AuthoRIZAtioN bypAss

HOW (AND WHY) YOUR QA TEAM CAN SAVE THE DAY

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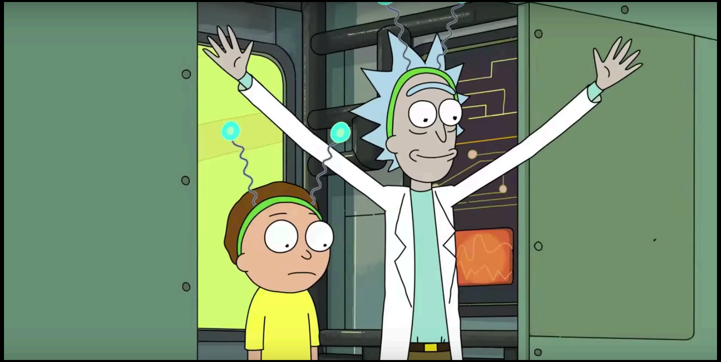
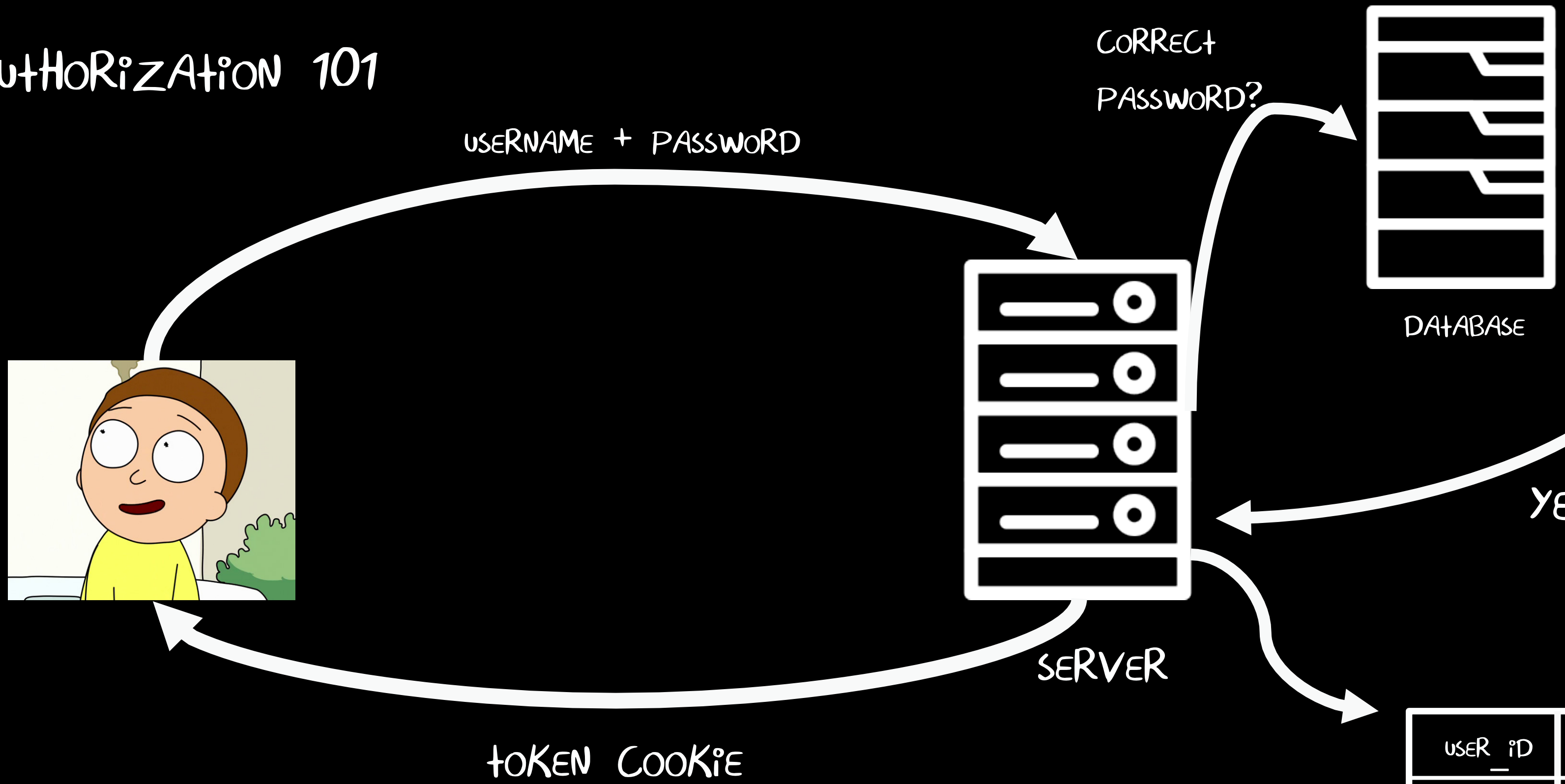
GREETINGS!

