



Capture The Flag

SSH

I.E.S Fernando III - 6 mayo 2022

01

¿QUÉ ES SSH?



Secure SHell (SSH)



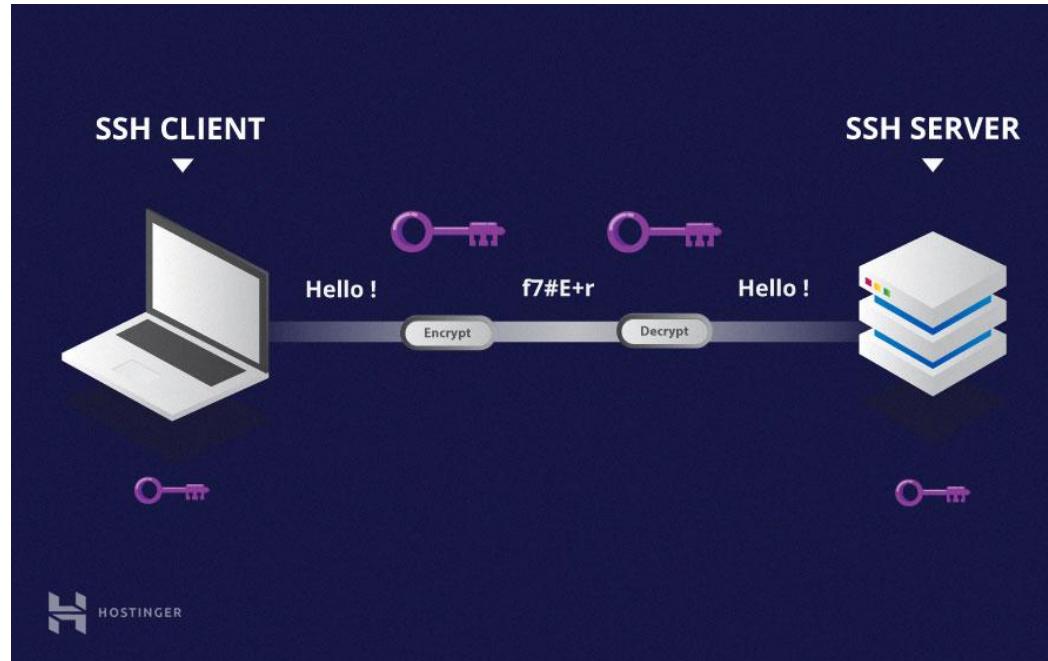
Protocolo de administración remota que permite a los usuarios **controlar y modificar servidores remotos** de Internet a través de un mecanismo de **autentificación**

02

CIFRADOS

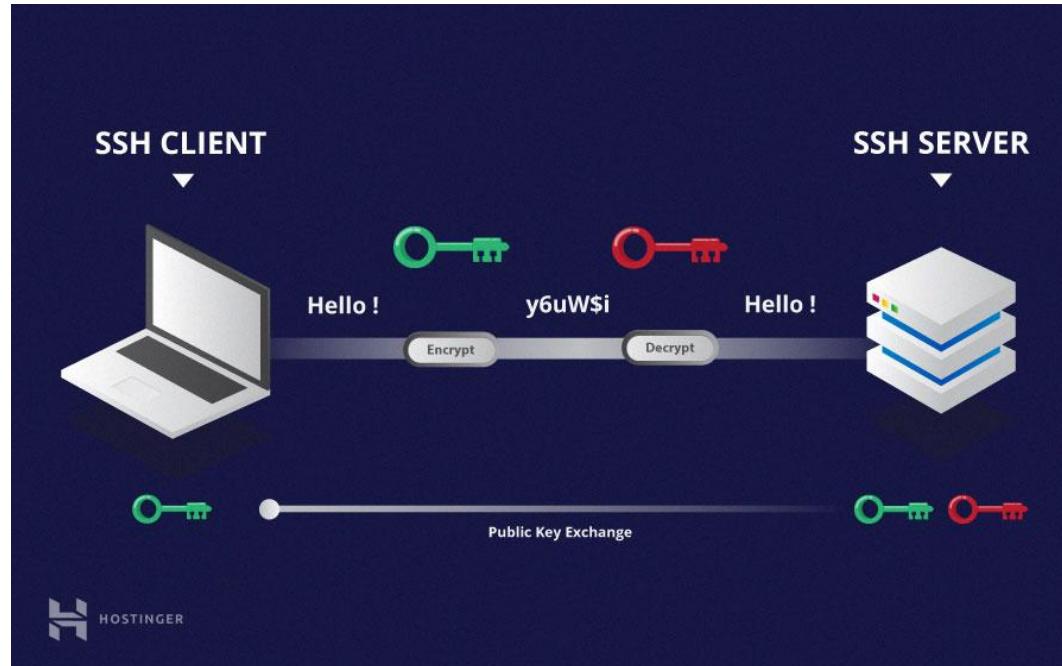


Cifrado simétrico (clave secreta)



Fuente: <https://www.hostinger.es/tutoriales/que-es-ssh>

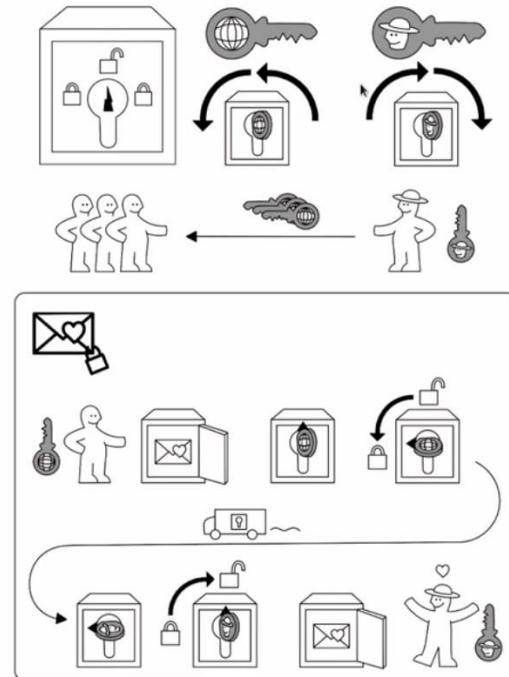
Cifrado asimétrico (par de claves pública-privada)



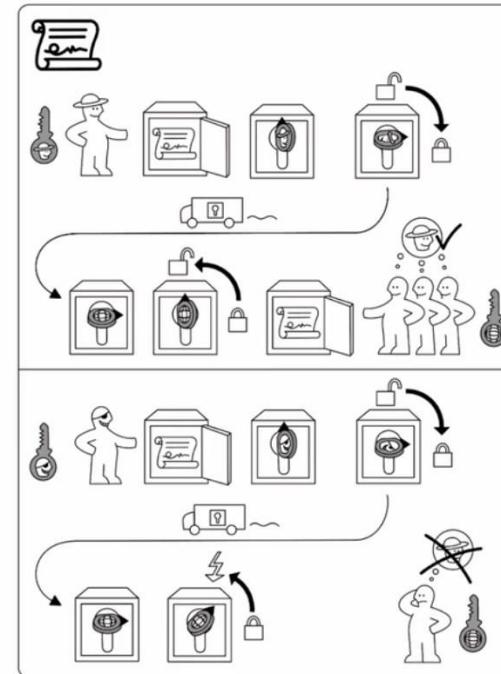
Fuente: <https://www.hostinger.es/tutoriales/que-es-ssh>

Cifrado asimétrico (par de claves pública-privada)

