

Principles of Game Design

Challenge 1-1

Name the different development roles needed to make a video game

- **Game Artist**
- **Game Developer**
- **Game Designer**
- **Narrative Designer**
- **Producer**
- **Marketer**
- **Coffee Provider**
- **Story Designer**
- **Sound Designer**
- **Manager / Leader**
- **Playtester**

(2nd answer) **Concept artist**

Challenge 1-2

a. Define "Game Designer"

A game designer, in my vision, takes the role of the fundamentals of a game and the way all mechanical concepts bundle together for a playable product.

b. What are the attributes / skills / knowledge of a game designer?

A game designer should be aware of the game industry, and how it develops. He/she should keep the rest of the team up to date about what's going on in the industry. Also, the game designer must be able to think critically about game mechanics and fundamental concepts. Mapping out ideas, developing concepts and brainstorming.

c. Name 5 game designers from 5 games you have played.

- 1) Keiichiro Toyama, Silent Hill 1 & 2**
- 2) Edmund McMillen, Super Meat Boy & The Binding of Isaac**
- 3) Gabe Newell, Half-Life/Team Fortress/Portal**
- 4) Jim Rossignol, Sir You Are Being Hunted**
- 5) Mike Dailly, Grand Theft Auto**

Challenge 1-3 (Home)

1 – Who are credited as the game designers of the following games:

- Sim City -> **Will Wright**
- Super Mario Bros -> **Shigeru Miyamoto**
- Populous -> **Peter Molyneux**
- Dungeons & Dragons -> **Gary Gygax & Dave Arneson**
- Lord of the Rings (Board game) -> **Reiner Knizia**
- Magic: The Gathering -> **Richard Garfield**

2 – Name (at least 5) sub-disciplines related to the following game development specializations:

https://en.wikipedia.org/wiki/Video_game_design#Disciplines

- Game Design -> **Concept Design/Game Writing, Level Design, User Interface Design, Production, Playtesting**
- Programming -> **Architecture, System Design, Level Design, Compatibility, Production**
- Game Art -> **Texture Design, 3D Model Design, Art Director, User Interface Design, Game Feel**
- Game Sound & Music -> **Sound Effects, Composition, Ambience, Environmental Sounds, Audio Systems**
- Other -> **Playtester, Narrative Design, Story Writer, Marketing, Production**

Challenge 2-1

1- Define game.

A game is an interactive application, meant to either give the player a certain emotion, an (enjoyable/challenging) experience or something inspiring.

2- What is the holy grail of game design?

The holy grail of game design is a concept that is new and never seen before in its form, and also provides the user with something refreshing and amazing. It either educates the player, shows new views of artistic expression, or is a source of inspiration for culture.

3- Why do we play games? What do games add to our lives?

Depending on the game we play, we use it as a past-time activity, or play it for a story. It could be regarded as an interactive movie/environment the player gets to have freedom in.

Challenge 2-2

- 1- How would you feel if one of your players died because they played your game too long?

It would be kinda bad of course for it to happen, but this wouldn't be my responsibility. I mean you should understand that any media experience or interactive application shouldn't take over your entire life and health. It is in the player's hands. Same thing as drinking too much water. Everything will kill you if you use/do it too much.

- 2- How would you feel if one of your players kills another player (in real life) over your game?

It has happened before. Games aren't meant to harm other people directly. (Unless I'm missing something here) But what the player does after getting influenced by the game, is completely up to them. I will feel guilt, but wouldn't feel responsible.

- 3- How would you feel if research showed that your game was harmful?

Games aren't necessarily healthy activities. And people already know this. But this shouldn't have to affect the reputation of the said game, because people will keep playing it. See it as "smoking kills".

- 4- How would you feel if your life was threaten by one of your game's players?

I would feel disappointed about the fact that a game would cause that much outrage for life threatening consequences. It would need a very good reason for something worth threatening for.

Challenge 2-3

- 1- Are these really issues?