- GILAD KATZIR
- SECURITY RESEARCHER AT WIX.COM
- LIVE IN TEL-AVIV
- PII FANATIC, STATISTICS ENTHUSIASTIC, STRONG BELIEVER IN QA SECURITY



AUTHORIZATION 101



USERNAME + PASSWORD

CORRECT PASSWORD?

DATABASE

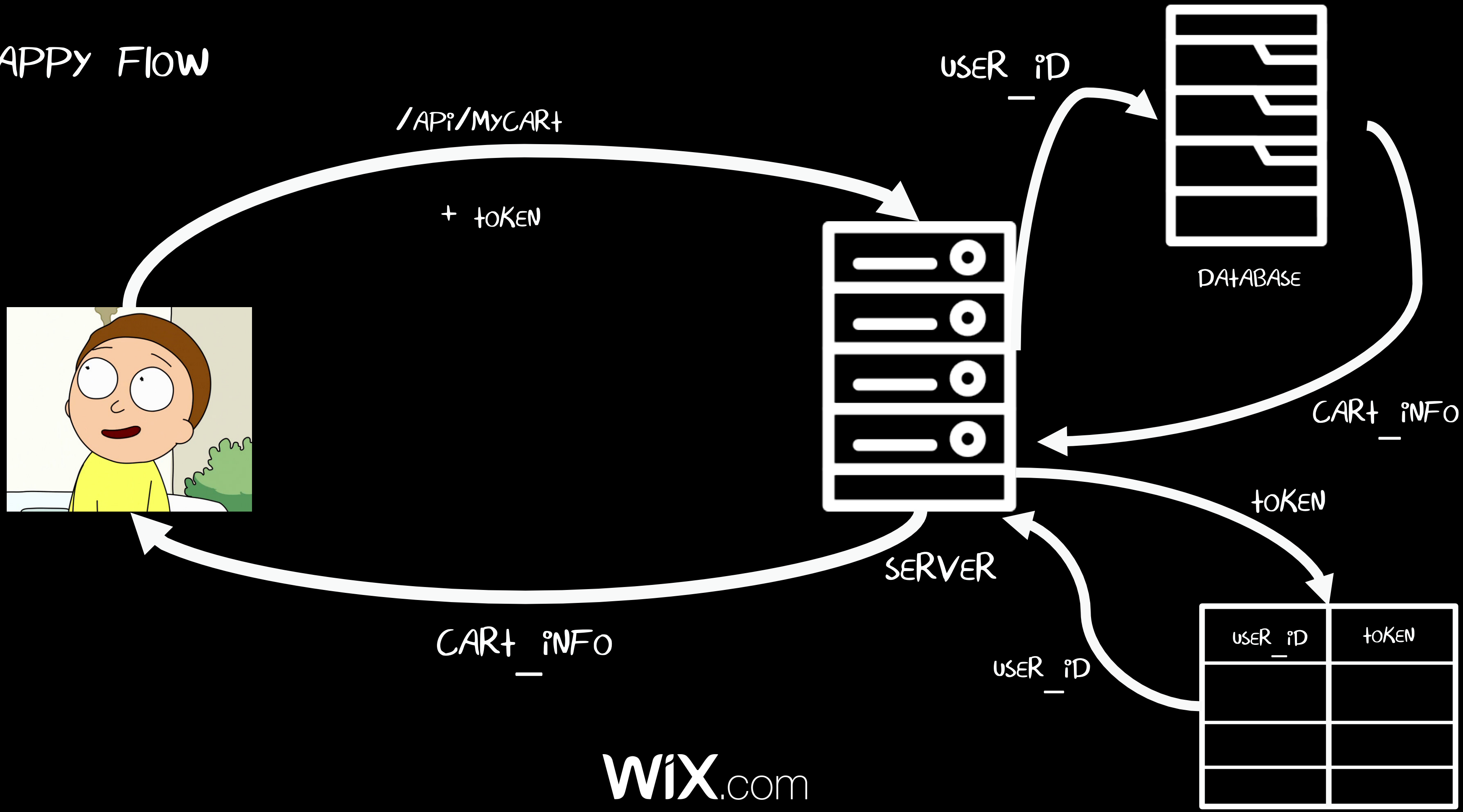
YES!

