

Introducción al diseño

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Administrativa: Carta al estudiante



UNIVERSIDAD DE
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Diseño de Software

1. Características generales

Nombre:	Diseño de Software
Sigla:	CI-0136
Créditos:	4
Horas lectivas:	5 horas de teoría
Requisitos:	CI-0117 Programación Paralela y Concurrente
Correquisitos:	Ninguno
Clasificación:	Curso propio
Ciclo de carrera:	I ciclo, 3er año (énfasis de Ingeniería de Software)

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¿Qué es la ingeniería de software?



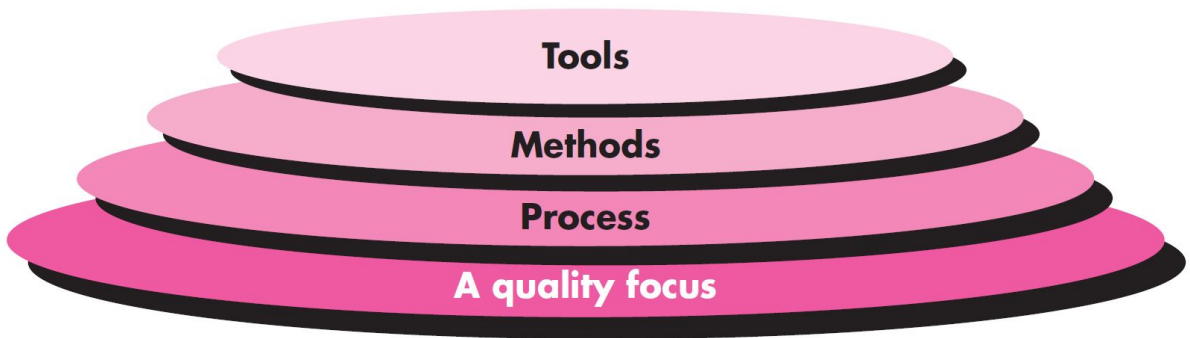
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“Software Engineering: (1) The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software. (2) The study of approaches as in (1).” IEEE

La ingeniería de software tiene muchas capas...



Un proceso de ingeniería de software tiene los siguientes componentes...

Actividades

Que tienen un objetivo grande dentro de un sistema que se aplica siempre.

Acciones

Un conjunto de tareas técnicas que se hacen para producir un producto de trabajo mayor.

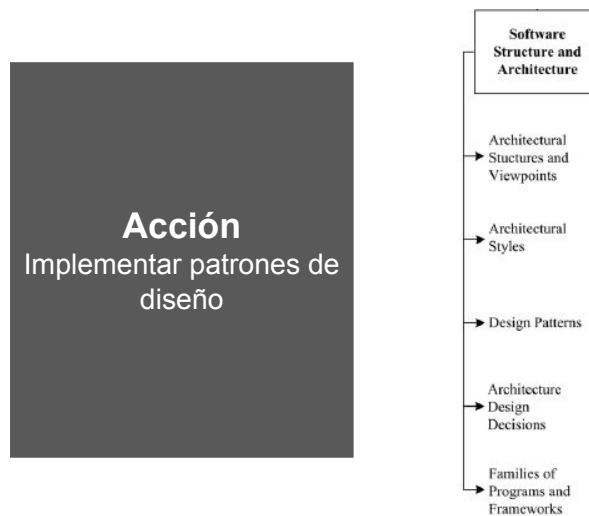
Tareas

Pequeña tarea enfocado en objetivo bien definido que produce un resultado tangible.

Un ejemplo de cada componente del proceso...