These are real-life issues, which affects almost anything, beyond gaming. So of course, a media like gaming would also have to deal with these.

- 2- Do you think videogames can have this effect?

Yes. In my opinion, anything can be abused/addicting. And if movies can already be controversial, games are completely in for it then. Since it allows the player to fully explore/take actions in a virtual environment, it increases the chances for controversy to happen.

- 3- (Take Home) Find 5 games that you think are controversial.

Postal, the entire Grand Theft Auto series, Wolfenstein, Manhunt, Silent Hill

Challenge 2-4

Read & Reflect

Game Studies

*What I understood about the fundamentals of a "game", is clearly addressed in this book. The **classic game model** is a system which analyses how a game works, and applies for everything we understand under the idea of a game. It also traces back history and proves that around a thousand years ago, there also were games around.*

The model describes that a game consists of six fundamental parts:

- 1) A system that is either a hypothetical, digital or recorded framework of rules.*
- 2) A variety of outcomes that differentiate themselves from each other.*
- 3) The different outcomes hold different values within them.*
- 4) The player can interact in a way for the outcome to change accordingly.*
- 5) An emotional reaction is generated by the outcomes.*
- 6) Interactions the player can make are either optional or considerable.*

*Not all games conform to this model, but this is a theoretical representation of how games **do** work as a concept. With this model you can see the diversity a game could have. In history, games have either changed or broken the rules of the model, which also proves how broad this medium of gaming is.*

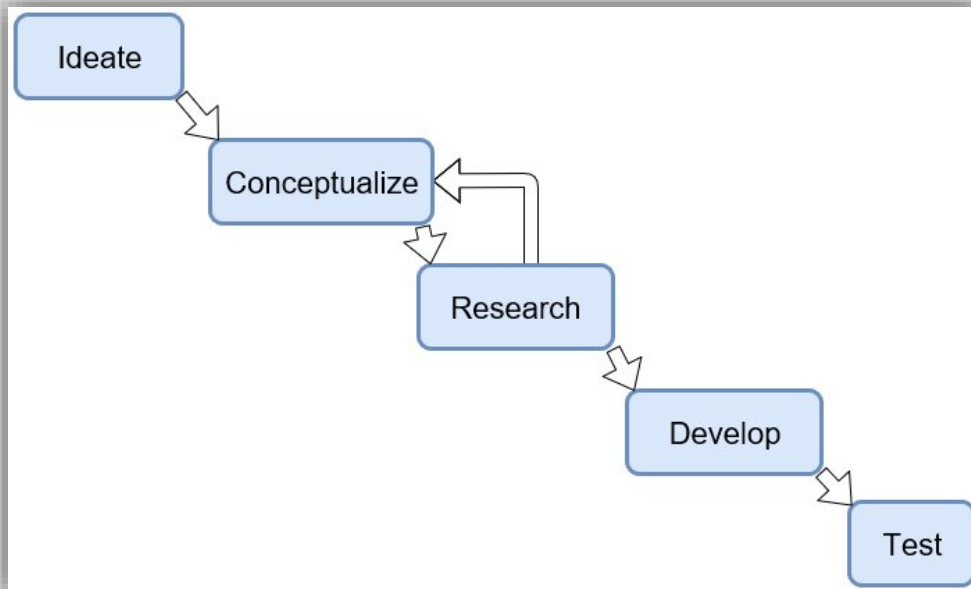
*In fact, gaming is should a broad term that it applies to everything that follows at least some of these rules. Besides the obvious video games we have card games, board games, sports, kids games, interactive narratives, and all sorts of other **games**. Gaming media is wider than movies, music or books since it's a multi-media experience.*

*Game schemas are essential for analyzing a game. It is a way for dissecting any game application, and looking at the fundamental concepts. It's tough to see how a game works on the surface, by just simply glaring at it. But once you have a good technical view of its innards, some things become clear. It becomes clear that the said game is based around **Rules** like in the model. Rules are mathematical boundaries applied to a game, adding balance and challenge to it. Besides rules it is essential for a game to **Play**. This defines as the emotional experience the person has. Aside from that, a game has **Cultural** value. This means that the game revolves around a culture; A context of people interested in it.*

Time and space is needed to give a game boundaries; A game has to be limited in order for it to give clarity and be fun for the player.