SERVER

TOKEN COOKIE

USER_ID	TOKEN

HAPPY FLOW



USER_ID	TOKEN

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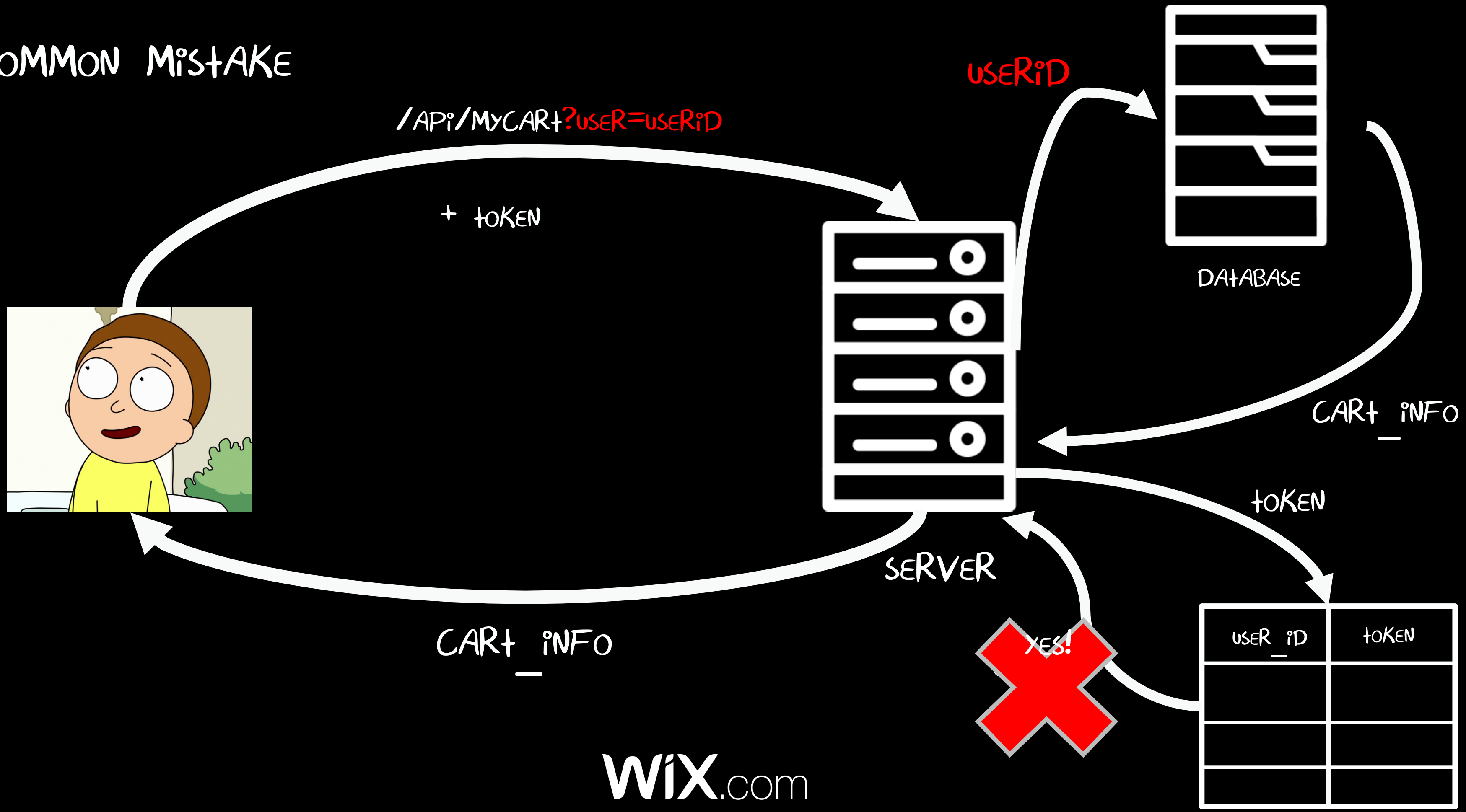
COMMON MISTAKE