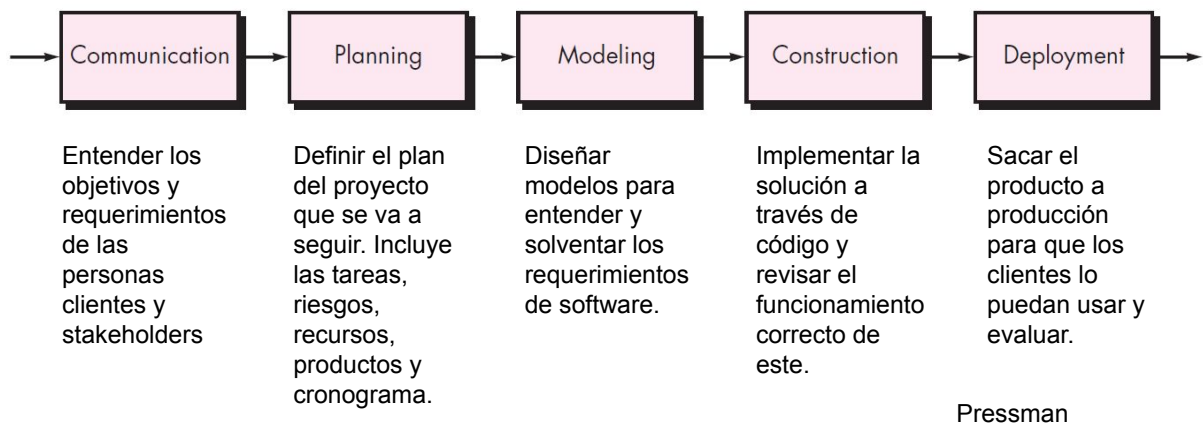
Un ejemplo de cada componente del proceso...



Un ejemplo en el contexto de diseño de cada componente

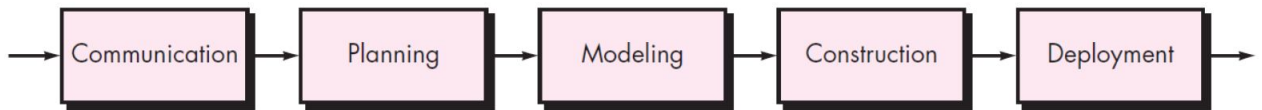


Un proceso “genérico” de ingeniería de software contiene las siguientes actividades...



Pressman

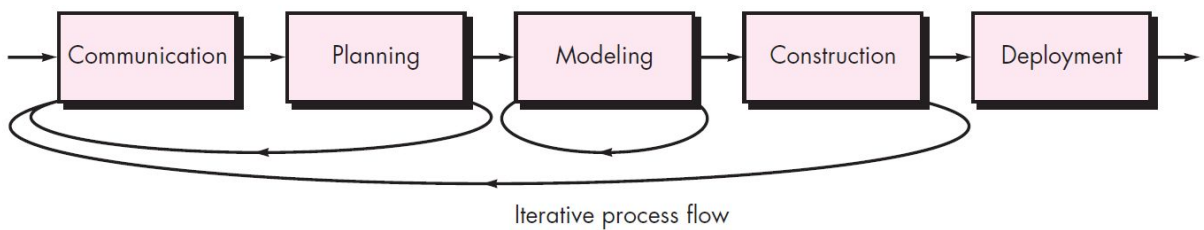
¿Cuál es la actividad más importante?



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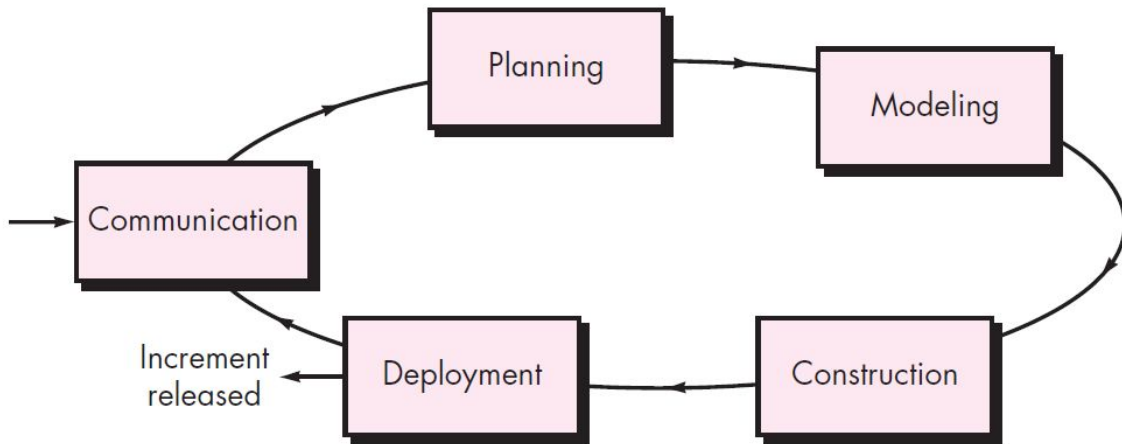
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Los procesos no son lineares



Pressman

Los procesos no son lineares



Evolutionary process flow

Pressman

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Cuál declaración es cierta

El cambio es raro y solo ocurre en respuesta a grandes innovaciones en el campo.