PUBLIC KEY KRÜPTO



idea-instructions.com/public-key/
v1.0, CC by-nc-sa 4.0 



Fuente:
<https://idea-instructions.com/public-key/>

Hashing



Fuente: <https://www.hostinger.es/tutoriales/que-es-ssh>

03

FORMAS DE AUTENTICACIÓN



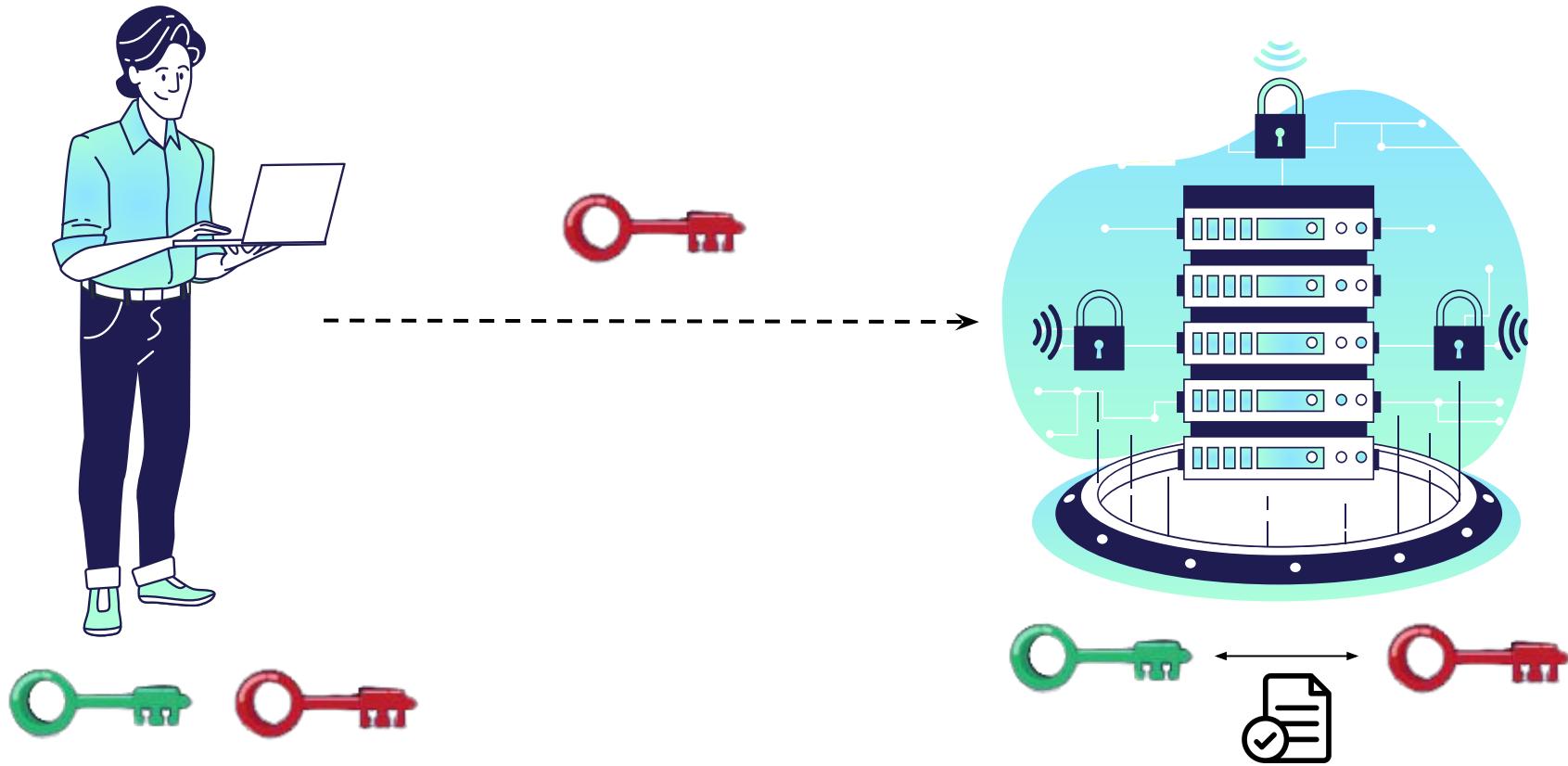
Contraseña



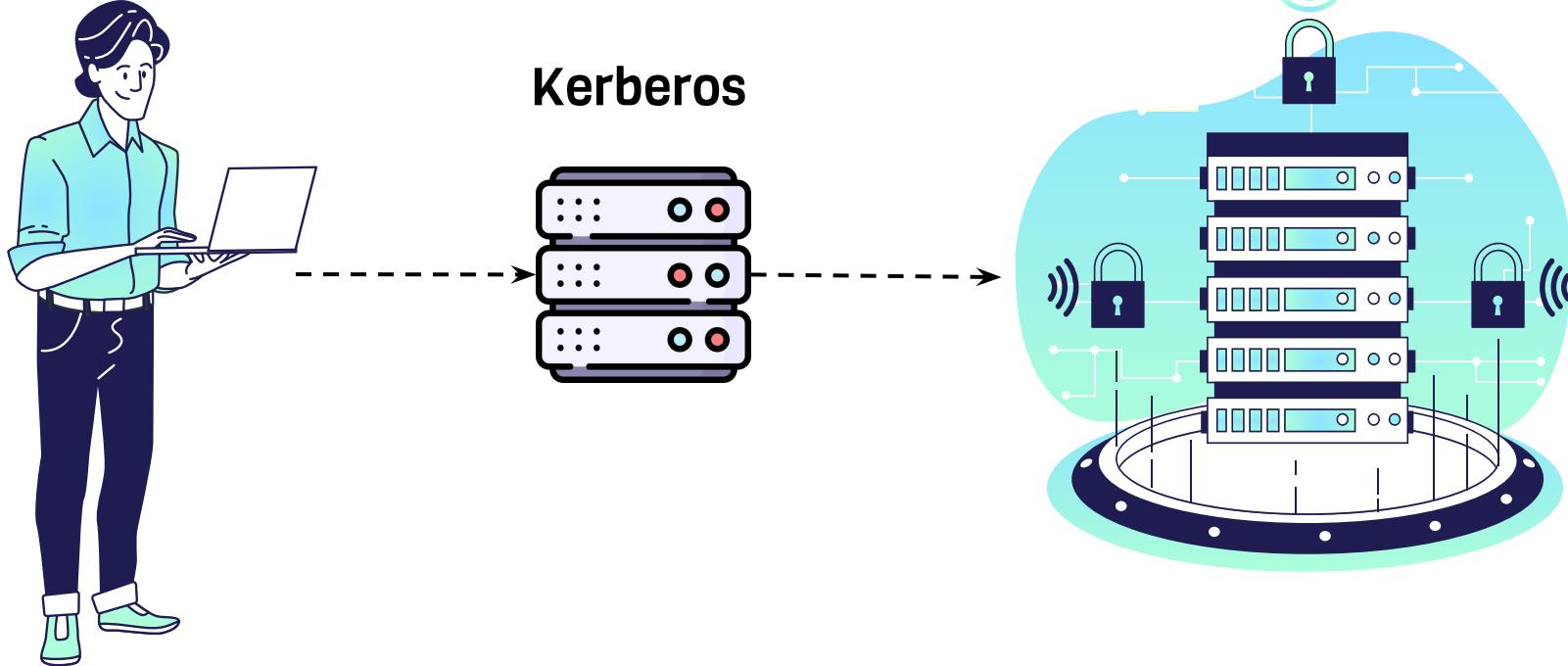
Usuario: Pepe
Contraseña: *****



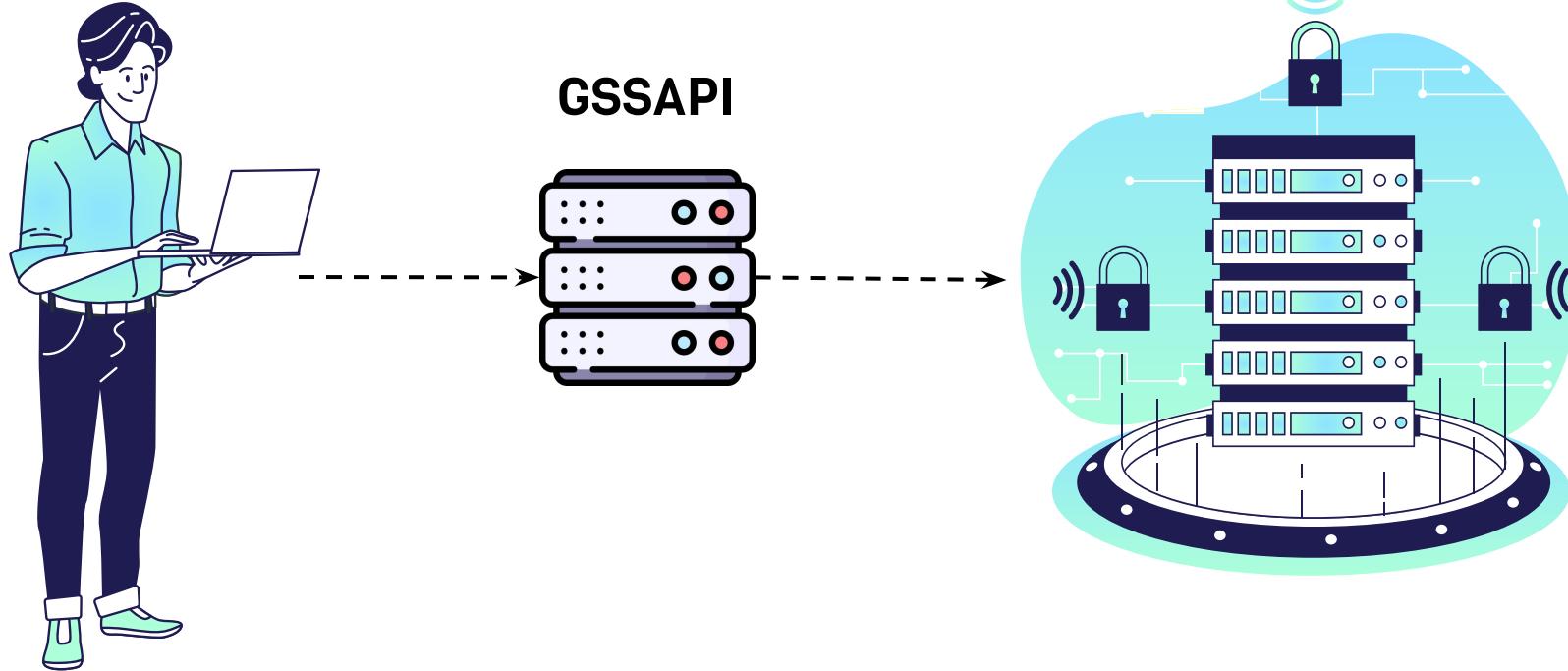
Clave pública



Servidor kerberos



GSSAPI



04

¿CÓMO FUNCIONA?

Alguna vez te has preguntado
como funciona SSH ? ...