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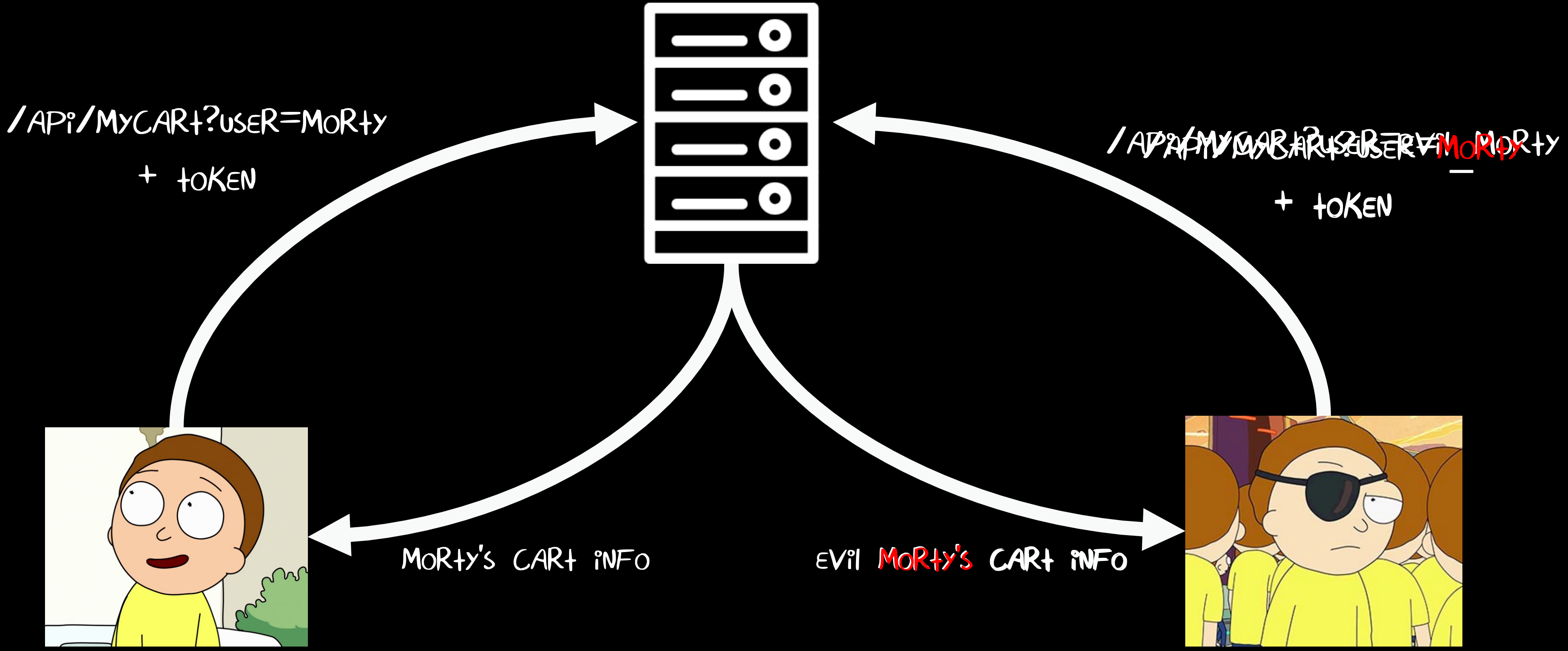
EASY EXPLOIT