Challenge 3-1

- 1) Draw a diagram of the game design process. Ask yourself: What do you think the game design process looks like? Are there phases? Is it a cycle? How do you begin? Where does it end?

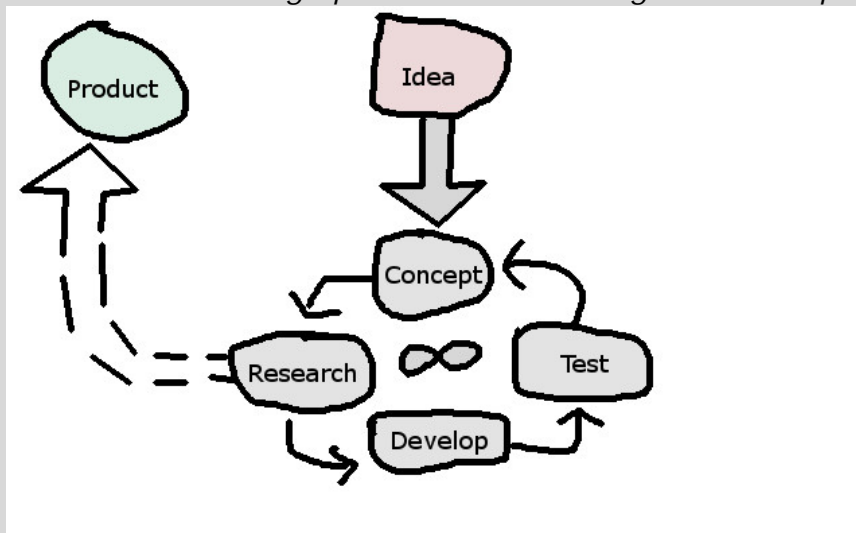


- 2) Is there a difference between the game design process and the game development process? If yes, how are they different?

Game Design is more theoretical, it is the process of making a concept work fundamentally.

Challenge 3-2

- 1) What is an iterative design process? Draw a diagram of this process.



- 2) Describe what a tool for game design would be and how it would help a game designer.

Digital photo editing tools, like photoshop, illustrator. Writing stuff down and drawing concepts. Perhaps some software for animation aswell.

- 3) Can you name 3 design activities that characterizes a game designer's role in game development?

Conceptual Cohesion, Communicating, Idealizing

Challenge 3-3

- 1) Are there different kinds of game design processes? If yes, then how would they differ?

I think there certainly are different ways to approach a game concept. My mind likes to think there are some in-the-book based methods for designing, but for each game you can differ from these, and find what's best. For example you could have a game that keeps expanding content-wise. For this you need a more iterative-style way of designing.

- 2) What kind of authority should a game designer have over design decisions?

A game designer should have the authority to discuss, change, or scrap concepts/ideas that might not work in combination with different game mechanics. He/she should have a say about the entire game as one 'package'.

Challenge 3-4

Read & Reflect

Game Design Process

The design process of a game consists of three distinguishable stages. **The concept stage, elaboration stage and the fine-tuning stage.**

The concept stage consists of a core concept, a target audience and other fundamental details that can't be changed later on in the design process, without causing problems. These aspects give the overall game design a strong foundation to eventually start building on, during the **elaboration stage**. The concept stage should be a non-iterative part of the design process. It should make the goals of the concept clear, define what target audience it is meant for, and what the role of that said audience will be in the final product.

This elaboration stage is the time in a process where design decisions may differ, and concepts get added or removed to the core. This is also part of the development process, along with prototyping and expanding on the concept. This stage features the core mechanics of the game, the characters and the game world/environment.