NEGOCIACIÓN Y AUTENTICACIÓN

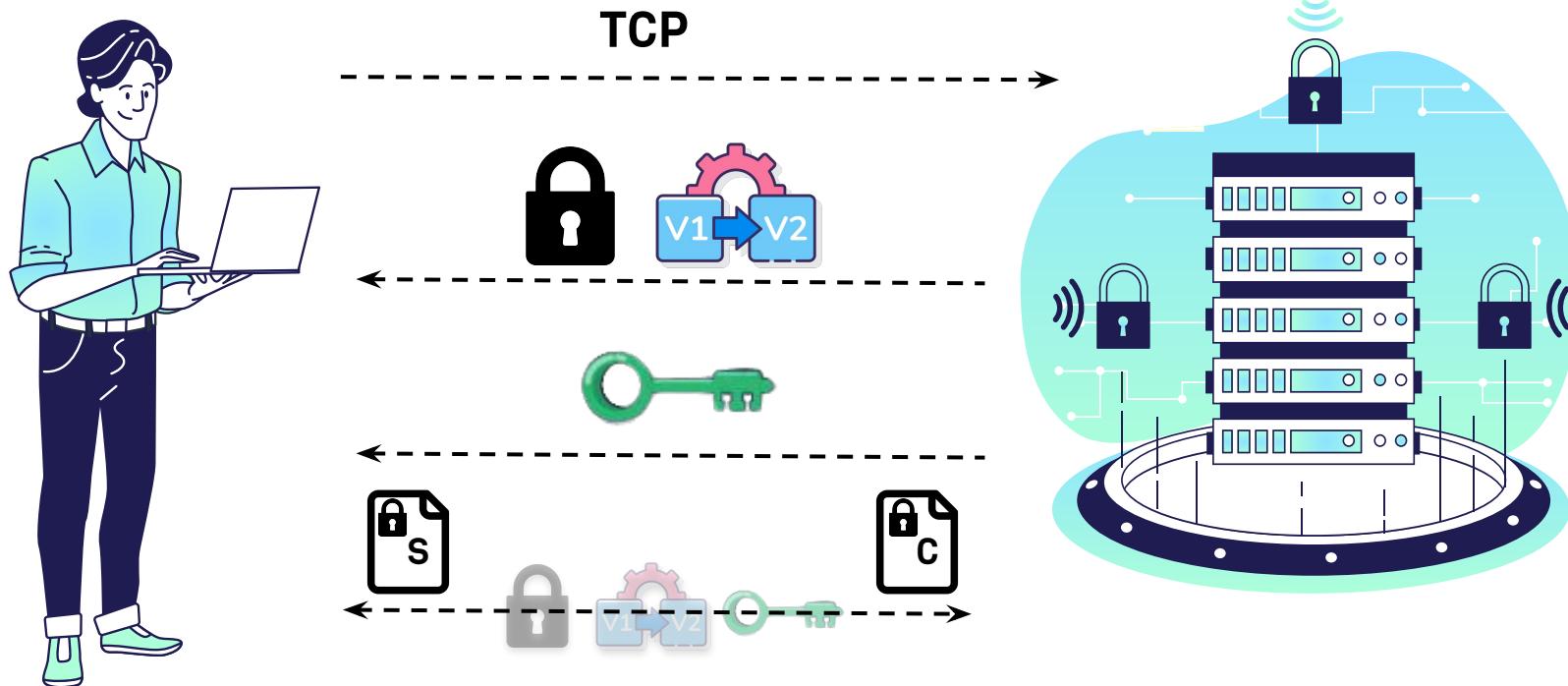
1

NEGOCIACIÓN

2

AUTENTICACIÓN

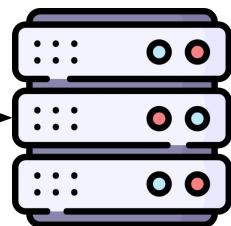
Fase 1: NEGOCIACIÓN



Fase 2: AUTENTICACIÓN



Usuario: Pepe
Contraseña: *****



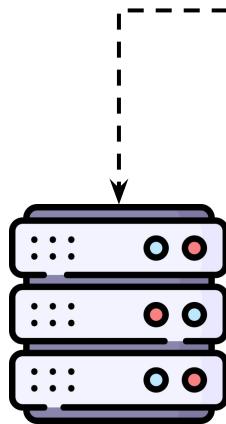
05

CTF SSH

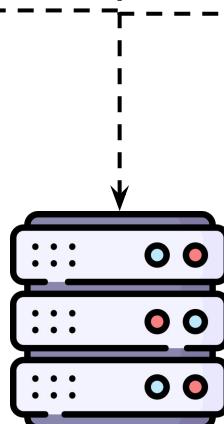


CTF SSH

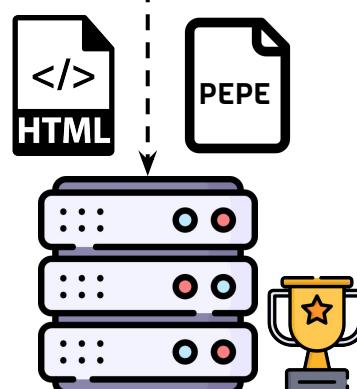
SSH



Máquina 1



Máquina 2



Máquina 3

PRIMERA PRUEBA

- **Máquina 1**
 - Host: falcondptoinformatica.synology.me
 - Puerto: 22
 - Usuario: Eladio, Ana, Loli, Guillermo, Antonio, Carlos
 - Contraseña: Se encuentra entre las 200 contraseñas más utilizadas en España en el año 2020 (fichero pass_csv.csv)
- Araña en Java que realice un ataque de diccionario para conseguir el usuario y la contraseña de la máquina
- Conexión SSH mediante terminal a la máquina 1
- Abrir o descargar el fichero *instrucciones_máquina_2.txt* para ver la siguiente prueba

ANEXO I

Cómo utilizar SSH



Autenticación con usuario y contraseña

```
ssh usuario@maquina -p <puerto>
```

Autenticación con usuario y contraseña

Ejemplo

ssh paco@192.168.0.56

ssh isabel@serverdpto.me -p 56

Autenticación con clave pública

Generar claves

```
ssh-keygen -t <algoritmo>
```

Autenticación con clave pública

Ejemplo

`ssh-keygen -t ecdsa`

Autenticación con clave pública

Copiar clave pública (Linux)

```
ssh-copy-id -i <ruta_fichero_identidad> usuario@maquina
```

Autenticación con clave pública

Ejemplo

```
ssh-copy-id -i id_ecdsa paco@192.168.0.56
```

Autenticación con clave pública

Copiar clave pública (Windows)

```
type <fichero_clave_pub> | ssh usuario@maquina "cat >> .ssh/authorized_keys"
```

Autenticación con clave pública

Ejemplo

```
type id_ecdsa.pub | ssh paco@192.168.0.56 "cat >>  
.ssh/authorized_keys"
```

Autenticación con clave pública

Conexión indicando clave privada

```
ssh -i <ruta_clave_privada> usuario@maquina -p <puerto>
```

Autenticación con clave pública

Ejemplo

```
ssh -i ~/.ssh/miclaveprivada paco@192.168.0.56
```

Transferencia de ficheros

```
scp usuario@maquina_origen:ruta usuario@maquina_destino:ruta
```

Transferencia de ficheros

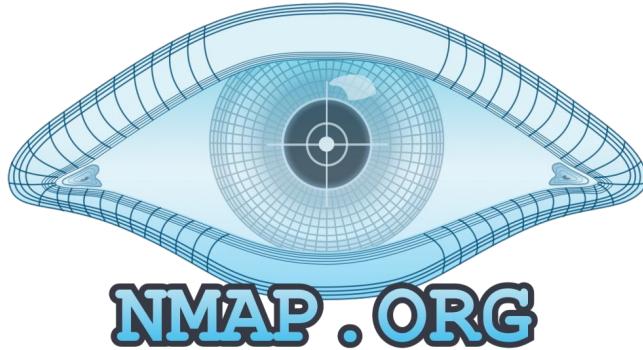
Ejemplo

scp paco@192.168.0.56:/home/paco/examen.docx .