/API/MYCART?USER=MORTY

+ TOKEN

/API/MYCART?USER=EVIL_MORTY

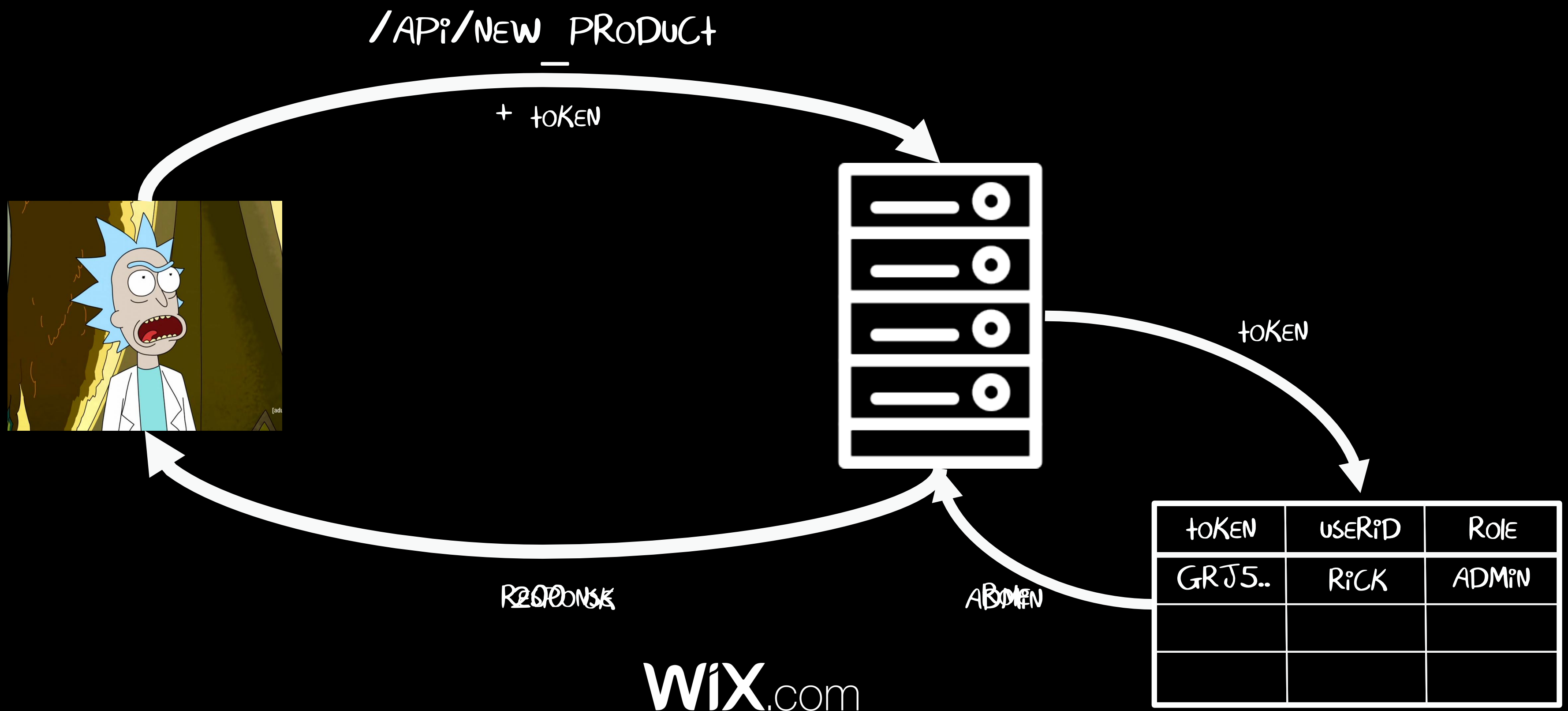
+ TOKEN

MORTY'S CART INFO

EVIL MORTY'S CART INFO

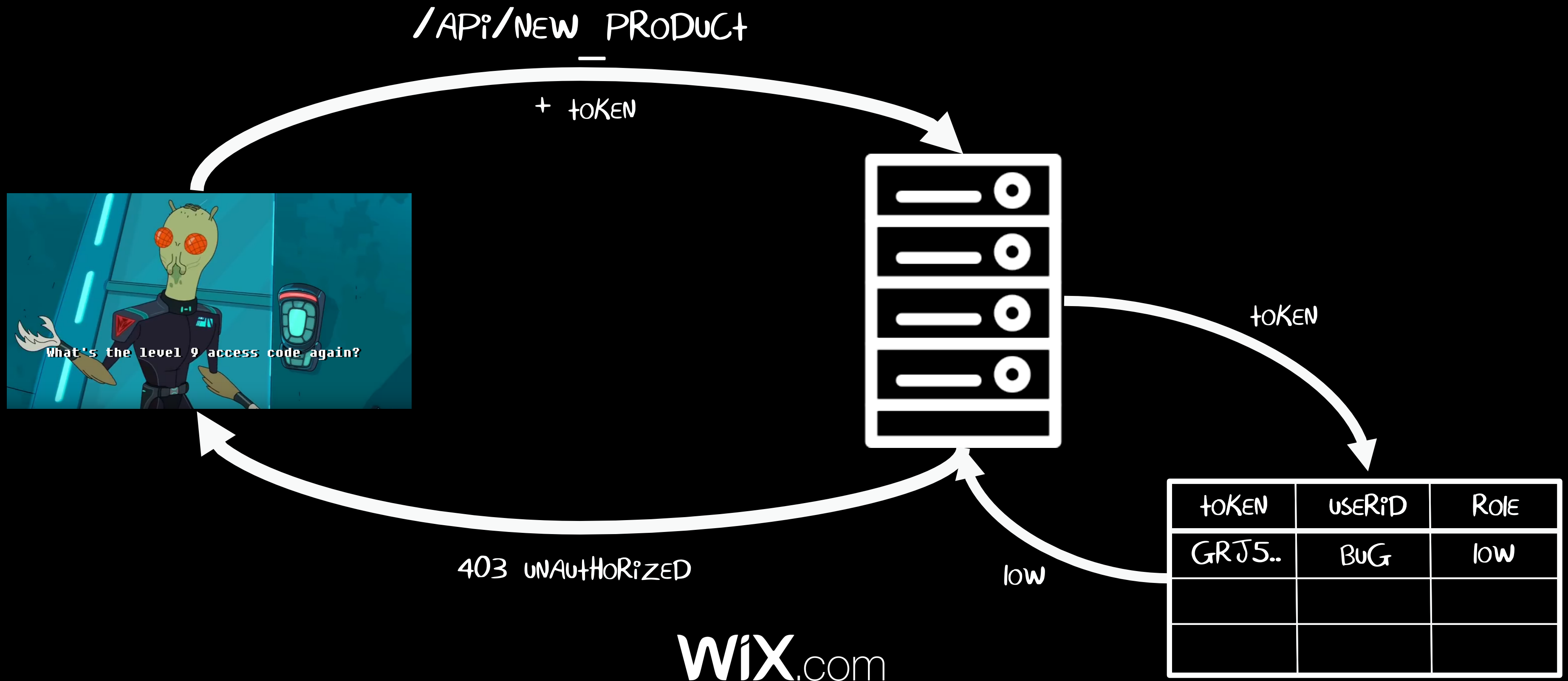
let's start with a demo...

