

# Geex

Review

## CRAFTSMANSHIP

Made with  by X



**GEEX Blog:**

Coding Culture  
FTW: Feel The  
Win

**Taste of IT:**

The evolution  
of security  
Craftsmanship

**Did you know:**

Craftsmanship  
tips and tricks

**Geeks culture:**

Learn Reasonable  
React Coding

# EDITO

"Learn, Share, & Code"

"GeeX Review" is a quarterly digital magazine made by developers for developers. The main goal of this initiative birth is to spread coding culture & sharing the latest technology subjects with the community of developers & IT passionate. This edition is about "craftsmanship and coding culture"

The magazine sections are

◆ **GEEK'S BLOG**

◆ **TASTE OF IT**

◆ **DID YOU KNOW?**

- Technology reviews
- Top technology trends,
- Tips and tricks
- Recommended Blogs

◆ **GEEK CULTURE**

- Upcoming events
- GeeX box office
- Games & MEMES

This is an open collaborative magazine, feel free to send your suggestions about contents to the following address [geex.review@x-hub.io](mailto:geex.review@x-hub.io)

Submit



THE CODE KRAKEN

## About us

xHub is a global IT company, helping customers to scale their digital transformation strategy by delivering customized IT solutions & leveraging problem-solving skills of our experts.



## CODING CULTURE FTW: FEEL THE WIN

A great coding culture is often linked to having Billiard, free food, & office computer games. Having such an environment is incredible however, it ought not to be equated with the concept of CULTURE!

Indeed, a lot of tech companies are adopting this kind of lifestyle yet, but this has nothing to do with culture. Embracing a coding culture is a mindset!

Culture is related to how we think, how we win, how we lose Together ! it worth nothing that culture has the same importance as profitability. Business understands the value of strategizing for success, culture is an essential component of a successful business strategy. Aligning business goals with cultural values influences performance in a significant way.

This article shares our experiences at [xHub](#) on building and maintaining a strong coding culture.

xHub was built with a clear vision to be the best spot for any passionate developer & to probably be the best delivery accelerator for any customer when it comes to problem-solving & tech excellence with DevOps & agile styles of work! So obviously Coding culture is at the heart of our identity. It's also our main constraint design for anything we are building.

As a senior developer & founder of the company, the idea was to create the best place where developers are the kings, the crown holders, to be more specific the decision-makers, no doubt about it. At xHub, the developer is always first before even the customer. This is how the coding culture is so important to us, and for sure it plays a big role in our:

- Hiring policy.
- xTalents empowerment.
- Every customer touchpoints in our [SMarketing](#) Lean Loop: from product design to delivering real value to the customer toward excellence with mutual respect & integrity (*we never compromise our culture in pursuit of business performance and success*).

Coding culture for us is the outcome of all decisions made by our organization, it's been a big part of our BHAG -Big Hairy Audacious Goal- for years: "xHub is a global company with a strong coding culture fostering innovation in their products & services". We don't just believe in our culture, we believe in our people and we give them the freedom to be awesome.!

2 years back, when the company started to scale, [Mohammed.A](#) (currently our head of engineering) the first-ever xTalents- talked about our golden circles "hoping that if we get lost someday, we come back here to remember our purpose, our cause, and our belief!" as quoted from his [blog](#). Yet with our strong culture & clear purpose, we've been always focused on building frameworks & methods to



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ensure keeping the culture on track, as a result, we are performing better in the long run. And we continue to grow. We strive to ensure that our culture remains alive and well, we keep always updating it the same way we iterate our clean code!

### ➤ **Coding culture** remain always the voice of our organization & defining it help us on:

- Attract & engage the best xTalents & help them do their best work.
- Define & maintain a unique & authentic brand that specify who we are and what we are creating.
- Put collaboration first & make smart decisions to enjoy the journey together.

Thus, before talking about the coding culture at xHub, we all know that when it comes to talking about company culture in general .it fluffies the topic and ends up being a convoluted one. While there are recognizable factors that influence organizational culture as listed in [Wikipedia](#): «vision, values, standards, frameworks, images, language, suppositions, condition, area, convictions and propensities» - it's far beyond that, trust me, particularly with tech companies and significantly more with a developer-first company like xHub.