scp ./notas.xlsx paco@192.168.0.56:/home/paco/

ANEXO II

Cómo utilizar Nmap



Escaneo de puertos con Nmap

Puertos más comunes

nmap <dirección-ip>

Escaneo de puertos con Nmap

Ejemplo

nmap 192.168.0.56

nmap serverdpto.me

Escaneo de puertos con Nmap

Rango de puertos

```
nmap -p <p-inicio>-<p-fin> <dirección-ip>
```

Escaneo de puertos con Nmap

Ejemplo

```
nmap -p 0-400 192.168.0.56
```

Escaneo de servicios con Nmap

```
nmap -sV <dirección-ip>
```

Escaneo de servicios con Nmap

Ejemplo

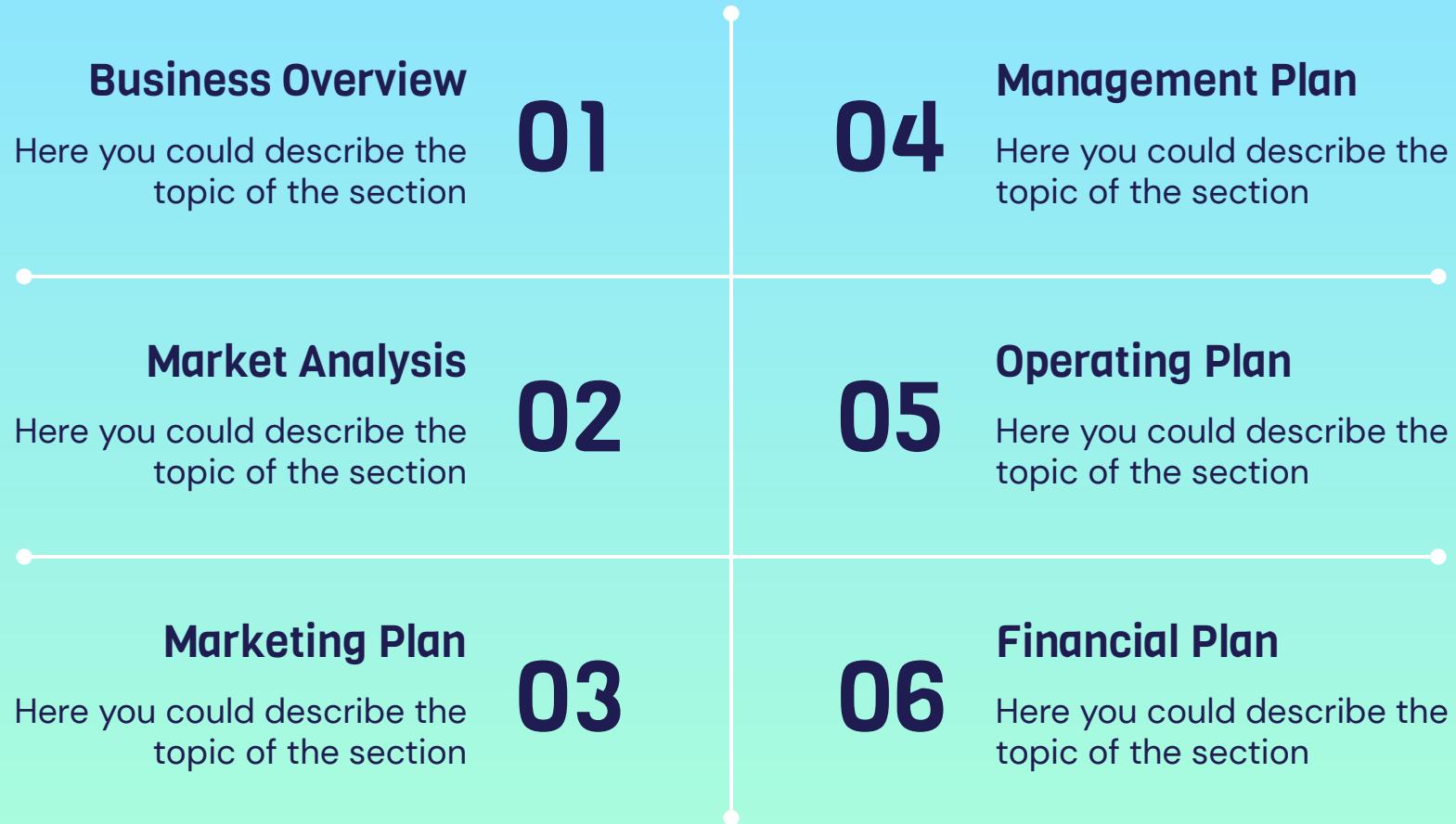
```
nmap -sV 192.168.0.56
```

ANEXO III

Github

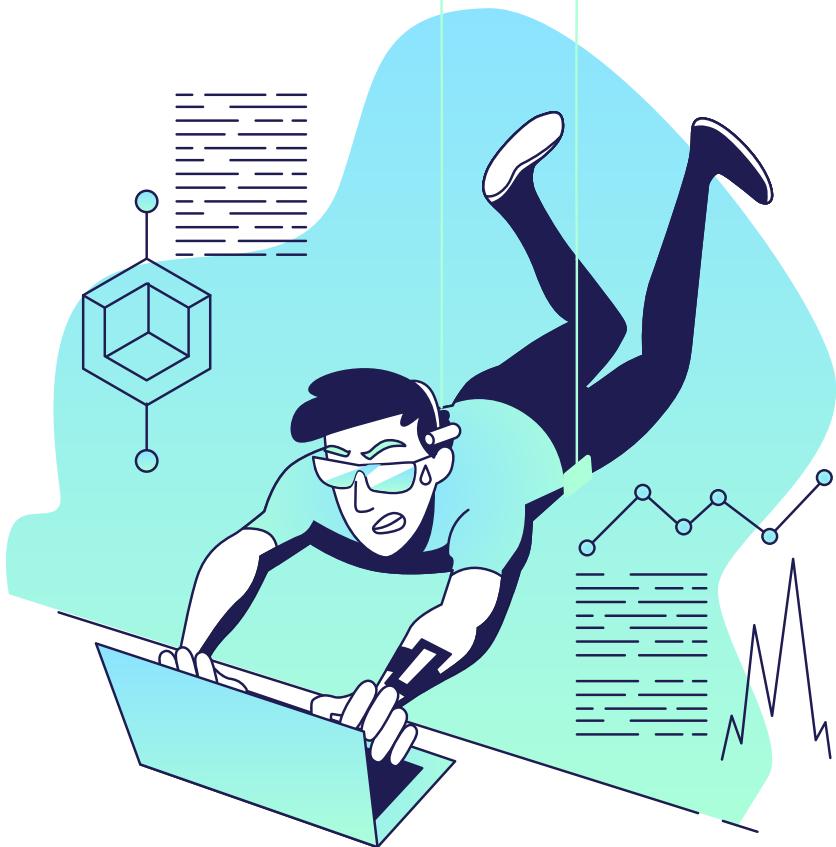


!SUERTE!



MISSION STATEMENT

Here you could describe the company's mission. A clear message is a good way to get down to business

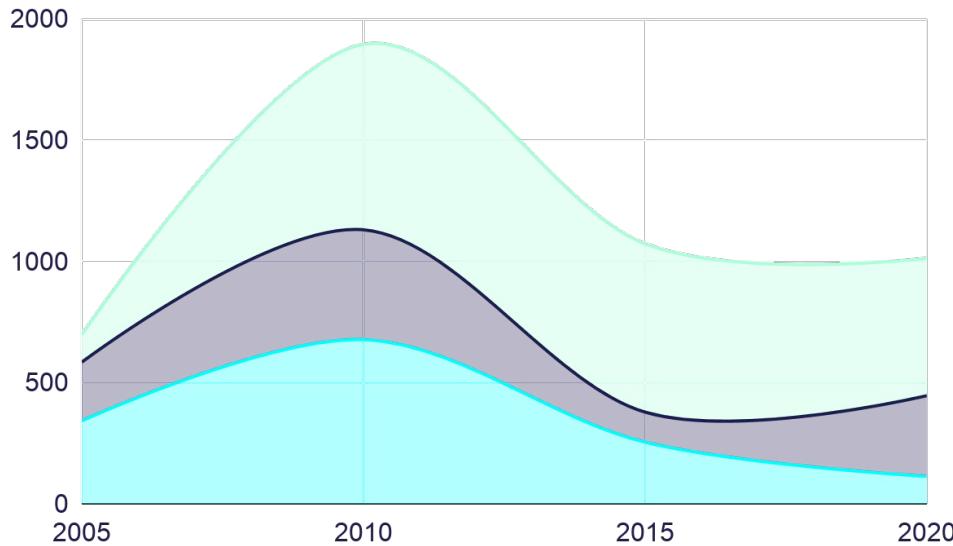


OUR COMPANY



Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than the Moon

MARKET TRENDS



Mars

Saturn

Venus

Edit this!

To modify this graph, click on it, follow the link, change the data and paste the resulting graph here

COMPETITORS



Mars

Despite being red, Mars is actually a cold place full of iron oxide



Jupiter

It's a gas giant and the biggest planet in the Solar System



Saturn

Saturn is a gas giant, composed mostly of hydrogen and helium

COMPETITIVE ADVANTAGE



Them

Mercury is the closest planet to the Sun and the smallest one in the Solar System

Us

Jupiter is, the biggest planet in the Solar System and the fourth-brightest object in the sky

02

MARKET ANALYSIS

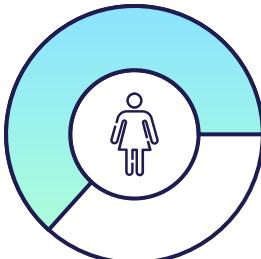
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here if you need it



TARGET

60%
Women

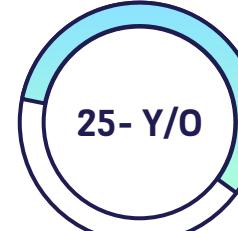
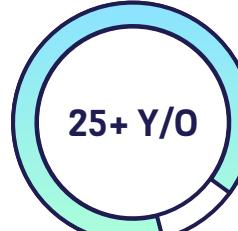
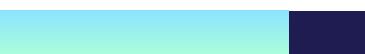
Saturn is a gas giant
and has rings