ACCESS CONtROl 101



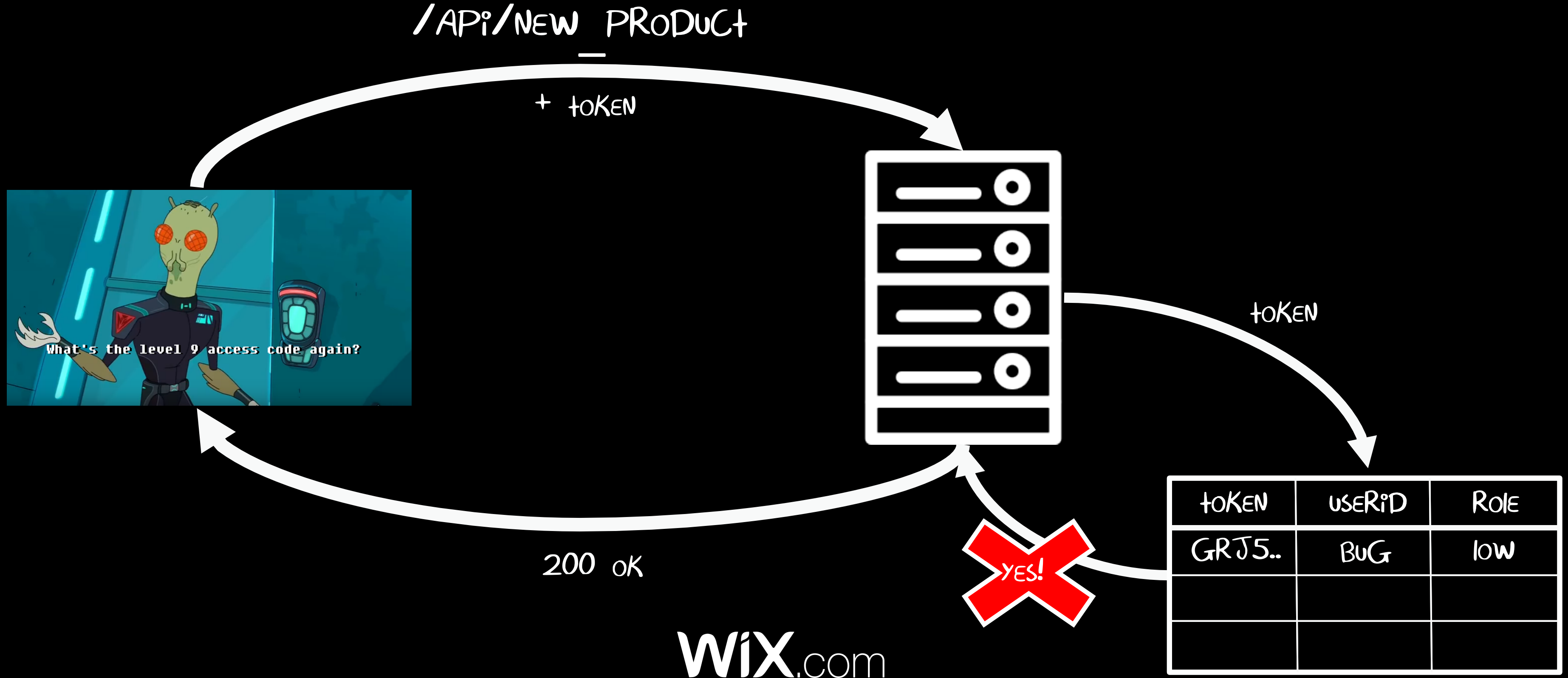
tOKEN	USERiD	ROlE
GRJ5..	RiCK	ADMiN

ACCESS CONTROL 101



TOKEN	USERID	ROLE
GRJ5..	BUG	low

FORCEFUL BROWSING



TOKEN	USERID	Role
GRJ5..	BUG	low

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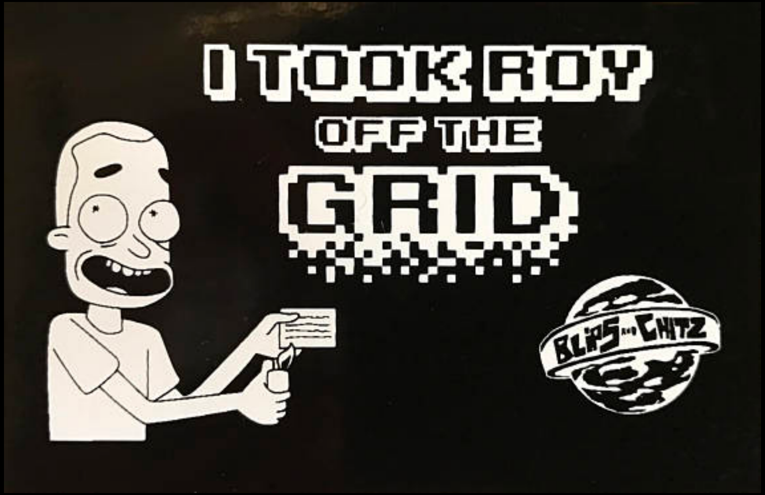
