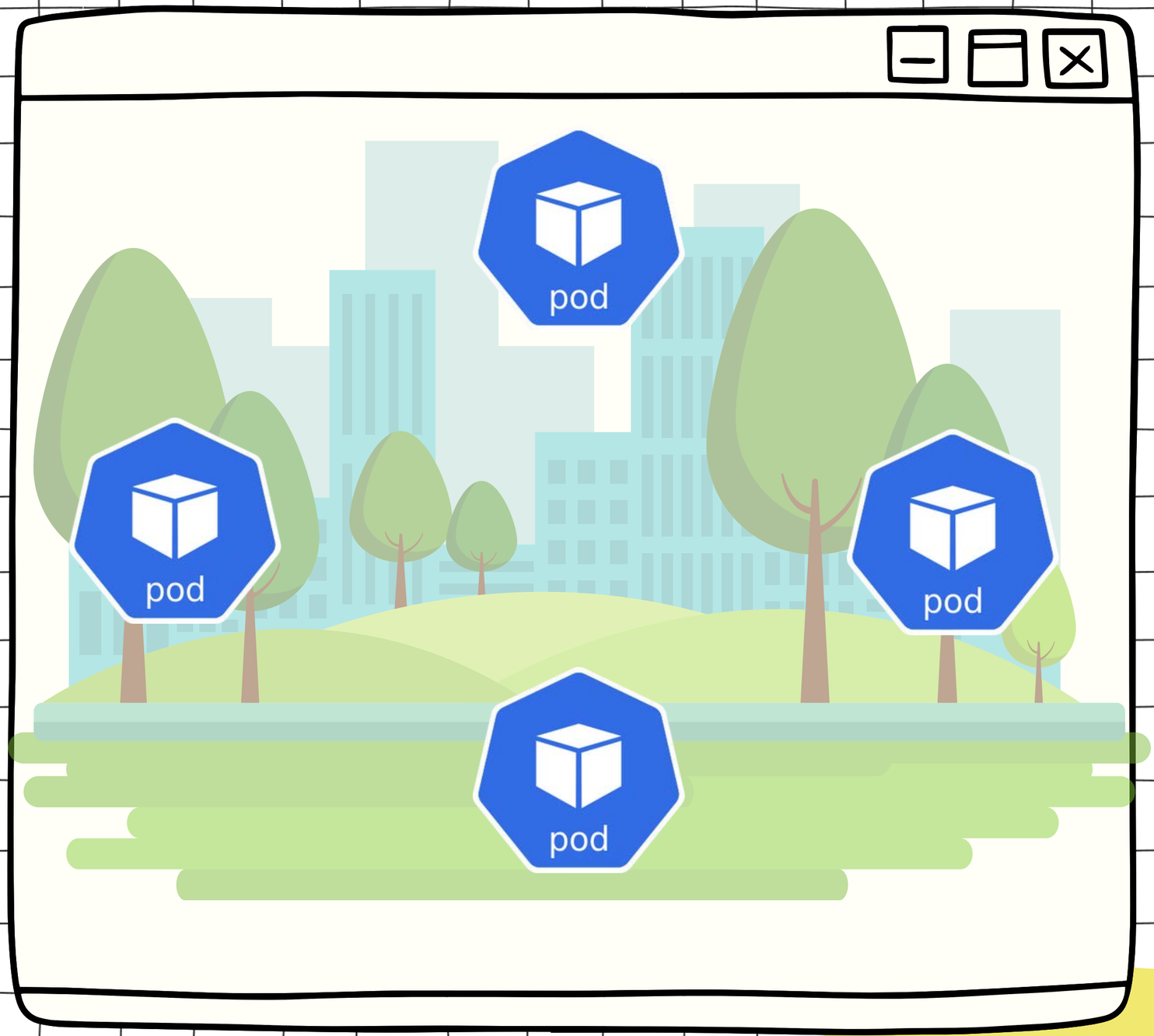