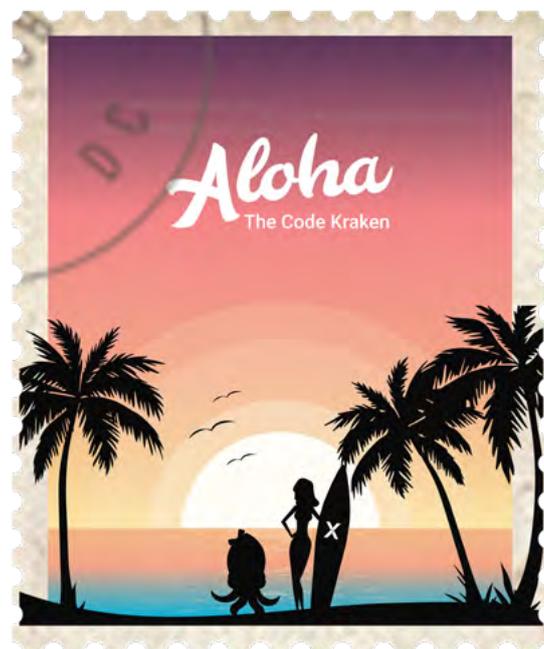
Imagine a culture where we think big and & to be different in driving towards new horizons, we love challenges and we are free to make mistakes, explore possibilities, and dig for the perfect solutions. A great coding culture that favors autonomy & ownership and focuses on empowering employees and making them productive and happy by working on the challenging stuff they love. A culture that encourages innovation & forward-thinking to always surpass customer expectations & execute everything with focus and agility to drive for sustainable growth. In this blog I will try to provide some examples from our experience at xHub that prove once you're working in a great coding culture, you will hardly think to move somewhere else :

### ➤ **Culture of Achievement & Excellence**

- Our Motto is always **FTW** and always make the customers **FTW**. this term is referred to '**Feel The Win**' to us as a team and to the customers. Creating a great user experience for us it's not an option it's a MUST.
- Our goal is to create an impact with our Aloha spirit. We're sufficiently valiant to think greater & we got the power to transform ourselves, our customers, and communities.
- We strive for professional excellence to the highest standards possible consistent with the goals of every project.
- We execute with focus & agility to drive for sustainable growth and development, and we put safety and quality as our highest priorities.
- We exceed customer expectations through active engagement, focus, and a passion for innovative solutions.

### ➤ **Culture of happiness**

- in xHub we breathe code, in our communities, we spread that breath. we believe in the power of sharing, for that, we are positioned as a real catalyst for IT talents in the region of Africa .we organize various large-scale events in Morocco such as : [Devoxx Morocco](#), [Devoxx4Kids](#), as well as monthly technological Meetups.
- A teambuilding once a year is always a good deal. We are always excited about enjoying activities together as we all have a family spirit and this kind of actions bonds us even more.
- People are the magical ingredient, we learn together we share our knowledge and most importantly we empower each other. That basically help us to bring the best versions of our selves.
- We celebrate success, birthdays, small/big wins, rockstars , our achievements & finally our selves because simply we deserve it!



### ➤ **Culture of Passion**

- We share the same love: The love of CODE.
- We live to code, creating great software make us happy.
- We are challenge enthusiasts plus, we pride ourselves on the quality of our work.
- We choose the best challenging projects and we drive leadership with our customers, we do no

maintenance. Why? because we believe in the religion of clean code.

- We are free to make mistakes, explore possibilities, and dig for the perfect solutions, fail fast, learn and learn and move on... Life is too short.
- We're a Value-based structure, here below some of our Engineering circle values:
  - Always write CLEAN CODE.
  - Try to find a better way to solve the problem.
  - Be pragmatic: Balance your passion between clean code & solve customer problem to FTW : Feel The Win.

### ➤ Culture of team

- Collaboration and communication are the keywords for us. Acting as a team is a must.
- We win together and lose together, no finger-pointing instead everyone is Focused to solve the problem.
- We adopt the fail-fast and learn from failure kind of attitude.
- We believe that together: Everyone achieves more.

### ➤ Culture of leadership and empowerments

- We are committed to the success of our company through personal responsibility and leadership.
- Leadership and superior performance are achieved through the pursuit of personal excellence.
- We seek continuous improvement and take pride in what we do. We do things to the highest possible standards.
- We acknowledge the potential of the individual and create opportunities for all to grow and excel.