All SHAPES AND SiZES

- PARAMETER tAMPERiNG
- FORCEFUl BROWSiNG
- FORGOttEN/HiDDEN CONtENt
  - DEFAUlt COMPONENtS
  - URl GUESSiNG
- HORiZONtAl/VERtiCAl



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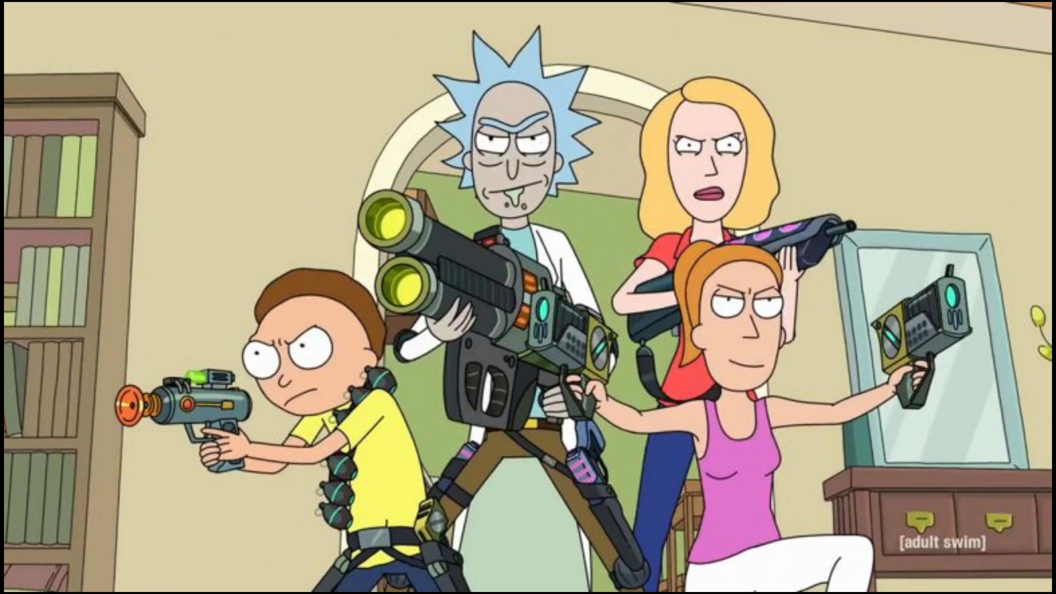
NO PROBlEM _ OuR PROGRAMMERS ARE GREAt!