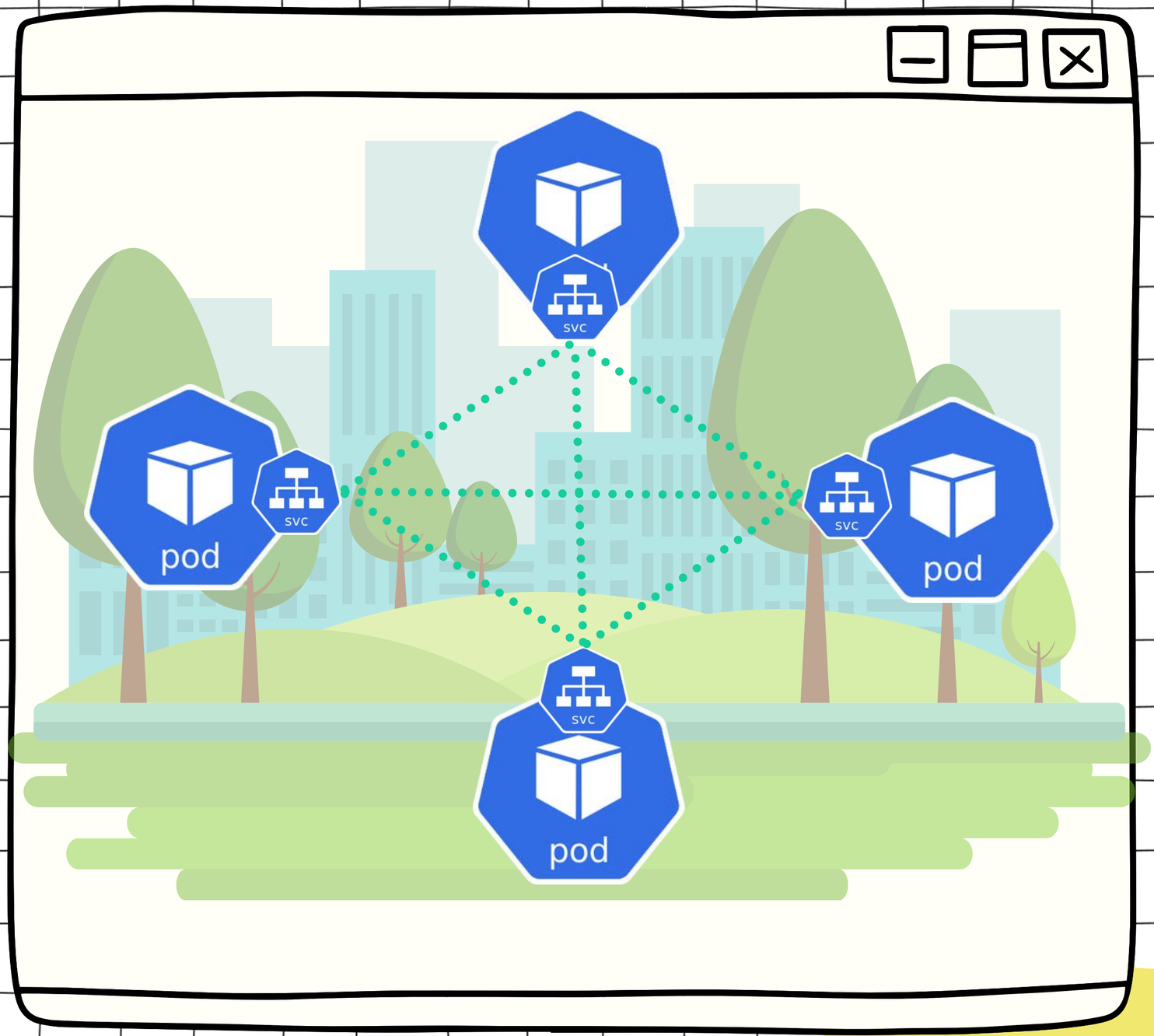