El cambio solo afecta los lenguajes de programación específicos o las tecnologías utilizadas, pero no la práctica más amplia de la ingeniería de software.

El cambio es constante, ya que las nuevas tecnologías, las expectativas de las personas usuarias y los requisitos comerciales evolucionan continuamente.

El cambio es un evento único que ocurre al comienzo de un proyecto de software y no vuelve a ocurrir hasta que se inicia un nuevo proyecto.



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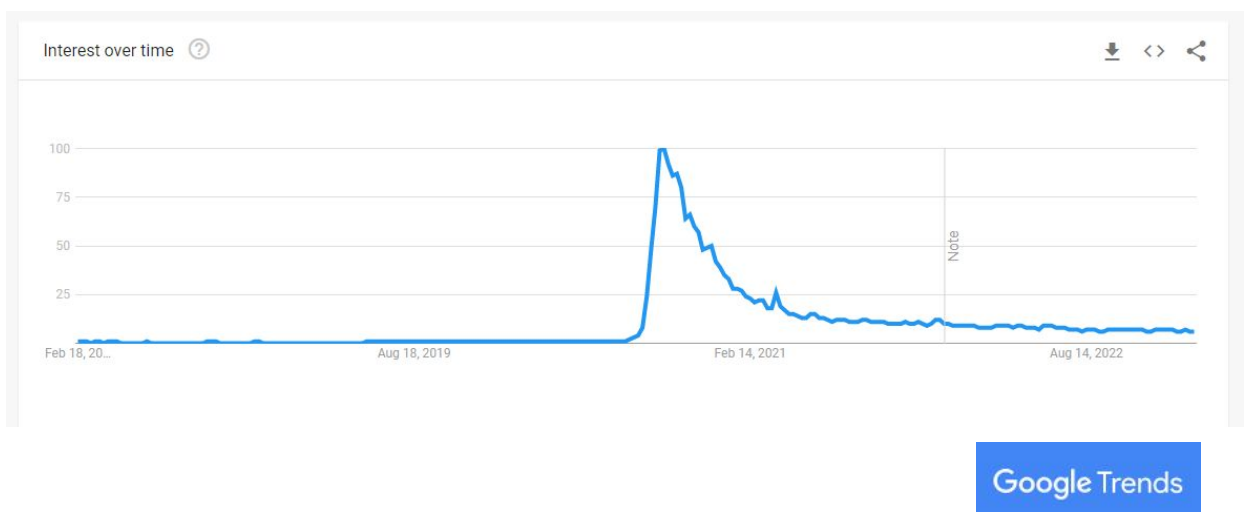