After this, there is the **(fine-)tuning stage**. During this stage the game in question should be playtested, and tuned to the best form of itself. In my opinion there rarely is an end to this part of the process, because you can never get the perfect desired result of a project. In a non-pessimistic way for saying this, I also regard this as an iterative process. You can always keep building/improving upon a concept, and in my mind this can also get beyond limitations. So knowing when to call it quits during its part of the process is also an important point of the process itself.

In my opinion these rules can be broken. I think the game can sometimes decide what and how the design process for it will work. Me being an experimental thinker I am eager to think "too vast" in my concepts. As in, a game that keeps expanding on itself, or a game that doesn't have a single written-in-stone form. For these kind of beyond-limits games there would be other kinds of design process, such as all parts of the design process perhaps being 100% full iterative, and ever-expanding. Innovation sometimes comes in the form of breaking some rules.

Challenge 4-1

Come up with a game concept from <http://gamepatterns.co.nf/>

No-Ops | Outcome Indicators | Power-Ups

You are on a mission to sabotage, and bring down big corporations. The setting of the game takes place in modernist skyscraper office areas of companies. Your goal is to tinker with electronics, turn off the power or steal different kind of things. You have to do this without leaving traces behind.

The game will let the player know if this will happen, and grant you the opportunity to try again (By rewinding your actions). Mishaps include being spotted, leaving fingerprints behind, moving objects from their original location for others to notice, etc.

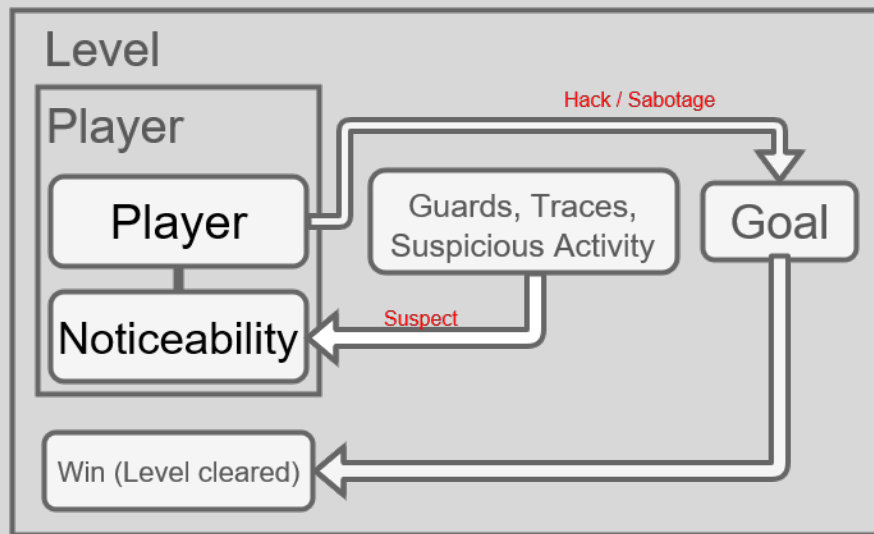
With this, it is possible to assassinate and destroy the environment, but with the risk of easily being caught. You have to be smart about your actions.

The player might find powerups in hidden rooms and lockers, and if handled with care, the player can equip these.

Power-Ups include temporal invisibility, X-ray vision and clearance of any traces.

The guard A.I. at each facility is designed in a way that it spots the smallest change in their environment. And as the game progresses the security / alertness of the corporations become increasingly tougher.

Flowchart



Explicitly Important Game Design Terms

Core Mechanics -> (Kicking the Ball in soccer)

Progressive Mechanics -> (Encouragement, Another team, objective, time, points)

Challenge 4-2

- Find 2 objects that have a procedural relationship
Every action the player takes, will have some form of a trace which will be left behind. If you're not conscious about this the guards will find out rather quickly. Because of this, the Noticeability have a direct relationship with the guards.
- Find the core-game mechanics
Noticeability / Visibility is the core game mechanic, because the game revolves around being seen (or not). The game system depends on this element for it to decide whether it's a win or a lose.
- Find the progressive mechanics
The Guards are always searching for potential intruders. This makes you always on the move, trying to search for the goal.
- Find the games within games within games within games in your game
A game-within-a-game aspect of this game is the fact you have to find the objective (which is to hack / sabotage something). Along with the obvious stealth element, it also has a puzzle game built into it (the hacking). One can also say it becomes a memory-based game when you have to keep in mind at all times not to leave any traces behind.