pod




pod
pod
pod
pod


SVC
SVC
pod
SVC
pod
SVC
pod

The hardest workers

The ones who do the dirty work to build and maintain the Nation

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- *Rebuilds destroyed houses based on a contract*
- *Make sure people stay in houses*
- *Exist in every city*

Communications

- *Make sure everyone can talk*
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The hardest workers

The ones who do the dirty work to build and maintain the Cluster

Kubelet

- *Builds pods*
- *Rebuilds destroyed pods based on deployments*
- *Make sure containers are running in pods*
- *Exist in every node*

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Kube Proxy

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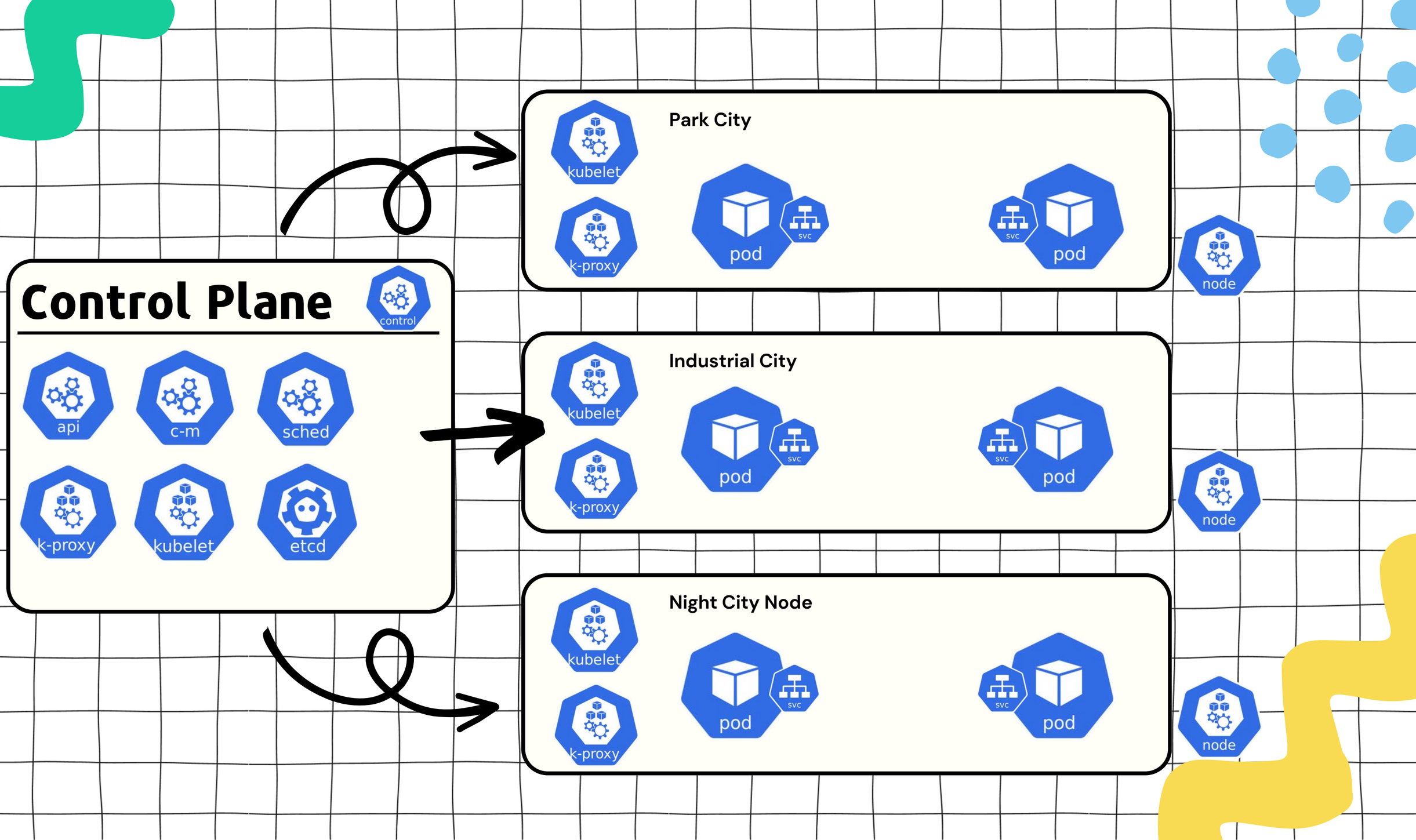
Control Plane
control
api
c-m
sched
k-proxy
kubelet
etcd
Park City
kubelet
k-proxy
pod
svc
pod
svc
node
Industrial City
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pod
svc
pod
svc
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Night City Node
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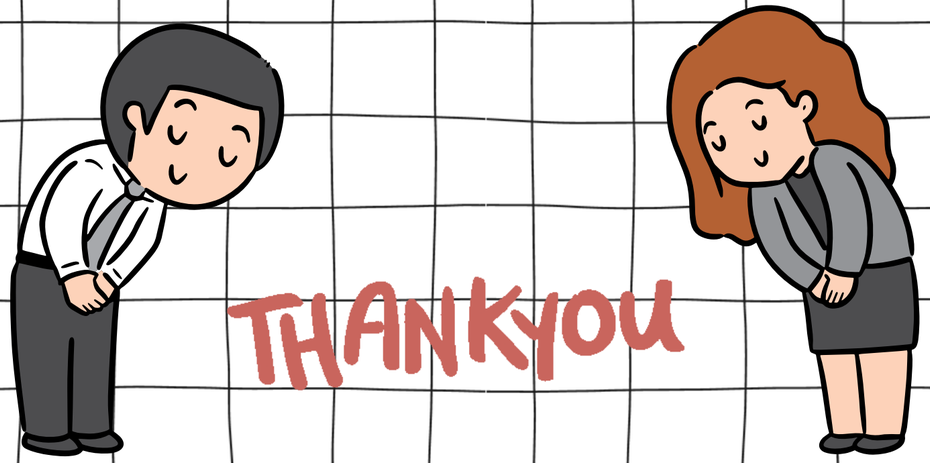
node

Siddhant Khisty
Developer Advocate

i_siddhantk

Aakansha Priya
DevRel

AakanshaPriya_



Resources