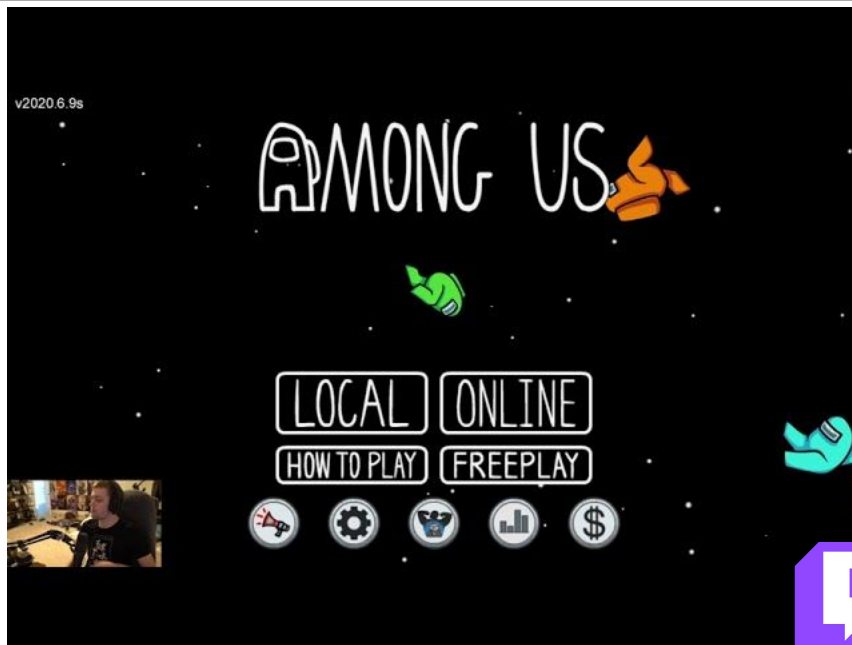
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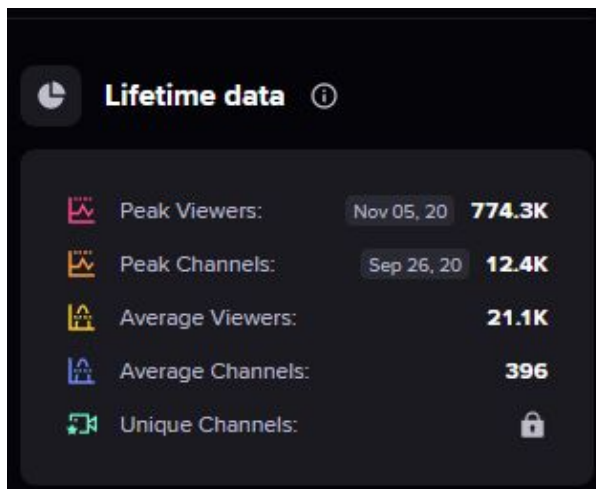
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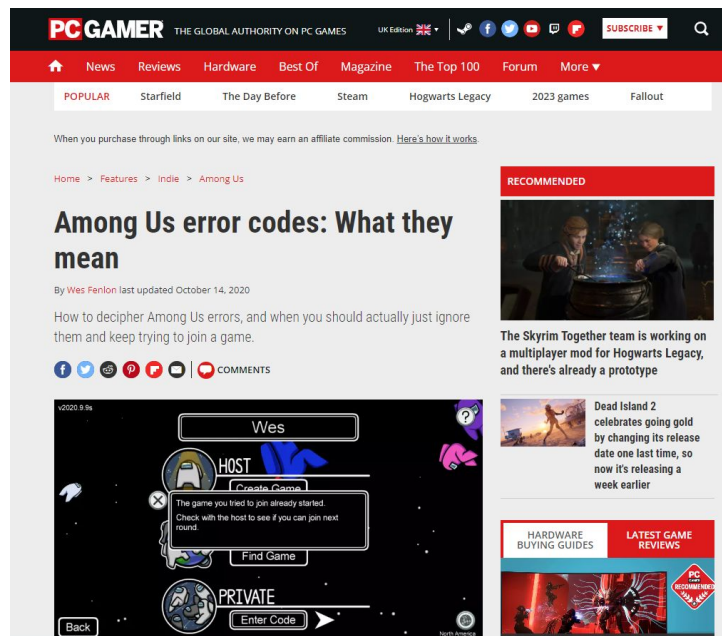
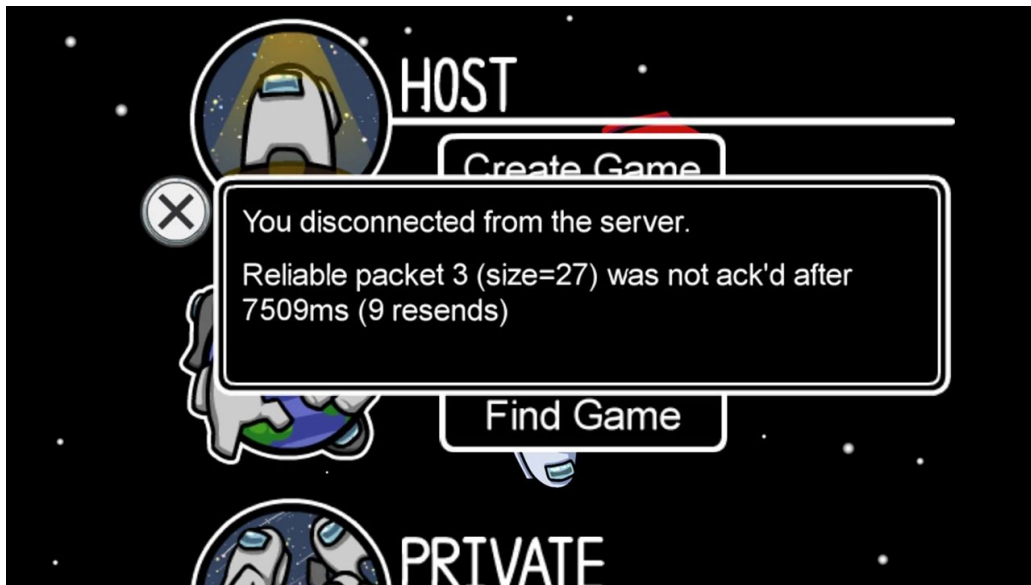
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Story time con un ejemplo reciente











Among Us 2

[Among Us](#) » Devlog

♥ Like 1376 2 years ago by [Innersloth \(@InnerslothDevs\)](#)

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Hi everyone! Time for a big post!