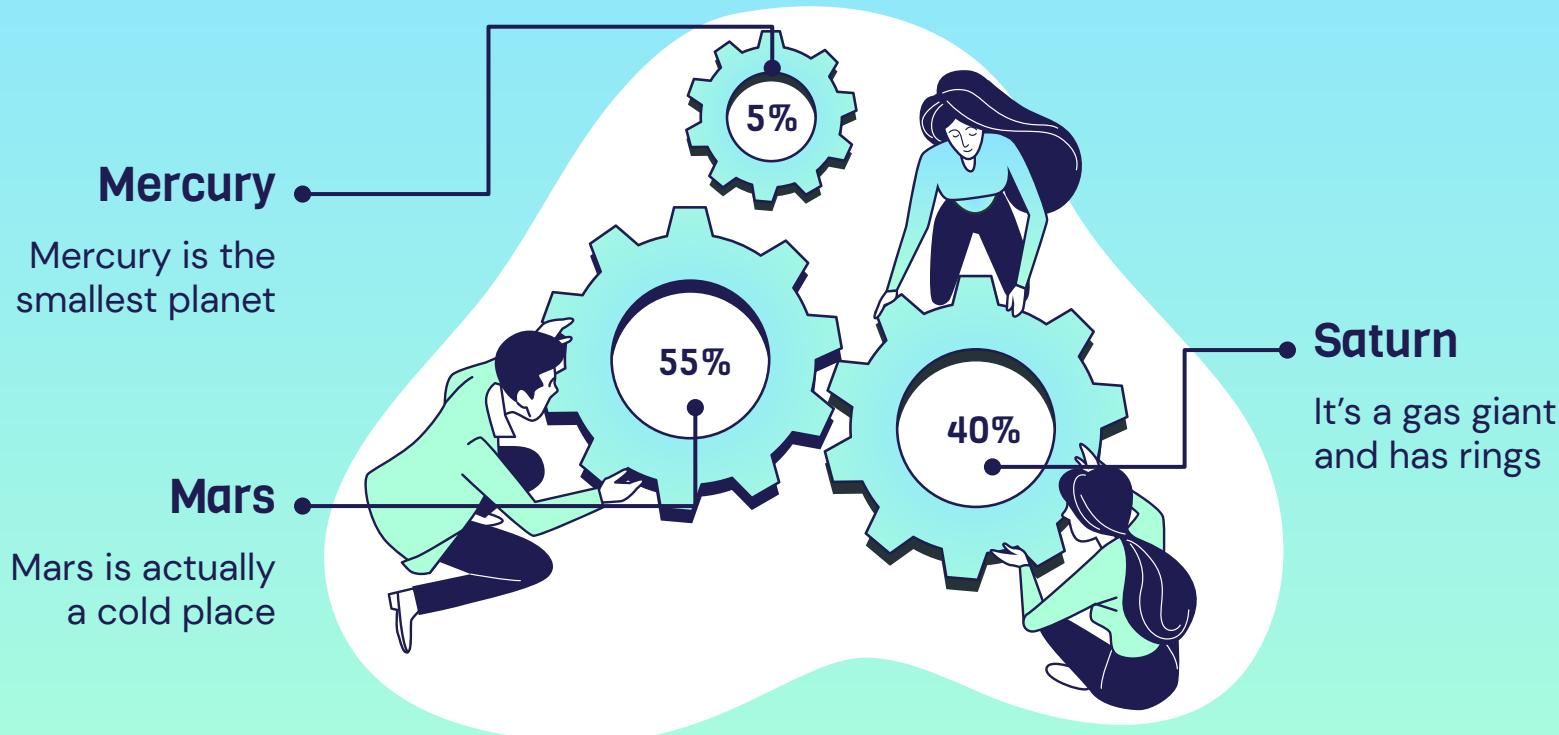
\$50K - \$60K

Average spend per customer

Mercury is the smallest planet in
the Solar System

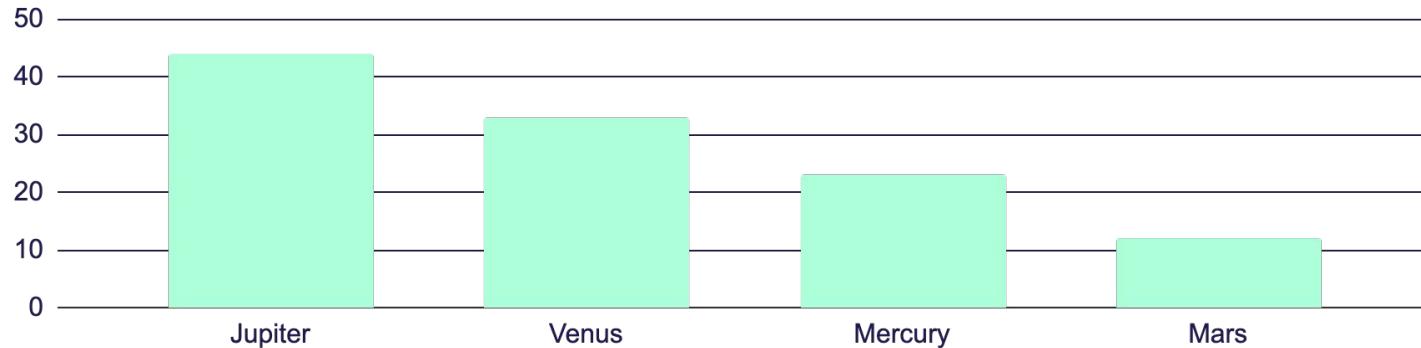


MARKET SIZE



MARKET SHARE

To modify this graph, click on it, follow the link, change the data and paste the new graph here



Jupiter

Jupiter is the biggest planet of them all

Mercury

Mercury is the closest planet to the Sun

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is a cold place

COMPETITION ANALYSIS

Jupiter	Mercury	Venus	Mars
Yes	No	Yes	No
Yes	No	Yes	Yes
No	Yes	No	Yes



03

MARKETING PLAN

You could enter a subtitle
here if you need it



OUR SERVICES

Mercury

Mercury is the closest planet to the Sun

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is actually a cold place

Jupiter

It's the biggest planet in the Solar System

Saturn

Saturn is composed of hydrogen and helium

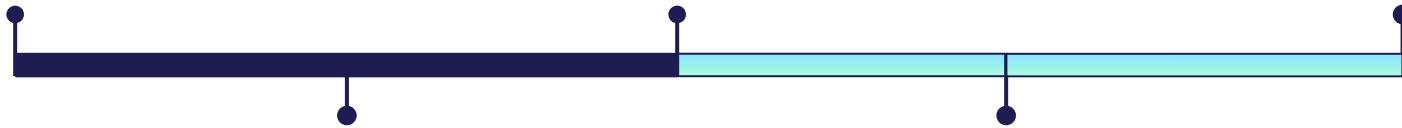
Neptune

Neptune is the farthest planet from the Sun

BREAK-EVEN ANALYSIS

Big Loss

Mercury is the
smallest planet



Loss

Mars is actually
a cold place

Profit

Saturn has
several rings

OUR PLANS

BASIC

\$19.99

- Service 1
- Service 2
- Service 3

START

STANDARD

\$25.99

- Service 1
- Service 2
- Service 3

START

PREMIUM

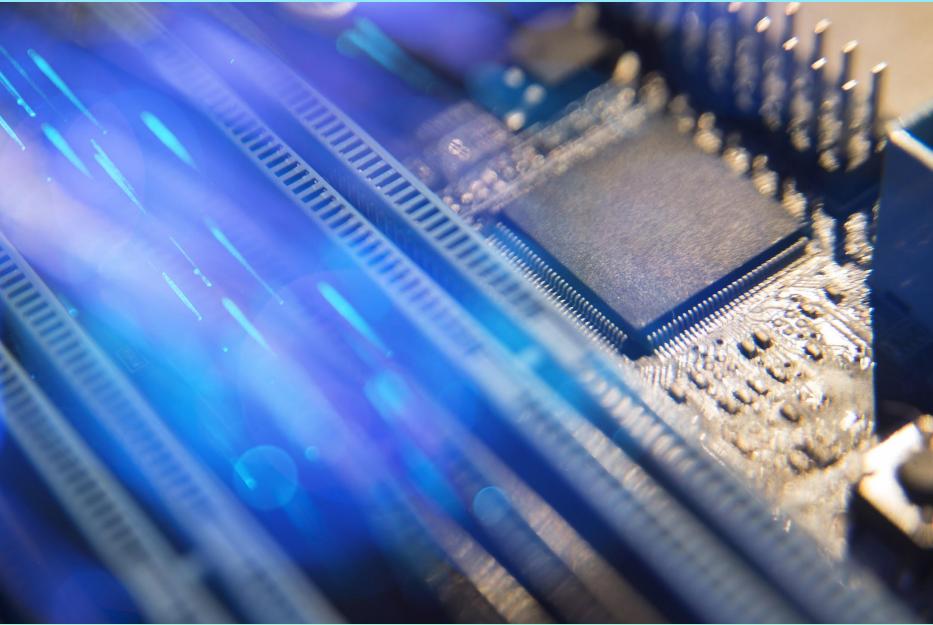
\$30.99

- Service 1
- Service 2
- Service 3

START

SALES AND DISTRIBUTION





A PICTURE ALWAYS REINFORCES THE CONCEPT

Images reveal large amounts of data, so remember: use an image instead of long texts