### ➤ Culture of respect and integrity

- We lead from a position of trust, openness, and transparency.
- We act ethically, treating everyone with honesty and respect, and we follow through on commitments we make.
- Our people are authentic and adhere to the highest level of ethics and integrity.
- These values define who we are and how we think about ourselves, and how others see us.

### ➤ Culture of innovation/creativity

- We always give free time to think, develop through company R&D and OSS projects.
- We constantly look for new ideas and value "out-of-the-box" thinking.
- we organize our own 24xHack, our internal hack every semester.
- We value the entrepreneurial spirit as we foster an environment that is conducive to innovation and change by creating a whole program "xPrenneur" that enhances the innovation culture.

### ➤ Culture of people

- Hybrid & autonomous people are the key for having a great workplace.
- A great workplace is not espresso or the nice Moroccan tea we make, it's not the Billiards or the lunches together (*Tajines, couscous...*)... We do plenty of these things, but only if they are efficient at attracting and retaining outstanding people.
- We put the highest priority on recruiting, developing, and retaining outstanding people. In fact, xHub now is a diverse pool of the most talented developers in Africa.
- We put a mentor and a buddy for every new hire in order to get them involved in the culture and the Mindset.

With all that said a great coding culture needs to be focused on people, their needs, and accomplishment without forgetting values that give cultural stability. Remember products and services can come and go culture and values stays. Always keep in mind that when we learn together when we help each other to grow when we educate each other when we guide each other towards improvement. That is the best of coding culture.



## BADR EL HOUARI



A serial Dev-preneur & creative Technologist with 12+ years in designing, architecting and building efficient IT solutions. The only Moroccan Java Champion since 2016 & Oracle Developer champion since 2016, CIO & Founder of xHub company & Chairman of Devovx Morocco : The largest developer conference in MEA, a happy father & Husband who enjoy coding, surfing and riding in his free time

# TASTE OF IT

## APPLICATIONS SECURITY ON CLOUD-NATIVE INFRASTRUCTURE



### RACHID ZAROUALI



Rachid Zarouali is a Docker Captain, Community Leader, international speaker and trainer. In his previous roles as head of the infrastructure team for the French registry and C.I.O of a worldwide recognized CRM and E-COMMERCE agency, he recognized the need to bring the latest technology at a production level to businesses of all sizes and founded SevenSphere. Through SevenSphere, Rachid offers training and consultancy for companies striving to dive into microservices container based infrastructure. Happy Husband and father, Rachid spends his spare time, participating in a number of OSS communities, teaching cloud computing architecture at a software engineering school



### FROM THE ORIGIN OF IT, HOW ABOUT SECURITY

Since the birth of IT, security was already a big concern. IT was all about hardware obviously and managed by the experts. There wasn't any wireless network, or software security layers, one-time passwords, security signing keys so on and so forth, everything was related to chips, assembly and jumpers :) the IT as we know it, went through different mutation stages, from an all about hardware mindset to an all-software (*remember how Microsoft began its journey by being the first-ever to license a software when all IT companies were strictly focused on the hardware*).

The hardest part in this paradigm shift is probably about the application itself, it's own codebase, libraries. We spent almost 30 years bringing hardware devices and Operating systems the security level they offer now (*and don't get me wrong, this journey is nowhere near to be finished*), It was all about infrastructure security. Around 10 years ago we started to discover (*the hard way*), security is no more about hardware devices or Operating systems (*or let's say the concern shifted*), but about applications, %90 of security threats are against the applications hosted on the Infrastructure.

### WHERE ARE WE NOW AND WHAT'S THE RELATIONSHIP WITH CLOUDNATIVE ECOSYSTEM?

We've grown a lot since the beginning of this IT new era started in the year of 2000 writing an application wasn't only possible for researchers, IT costs dropped down drastically. We've begun to collaborate worldwide, we've learned how to be better at writing our applications. At the same time, we had to move faster and faster, writing better applications

with less time. We started to build frameworks and software libraries to make our life easier when writing new applications. What's the relationship with the cloud-native ecosystem you might wonder? Everything nowadays is about software, and we run containers smoothly thanks to docker, cri-o, railcar:

- SOFTWARE. We have access to powerful orchestration and deployment solutions (*Infrastructure as code, configuration management system, ...*)
- SOFTWARE. We can build shiny UIs, use powerful database engines, create highly scalable API backends
- SOFTWARE. We are entirely ditching the hardware layers (*look at serverless*).