First of all, thanks so much for playing and enjoying Among Us. It's been crazy to see how much more popular Among Us could be than we ever imagined.

Second of all, yes. We're confirming Among Us 2. This post is all about what that means and why we're doing it.

First and Most Important

Among Us 1 servers will stay alive for as long as it has enough players to start games. When we first started, we found that players couldn't really play when the servers had fewer than 30 - 50 players per hour. But lately we have 70,000 - 110,000 per hour. We'd be crazy to shut off the servers on you in 2021! And even if Among Us 2 gets lots of players, we'll just run both at the same time. If Among Us 1 servers shut down, I will open source the code so players can run servers instead.

Among Us

An online and local party game of teamwork and betrayal for 4-15 players

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 Author [Innersloth](#)
 Tags [2D](#), [Casual](#), [Co-op](#), [minigames](#), [Multiplayer](#), [party-game](#), [Space](#)
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But why a sequel?


Among Us 1 has been out over two years. It started as a tiny local-multiplayer-only game and has grown and grown and grown. Online multiplayer took 2 months and a total rework to make happen, then 6 months per extra map, and horrible server growing pains along the way. It really was not created to be this big. Because of this, it's extremely hard to add more things without breaking existing things. Frankly, it's terrifying to add in more things because the game is so fragile. Fixing this would require recreating core sections of Among Us, then making sure everything else still works on top. It's actually even harder than just making a new game.



So the first goal of Among Us 2 is to be made to withstand growth. We want to add to it at least as long as Among Us, but with fewer bugs along the way.



The Future of Among Us

Among Us » Devlog

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 1019
 2 years ago by [Innersloth \(@InnerslothDevs\)](#)


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Hey everyone, PuffballsUnited here! It's been a very exciting time for us the past few months! We've absolutely loved seeing everyone enjoying Among Us! Forte has been working hard to get the servers adjusted to deal with the huge influx of players. Thank you so much for bearing with us through these growing pains. Hopefully we can get started on new content soon! Speaking of new content...

Us devs have had several long discussions about what we want to do with the game. When do we stop working on Among Us 1? What content goes into Among Us 2? The main reason we are shooting for a sequel is because the codebase of Among Us 1 is so outdated and not built to support adding so much new content. However, seeing how many people are enjoying Among Us 1 really makes us want to be able to support the game and take it to the next level. We have decided to cancel Among Us 2 and instead put all our focus into improving Among Us 1. All of the content we had planned for Among Us 2 will instead go into Among Us 1. This is probably the more difficult choice because it means going deep into the core code of the game and reworking several parts of it. We have lots of things planned and we're excited to bring new content to everyone as you continue to enjoy playing!

Among Us

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[Among Us Roadmap](#)

Here's some things that are coming on the horizon:

* Servers. Forte is still working very hard to figure out our server issues. We don't have an ETA but things should hopefully be getting better and better. This is taking up all development time on his end.

* Colorblind support. It's something we've put off for way too long... We plan on adding other identifiers for players as well as certain color focused tasks (Like wires). This should also open the potential for more colors. In the past we couldn't add more colors because it became too difficult to tell players apart.

* Friends/Account System. This is something we've wanted to do for a long time but just haven't been able to tackle. For the health of the game going forward we're going to sink our teeth in and figure it out! This one will definitely take some time.

* A new stage! It is still very early and we have only just begun designing the layout. The theme has been settled on though! The next stage in Among Us is going to be a Henry Stickmin themed location!

We have LOTS of other things planned too, we just need to prioritize and organize all our plans. Stay tuned!