ADVERTISING AND PROMOTION



Advertising

Jupiter is a gas giant and the biggest planet in the Solar System



PR

Venus has a beautiful name and is the second planet from the Sun



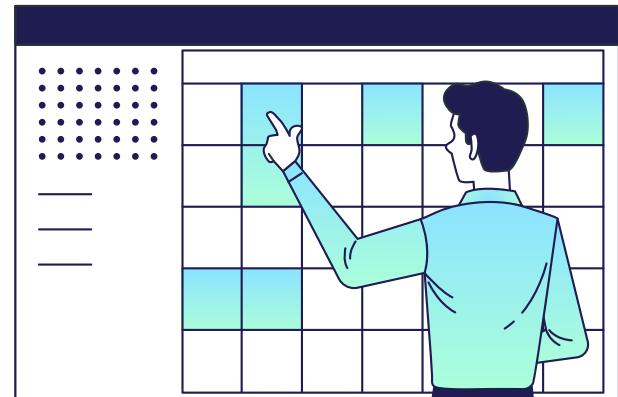
Online

Despite being red, Mars is actually a cold place full of iron oxide dust

04

MANAGEMENT PLAN

You could enter a subtitle
here if you need it



OUR TEAM

Albert Clifford

You can replace the image on the screen with your own

Joey Patterson

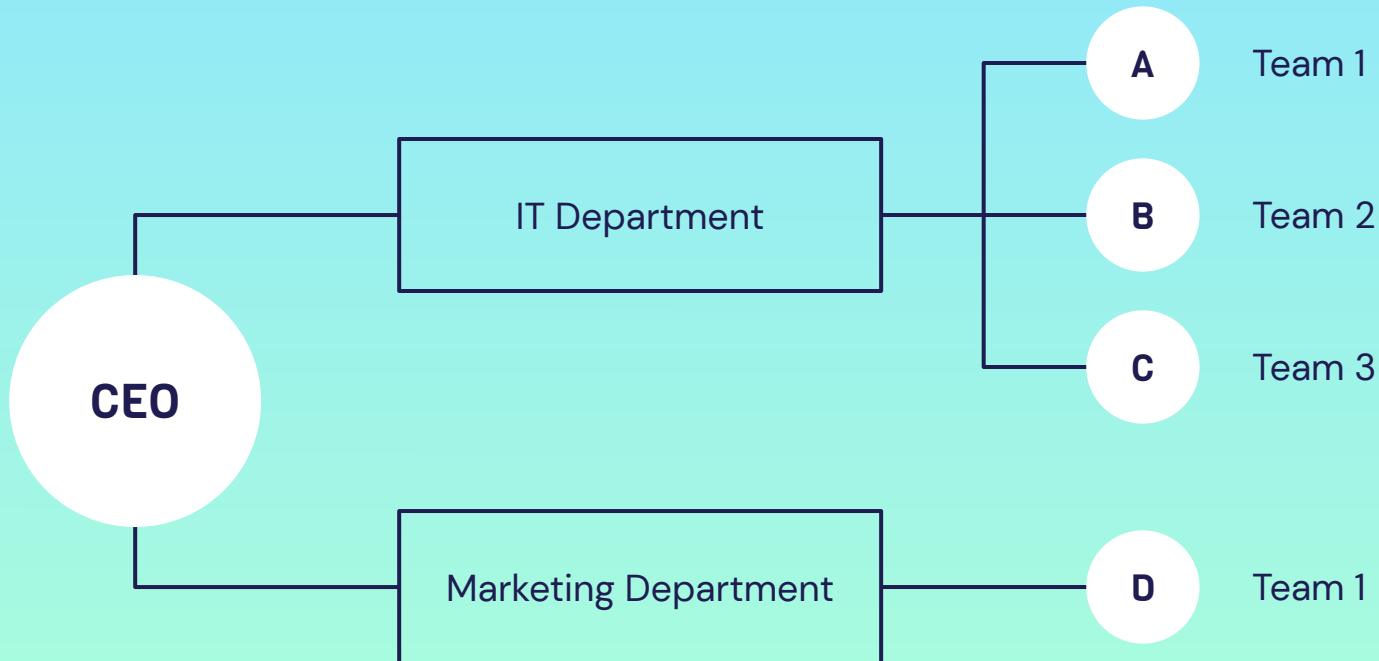
You can replace the image on the screen with your own

Laura Doe

You can replace the image on the screen with your own



ORGANIZATIONAL CHART



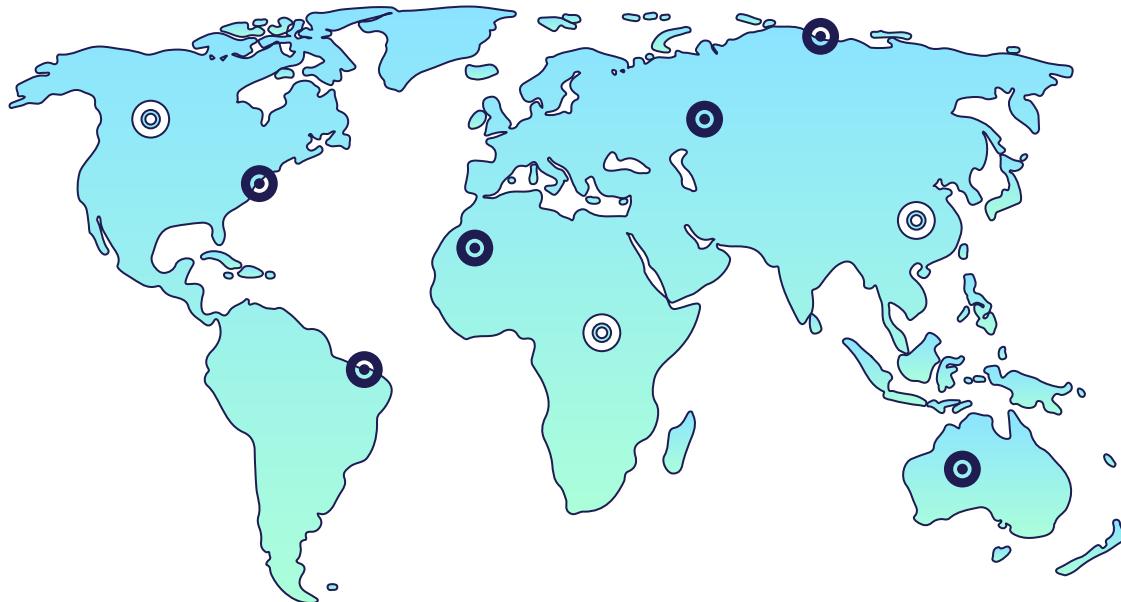
OUR PARTNERS

This is a list of partners

- Here you can talk about your partners
- Here you can talk about your partners
- Here you can talk about your partners
- Here you can talk about your partners