SOFTWARE today is everything meaning CLOUDNATIVE ECOSYSTEM is all about software.



## WHAT DO YOU MEAN EXACTLY? , ALL APPLICATIONS ARE BROKEN, WE FAILED ALONG THE LINE?

Hopefully, no at all! A lot of software used in the cloud-native ecosystem is highly secured, or developers are working hard to push their security state to the top! Let's say that while top engineers and security communities are very well versed, most developers aren't, and don't get me wrong **THIS IS NOT ON THEM!** We should learn (*and we'll learn it the hard way sooner or later*) that we can't possibly ask our development teams to go faster, to build shiny UI, better software, add more features and at the same time keep everything safe and secure! this will obviously lead to untested pieces of software, deprecated libraries, un-maintained frameworks, and as a result of major security issues.

IT became (way too) easy to break an application and to gain access to its data, rather than breaking the Infrastructure itself if you look closely at reported vulnerabilities (*mainly called CVE's*) they are now mostly related to software.

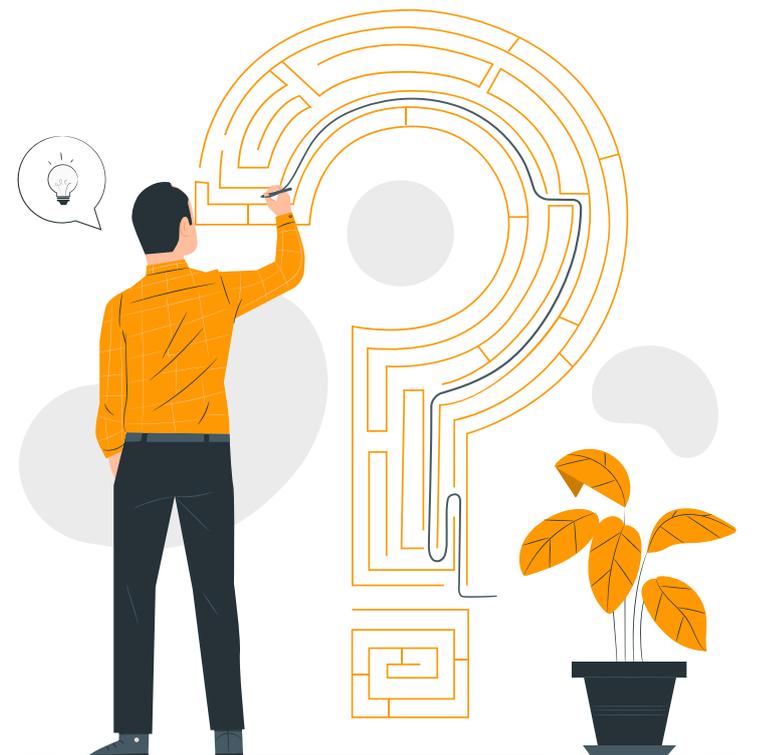
As bad as it may seem to you now, we are definitely not desperate, far from it thanks to our awesome community and its education effort and interest, we do have best practices we can apply, great tooling, method, workflows, and a huge amount of materials (*documentation, tutorials, videos, workshops, ...*), to help our developers' team-building better and secure software. But this is not enough if we don't fight our biggest challenge, our worst enemy ... Ourselves! everybody in the company, the community, the project, should be concerned about security, and put time and energy on this not so easy topic (*let's be honest*).

This is not a one time job or the job of a single team. A simple look at the latest data breaches exposed this year will help you understand the issue. Us as humans, most of them using top-notch pieces of software (MongoDB, elastic search for example), so what was missing there then? In most cases, their configuration wasn't strong enough to avoid a data breach.

## BUT WE'RE HUMAN AFTER ALL, WE MAKE MISTAKES, HOW TO OVERCOME THOSE BIG CHALLENGES?

Again thanks to our community, we are not alone, and if we work all together, this is definitely a war we can win! First of all, we should:

- Give time to our teams to take into account their day to day job, this serious concern. Time is money, some say, but security breaches cost way more than that when found, abused, and exposed publicly.
- Train our teams, so they can leverage testing frameworks and workflow, security auditing tools, code coverage, and more. The more they are trained into, the more efficient they will.