[Twitch & Discord mobile integra](#)

May 10, 2021

[Clever and interesting dev log ti](#)

Apr 27, 2021

[LET'S GO AIRSHIP 🚀 New upd now!](#)

Mar 31, 2021

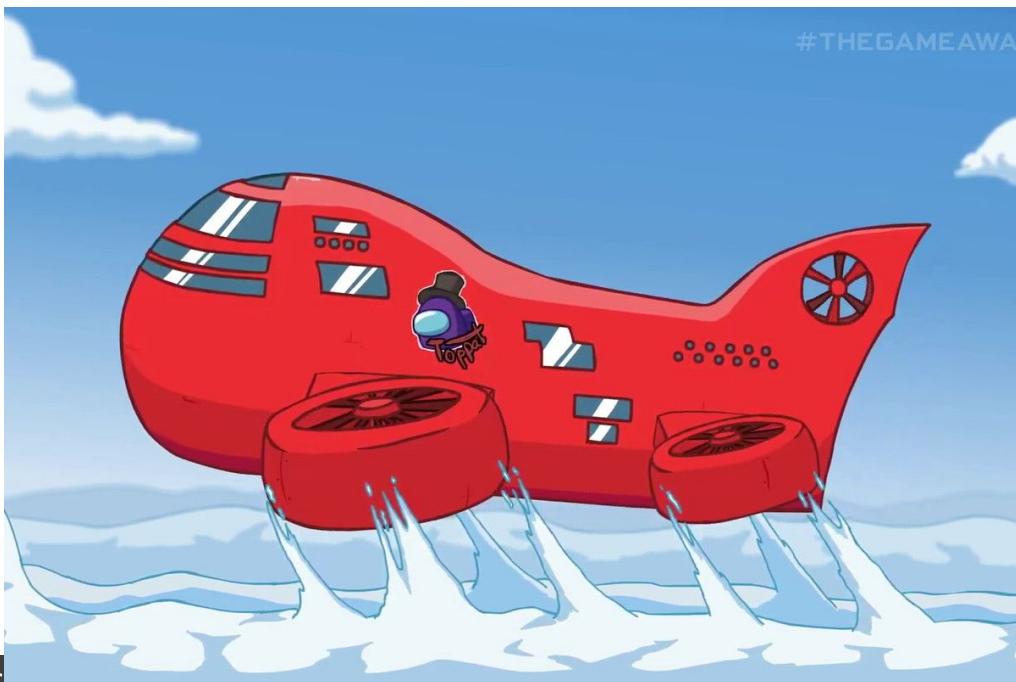
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--- Why is everything taking so long?? ---

- Among Us gained incredible traction pretty late into 2020 that we weren't expecting, and that meant A LOT of change for us. Not to dive into too much organizational stuff, but not only did we need to switch back to working on Among Us after thinking it was done, but we also needed to set ourselves up more sustainably to work on the game. We had to spend 2 months just restructuring, figuring out new processes, and getting external partners to help us manage on board. Originally it was just 3 friends working together (and now I'm here to make 4, hi), but if we wanted this to work long term and hire up, we needed to streamline things. It's all behind the scenes work, and while it meant time away from the game, it'll make it easier for current and future us to develop the game better. Not to mention additional platforms (like Nintendo Switch and Xbox) means more support, certifications to go through, and whatnot. We have help from our porting partners for that, but it still means we need to make sure future things we do are supported on those platforms. There's a ton of other things out of our control (legal issues, meetings, planning), so sometimes these things take longer as well.
- Thank you SO much for the patience as you wait for the next big update! We want to do more for you to show you how grateful we are, but without sacrificing on the quality and values we had before this blew up.

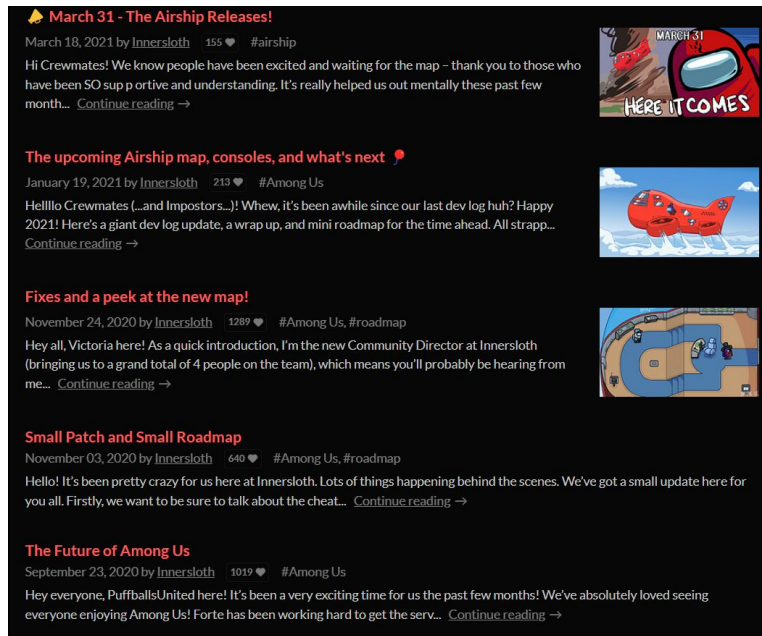


- Why did we not release a map ASAP?