- tHis is BASiC, sHoulD BE EASY
- tHERE is AlWAYS tHis ONE ENDPOiNt tHAt WAS MiSSED
- MiCROSERViCES ARE tHE WORSt!
  - DOZENS OF REQuEStS, SiNGlE ButtON CliCK.
  - REStFul APi - DiFFERENt REStRiCtiON FOR DiFFERENt MEtHOD (PAtCH, uPDAtE, Put, GEt).

so to sum things up

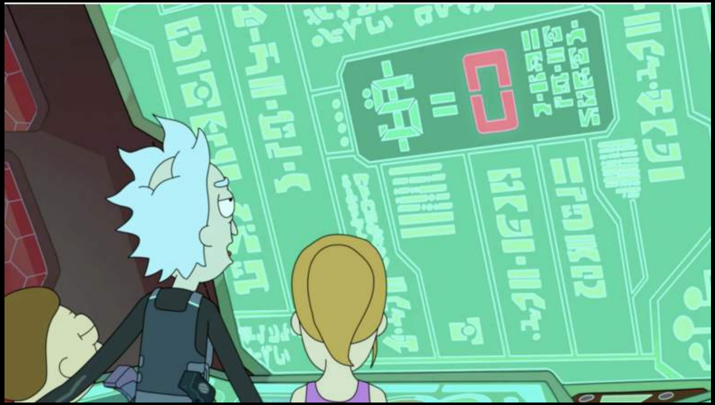
- ~x1000 of endpoints.
- specific business logic for each endpoint
- Multiple Roles/tenants
- All tests need to be manual
- AND...

YOU ONLY HAVE 4 SECURITY ANALYSTS



QA to tHe RescUe!

- PURE BUSINESS LOGIC BUG
- INTIMATE KNOWLEDGE
- MANUALLY TESTING
- NO NEED FOR SPECIAL SECURITY SKILLS
- „QUALITY ASSURANCE" DEFINITION
- WE STILL HAVE ONE PROBLEM THOUGH...



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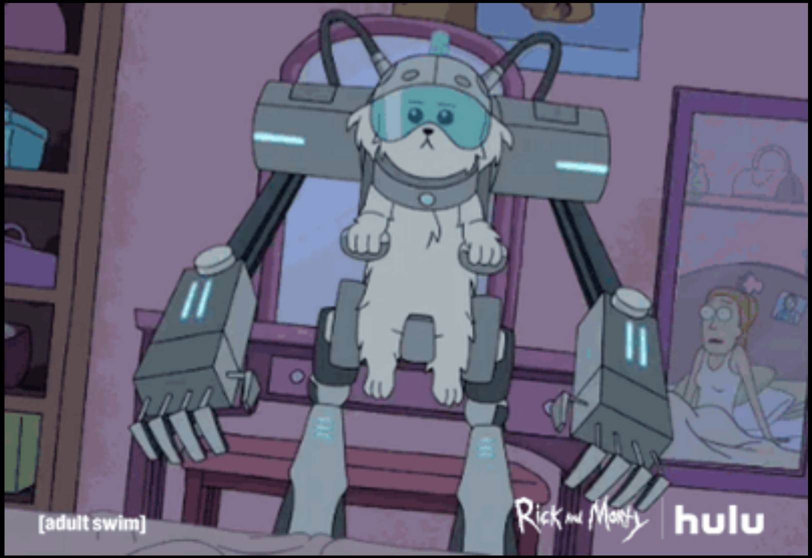
INTRODUCING AUTORIZE



My two Cents

- security is everyone's Job
- sometimes it only takes one small Mistake

QuestioNs?