As an example, we can think of continuous integration and deployment (*commonly known as ci/cd*) implementation using famous tools like Jenkins, GitLab, Travis, and circle-CI which will provide the necessary framework to test, identify and fix security problems. Tooling is essential, SonarQube again is a good example, but the choice of this toolchain composition is critical also, the steep learning curve is discouraging, complex configuration languages too.

I push the **KISS** principles (*Keep It Simple and Stupid*), the easier, the better, the faster the adoption and implementation will be, no questioning about that. What I can share, on the other hand, is experienced, successful projects on this topic, . We started by building the CI/CD platform, adding checks earlier in the process (*code coverage, vulnerability scans, end to end testing, ...*). Perhaps, more importantly, we build a workflow to make sure any issue raised by the CI/CD, was identified, analyzed, and added to task planning. You can build the perfect car if nobody buys it, you lose, the same goes for this example.

## OK! GREAT, BUT WHAT ABOUT KUBERNETES THEN? YOU SEEM TO TALK A LOT ABOUT SECURITY IN KUBERNETES LATELY

Ah ah :) Yes indeed, as you may know, I help my clients moving to the cloud or implementing containers and orchestration on-premise. Of course, Kubernetes is a cornerstone on that kind of projects, to be honest, Kubernetes is a fantastic piece of software, it offers some pretty powerful features available out of the box (*auto-scaling, self-healing, ...*). Kubernetes is a great example where this biggest challenge regarding the software is human, one bad configuration, one misbehaving, and your cluster could be exposed to threats. The learning curve is steep, but the challenge is definitely worth the price.

Let's take an example where the application is well made, secure, and continuously tested using a complete CI/CD platform. Well now we are facing the opposite statement from the beginning, wrong Kubernetes configurations can expose you to data breaches or application corruption. As an example of things that should NOT be left exposed, the "brain" of Kubernetes, called the API-SERVER, is responsible for everything happening in your cluster. Exposed without security is more or less like going on vacation for months, leaving your door widely open with your credit card and codes on the desk. This is true even for some managed services, managed doesn't mean closed. My takeaways here regarding Kubernetes is to leverage some out of the box features like:

- Role-Based Access Control (*enabled by default in most cases, but should be configured for your applications and users*).
- Networking filtering (*make sure nobody can access your database engine for example*).
- Namespace (*logical segregation between your applications*).
- Exists some advanced features related to control and limit from where and how your application is deployed and run (*registry lockdown, image signing, ...*)
- But again the learning curve is steep, and we should move on, one step at a time :)



## WHAT WOULD BE YOUR CONCLUSION?

Here's what I think as a conclusion. take security matters seriously; involve everybody at the beginning of your project. Train your teams, invest in the human before investing in the tooling. don't hesitate to share your experience and learn from the community: **"If you want to go quickly, go alone. If you want to go far, go together."**  
~African proverb.

Keep in mind that CI/CD is not an option; it's a critical part of your project success. Kubernetes is not a commodity. It's one of your best friends, learn about it and how to take care of it as you take care of your friends and family

## HOW ABOUT THE FUTURE?

The future is bright! Security is gaining interest, and the knowledge and tooling around it are growing bigger and better. We have the keys to our success in our hands, let's collaborate to succeed and make the I world a safer place :) I train students and professionals into Docker, Kubernetes, Terraform and more, and I hear more and more questions and see more significant interest from the attendees about security, which is very encouraging! We are on track moving faster than before, let's not wash our effort and keep going!

# DID YOU KNOW?

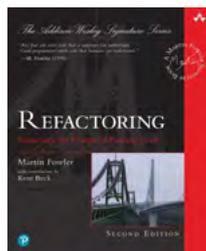
## TECHNOLOGY REVIEW

### CRAFTSMANSHIP

## CRAFTSMANSHIP BOOK



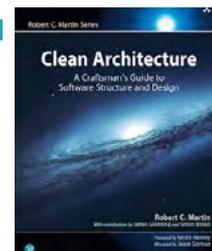
**HEAD FIRST DESIGN PATTERNS**  
Eric Freeman



**REFACTORING**  
Martin Fowler



**EFFECTIVE JAVA**  
Joshua Bloch



**CLEAN CODE**  
Robert Martin



## TIPS & TRICKS

### ➤ **Seek for knowledge**

You need to have a will to self-improve. it's gonna sound cheesy but computer science is like art, you are the Picasso and your code is your beloved piece of art, it needs to be clean and readable to all .to achieve this level you need to grow and thus your art will grow with you, to doubt and review your code as many time as it takes. Never forget that engineering or crafting although is an art it's a mean to an end.an artist uses his brush to picture his ideas, at "The end" in our case is the business needs. The artist idea here is that the business needs to be well painted and crafted