I explained this a bit in our last dev log, but Among Us' popularity was something no one expected, and quite late into 2020 too. (Thank you for that!!) We had already considered the game done and had moved onto something else. And while it may seem odd things took a few months, it's quite normal in game development, especially for a team of our size. When you work in an official capacity and need to handle various business needs, there are more legal considerations that need to be put into it versus if it were just a side project or mod!

Additionally, creating a map and updates isn't as simple as creating one aspect of the game and throwing it onto the PC. Because our game is cross-platform, it means EVERYTHING needs to work on as many devices as possible. (Every kind of smartphone and its various versions, console, etc.) You may have noticed most modifications to the game focus on just PC, as that makes development much easier.

When a game becomes unexpectedly popular it's great, but it brings a whole slew of other problems we were extremely new to, which I'll outline below. That being said, we're extremely grateful for all of the success we've found. The explanation of problems is just that – an explanation! Not a complaint. Thank you for letting us be a part of your lives. 😊

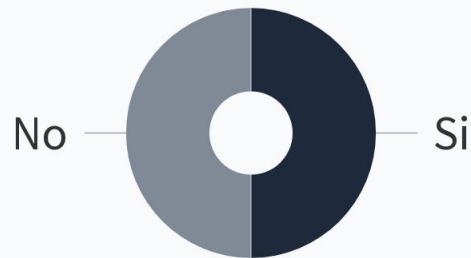


¿Conocen ustedes algún otro ejemplo?

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¿Es importante manejar el cambio?

 Si  No



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¿Es importante manejar el cambio?

 Si  No



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¿Cómo creen que se relaciona los ejemplos anteriores con el diseño de software?

Top

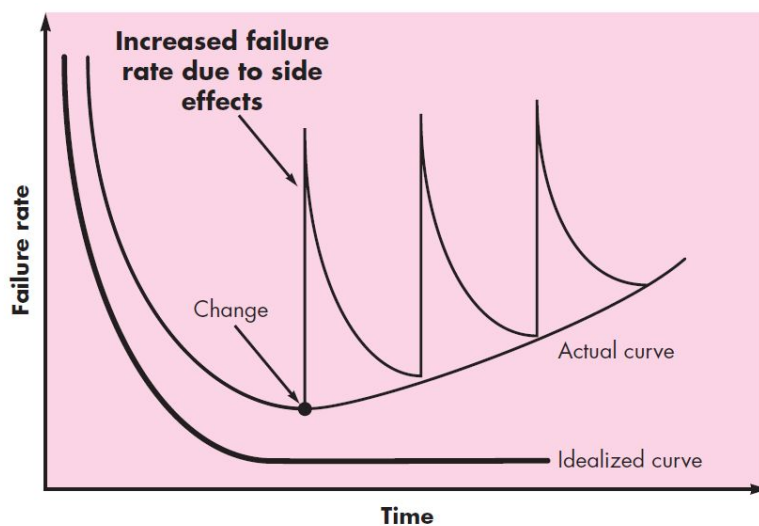


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El software se deteriora con el tiempo...



¿La relación entre el diseño y la deterioración de software es?

Al hacer que el sistema de software sea más complejo y difícil de modificar, lo que desalienta a las personas desarrolladoras a realizar cambios que podrían introducir errores.

Promoviendo la modularidad, la encapsulación y otros principios de buen diseño, que pueden hacer que el sistema de software sea más fácil de modificar y mantener con el tiempo.

Evitando el uso de patrones de diseño y otras mejores prácticas establecidas, lo que puede conducir a un sistema de software más único e innovador.

Priorizando la funcionalidad sobre la mantenibilidad, para garantizar que el sistema de software satisfaga las necesidades del usuario en el corto plazo.