OUR EXPANSION

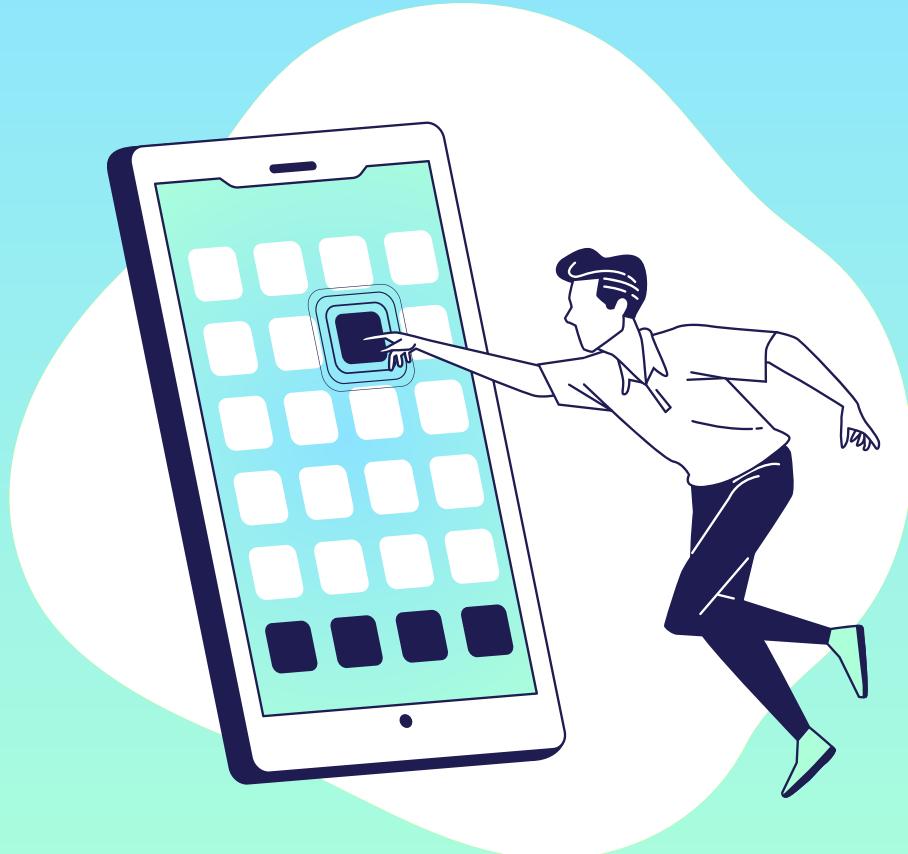


- Mercury is the smallest planet
- Venus has a beautiful name

05

OPERATING PLAN

You could enter a subtitle
here if you need it



OUR PROCESS



Week 1

Mercury is the
smallest planet



Week 2

Mars is actually
a cold place



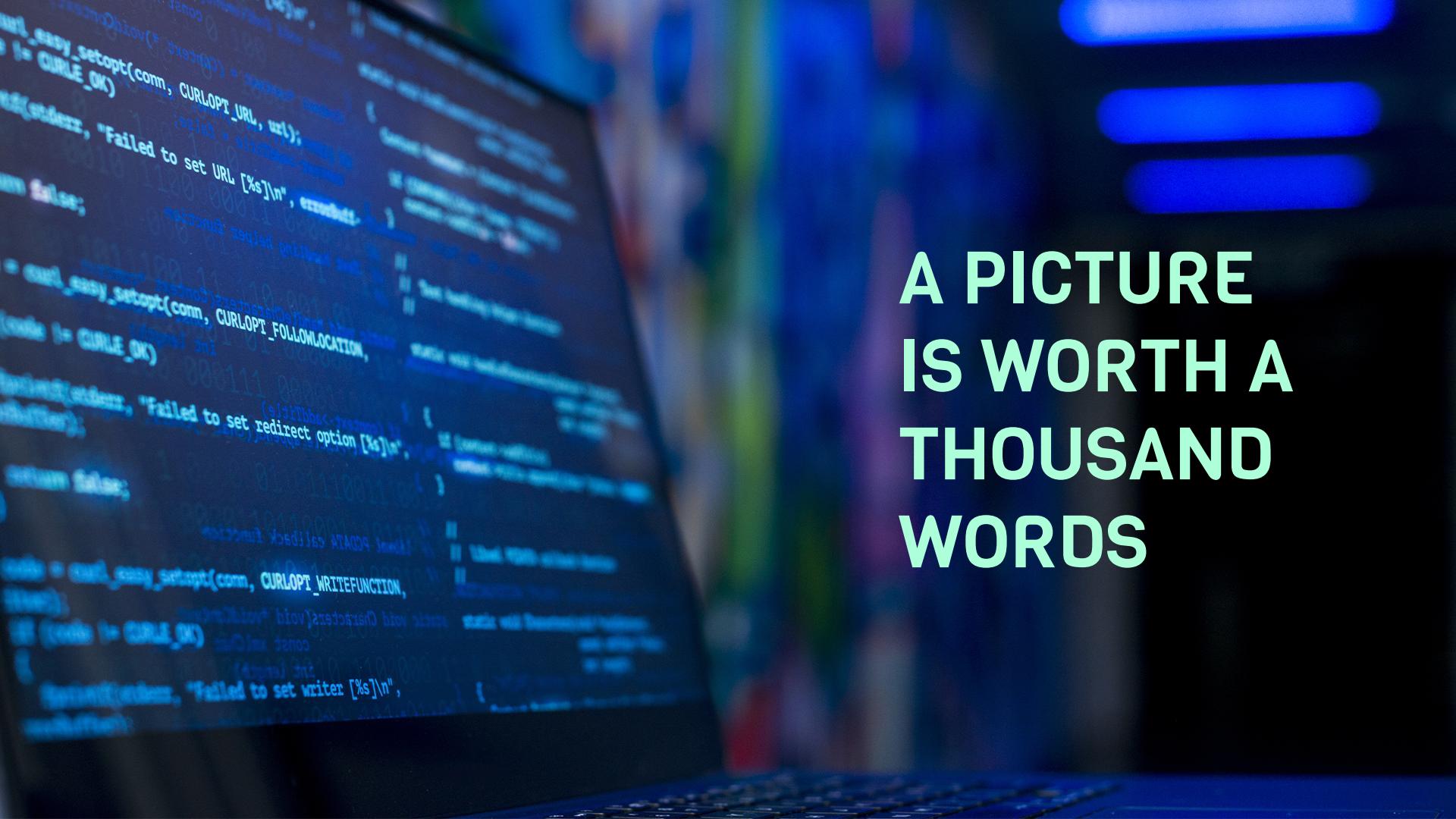
Week 3

Saturn has
several rings



Week 4

Earth is where
we live on



A PICTURE
IS WORTH A
THOUSAND
WORDS

06

FINANCIAL PLAN

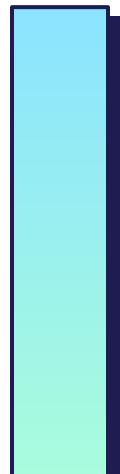
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PREDICTED GROW

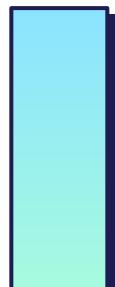
Mercury

Mercury is the smallest planet



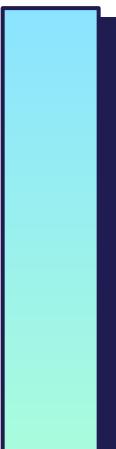
Mars

Mars is actually a cold place



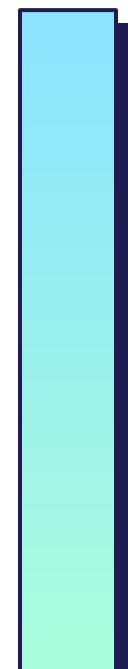
Saturn

Saturn has several rings

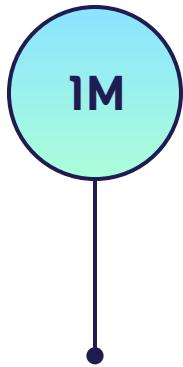


Earth

Earth is where we live on



BALANCE SHEET



Assets

What the company owns

Liabilities

What the company owes



Equity

Difference between both

498,300,000

Estimated total amount

THANKS!

Do you have any questions?

youremail@freepik.com

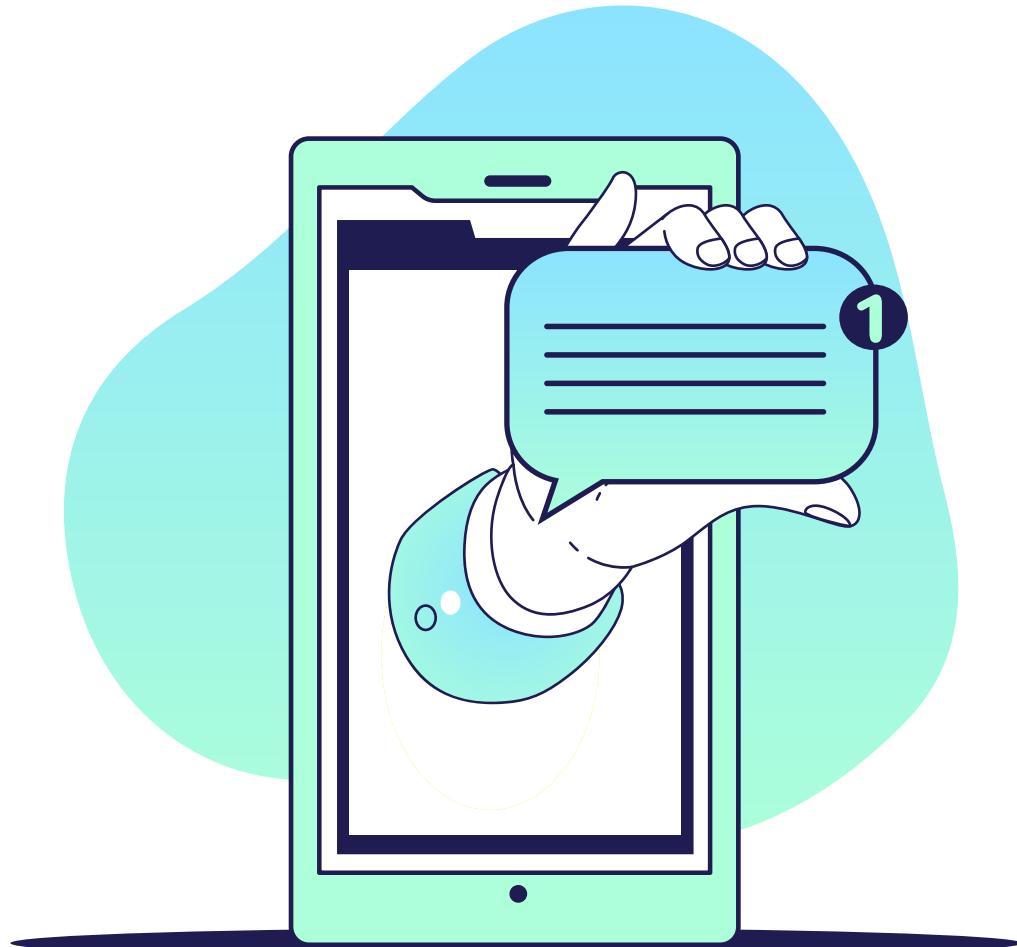
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RESOURCES

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- Logotype
- Login concept illustration
- Security concept illustration

PHOTOS:

- Motherboard with optical fiber cables
- Hacking concept

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Pana



Amico



Bro



Rafiki

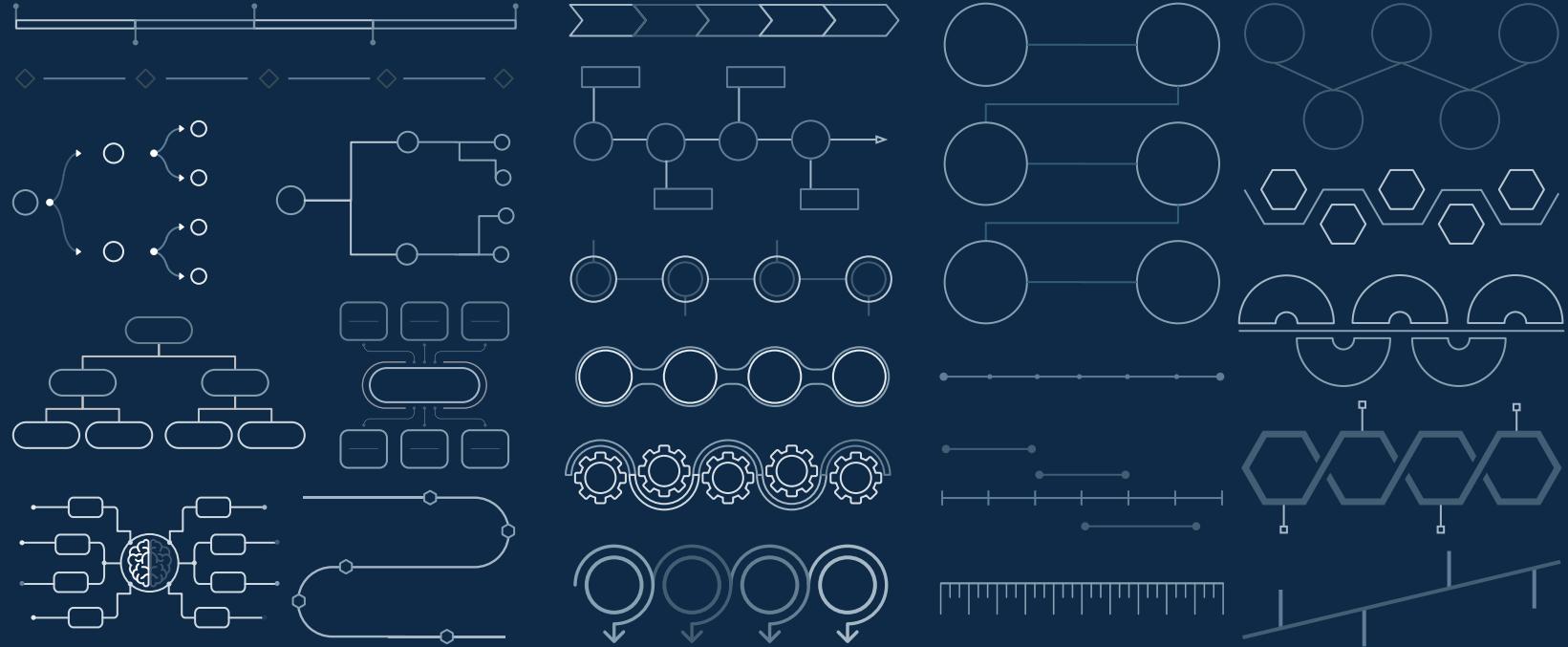
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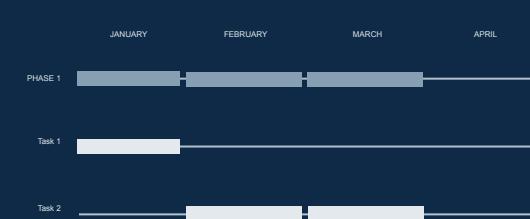
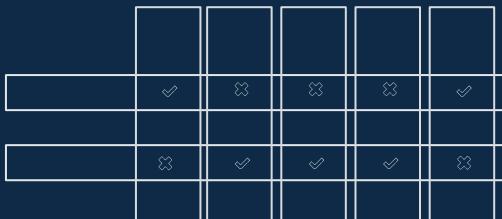
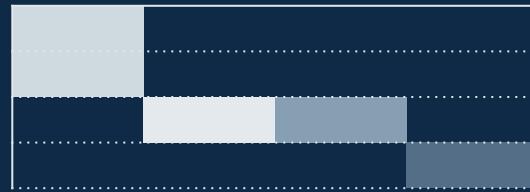
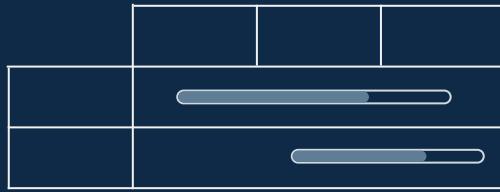
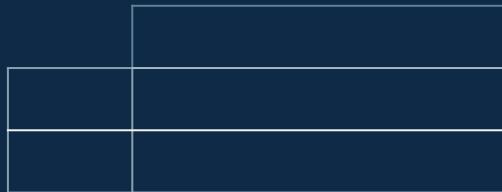
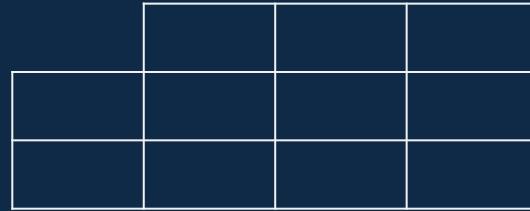
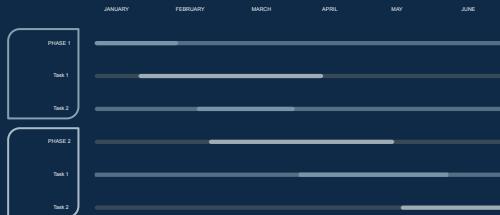
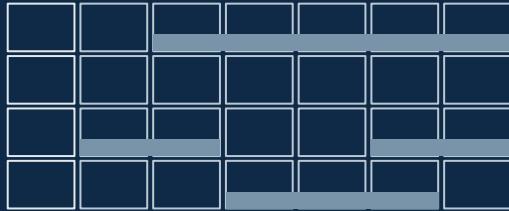
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Group the resource again when you're done.

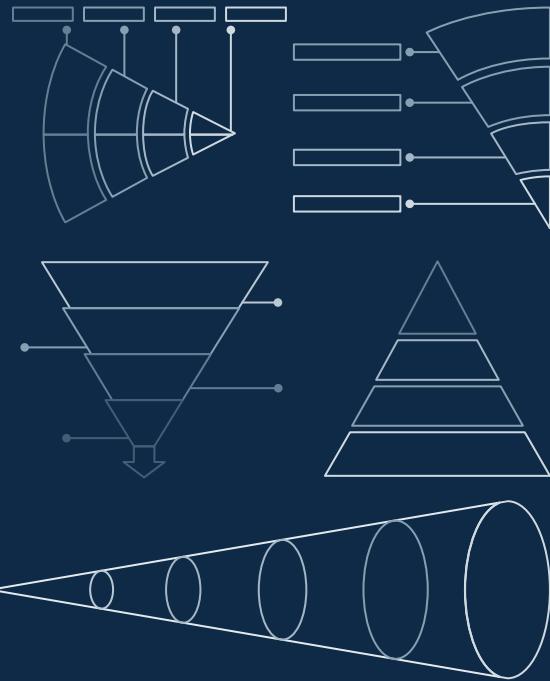
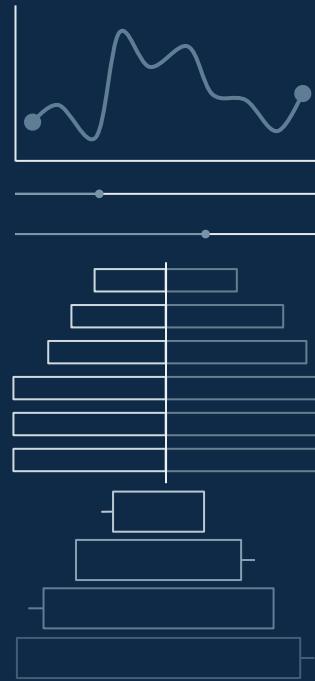
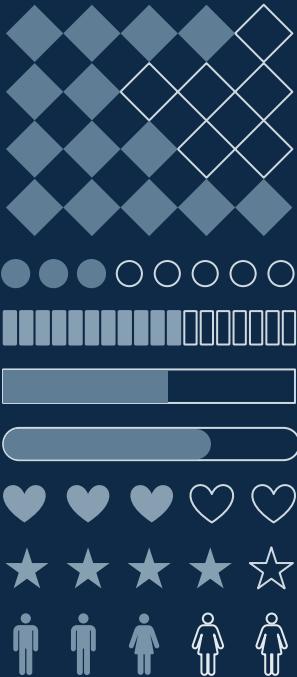
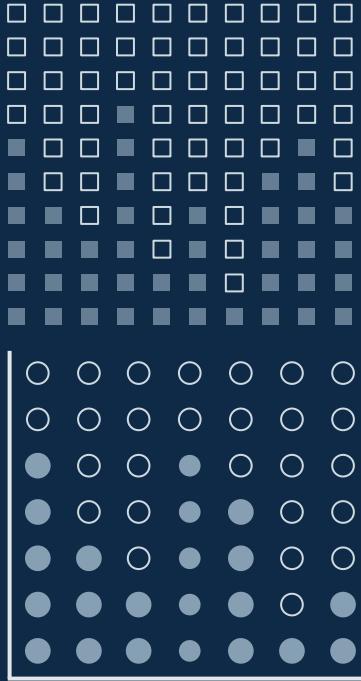












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Medical Icons



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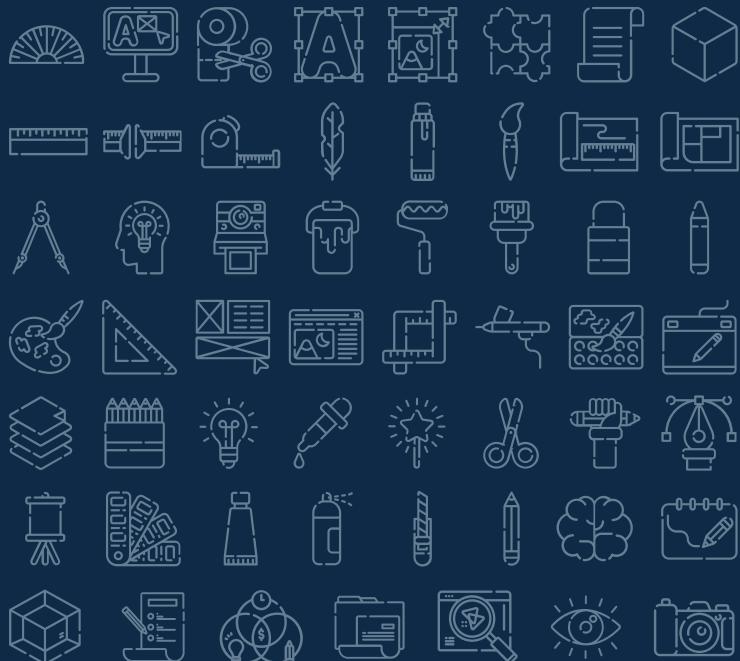
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Performing Arts Icons



Nature Icons



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