### ➤ **Be open to critics**

It is a very healthy and challenging practice to have a project where you can learn by doing . collect both feedback and critics from abroad and large community another way is to study open sources projects and learn from them and try to reproduce what they already did another important

thing here is your code is not your own, everyone in the team will contribute to it, for that reason it needs to be readable and understandable

### ➤ **Communicate**

A common misconception about craftsmanships that it's all about code, well it's not, it's all about you, you need good communication skills to interact with your team, to defend your ideas and speak your mind clearly, but never forget before all this you should be a good listener because you have a very complicated task which is understanding the business needs and proposing the appropriate solutions for it, you shouldn't be hindered by changes or new features, on the contrary, take it as a challenge without forgetting that new inputs should make you reconsider everything. look at the forest, not the trees, remember challenges can provide real opportunities to learn and to improve. keep in mind TO SHARE your knowledge with the community.



Software craftsmanship is an approach that priorities **coding skills** of a software developer. To be a craftsman is not a matter of a book or two **it's a lifetime journey** that demands a lot of hardship and patience. **Software craftsmen "do it right"** even under pressure, they are always focused on developing well-crafted software and adding value to projects. Craftsmanship have a superpower that can help us build **better products, better developers for a better future.**



**Amine.M**  
Software architect



There is a big misunderstanding amid **software engineering** and **craftsmanship**. The first one is mainly focused on academic qualifications that means in real life, you are not deemed as a master in it which is not the case for Craftsmanship that demands both **work** and **time** in order to **master it**. to be a craftsman it's a **Mindset**. You need to be a **continuous learner** and very passionate about this world without forgetting to **share your knowledge with the community.**



**Hassan.B**  
Senior Full Stack Developer



# SOFTWARE CRAFTSMANSHIP BEST PRACTICE

Rules that every developer should follow straight from the software craftsmanship manifesto

## Not only working software, but also well-crafted software

- Simple solutions
- Clean code
- Use best practices, languages and patterns
- Care and be passionate about your work

## Not only responding to change, but also steadily adding value

- Add value to the project
- Commitment and respect for the work
- Test and do everything as good as possible



## Not only individuals and interactions, but also a community of professionals

- Sharing knowledge
- Develop soft skills such as communication
- Create an organized team and take care of the structure and quality of communication

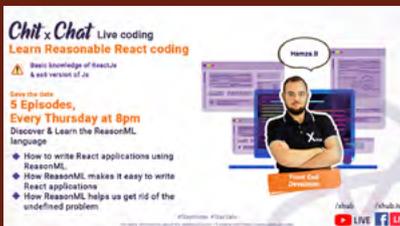
## Not only customer collaboration, but also productive partnerships

- Help business achieve their goals
- Work Agile respecting the project requirement ( budget, deadline )

# GEEEX CULTURE

## UPCOMING ONLINE EVENTS STAY SAFE, STAY AT HOME

Click thumbnail below for more information



**ChitChat: live coding**  
Starting **From June 11**



**Oracle OpenWorld Reimagined**  
Starting from July 22



**Web Summit**  
November 2 - 5

## GEEEX BOX OFFICE



### BAD EDUCATION

The beloved superintendent of New York's Roslyn school district become the prime suspects in the unfolding of the largest school scandal in history.



### ALITA

Alita is a creation from an age of despair. Found by the mysterious Dr. Ido while trolling for cyborg parts, Alita becomes a lethal, dangerous being.



### JUMANJI: THE NEXT LEVEL

The gang is back but the game has changed. As they return to Jumanji to rescue one of their own, they discover that nothing is as they expect.



### THE INVISIBLE MAN

Beneath a woman's striking beauty lies a secret that will unleash her indelible strength and skill to become one of the most feared assassins on the planet.

## OUR GAME'S CHOICE



### STICK SURFER

Help the legendary Stickson carve up the waves, cruise the dunes in his jeep, land some big air on the skate halfpipe or simply chill out in his beachside.



### CODE NAMES

Solve mysterious puzzles using code names in this unbelievable game

## COMMUNITY MEMES