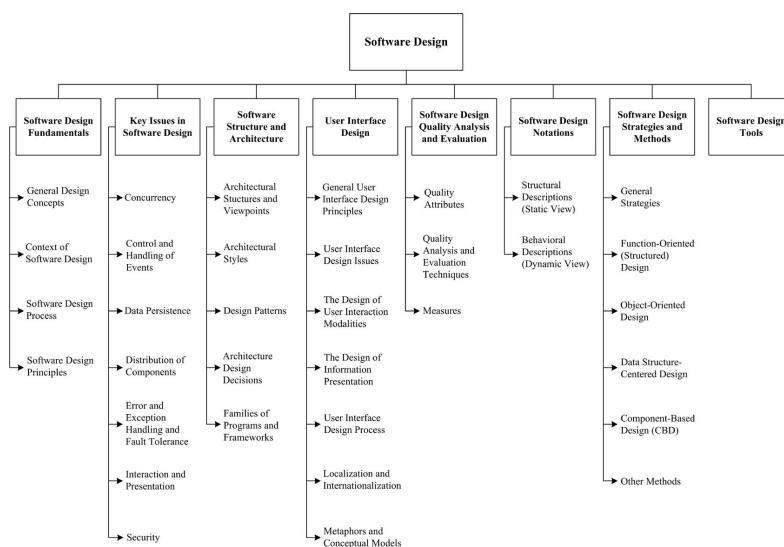


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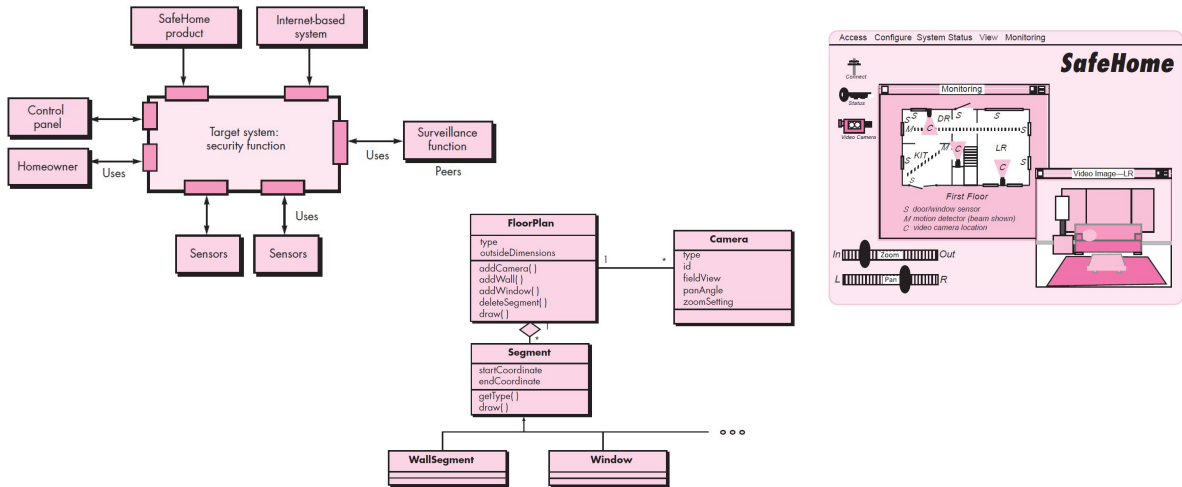
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¿Qué encapsula el diseño de software?



En la práctica, en el diseño vamos a crear varios artefactos...



En realidad están en un semestre de diseño :)

CURSOS DEL ÉNFASIS EN INGENIERÍA DE SOFTWARE

III AÑO

I SEMESTRE

CI-0121

3

Redes de Comunicación

Requisitos:

CI-0115, CI-0116, CI-0118

Correquisitos:

CI-0123

CI-0122

3

Sistemas Operativos

Requisitos:

CI-0116, CI-0117, CI-0118

Correquisitos:

CI-0123

CI-0123

4

P.I. de Redes y Sistemas Operativos

Requisitos:

CI-0116, CI-0118

Correquisitos:

CI-0121, CI-0122

CI-0135

4

Interacción Humano-Computador

Requisitos:

CI-0113

CI-0136

4

Diseño de Software

Requisitos:

CI-0117

Referencias

- Pressman, R. S. (2010). Software engineering: a practitioner's approach. Palgrave macmillan.
- Bourque, P., & Fairley, R. E. (2014). Guide to the Software Engineering Body of Knowledge (SWEBOK (R)) Version 3.0.