Challenge 4-3

Read & Reflect

Gameplay Mechanics

*The in-the-book definition of a **Game Mechanic** is either a feature or a rule, that has a significant influence on how the game works or is played.*

One of a game designer's roles is to know how much these mechanics will affect the game system, and how it will have an influence on the gameplay.

Having more mechanics in a game, makes it more complex. So another key element of the design in a game is to find the right balance of useful and good mechanics that fit the concept of the game. For a good game system it is crucial to make it easy for your players to use, whilst still being unique as a product, with its mechanics.

*Game mechanics range from simple movements/actions such as jumping, fighting and running to shooting, climbing or opening chests; The latter parts are combinations of mechanics, creating a whole new gameplay mechanic in itself. This is called **Emergent Mechanics**. I would call it a synergy between multiple mechanics.*

*Game mechanics can also be involved in **objects** within the game. These so called objects are basically everything within a game that gives interesting opportunities for either interaction, artistic value or progression. An object has certain **attributes** which are the properties/variables of the object. These objects also have **behaviors** that determine how the objects "act" within the game, and what kind of influence they have on the player's experience. These behaviors don't have to be linear; All objects have their own way of adding "life" to a game.*

Making a game fun for everyone is impossible, since it's as subjective as writing comedy. I liked that comparison addressed in this reader.

You can try your hardest to make something as fun as possible for everyone on this entire globe, but there always will be at least a group of people that don't adhere to your game system/concept.

Challenge 4-4

Analyze the following games:

	<i>Core Mechanics</i>	<i>Progressive Mechanics</i>	<i>Embedded Games</i>	<i>How does it govern social behaviour</i>
<i>Sim City 2000</i>	Building	Money	It's a citybuilding game, with simulation aspects and strategy	It makes the player think about strategizing, perhaps with others
<i>Skyrim</i>	Brawling Leveling	Open World Exploration	Adventure Action RPG	Not really, I would say
<i>Total War: Shogun 2</i>	Turn Based Strategy	Building your army, defeating others	Perhaps some RPG elements	On a competitive side, it encourages people to beat each other at the game.
<i>Monopoly</i>	Turn Based	Gaining Property / Money	Gambling Chance	Monopoly can anger competitors, it is all about the money
<i>Go</i>	Turn based Strategy	Points / Territories	Mind game / Strategy	Outsmarting eachother
<i>Battlestar Galactica</i>	Cooperation Anonymous	Conflicting teams	It is a card game where the players have secret identities. Along with that it is strategy, and cooperative.	Nobody will trust eachother, and eventually it can cause conflicts.
<i>Volley Ball</i>	Hitting the ball to the other end	Points / Conflicting Team	Not really	Teams will work together, and rivals may be regarded as "losers"
<i>Curling</i>	Slide the stone	Points system	Strategy / Team-based	Not really, besides the team-based score influencing some reactions
<i>Golf</i>	Hitting the ball	Less is more	Strategy	Not really

Challenge 5-1

Super Mario Bros. Controls

A -> Jump

B -> Hold to run

D-pad -> Walking

Down -> Crouch

Choices:

Quality Frequency Clarity (QFC)

Choice Quality: *Attack, or hide behind defense bunkers (Space Invaders), Literal choice dialogues.*

Choice Frequency: *How quick are you going to make a choice? Quantity of choices the game throws at you. Action games are based on a lot of fast choices.*

Choice Clarity: *How clear is the choice? In what way does the player know there is a choice?*

Goals:

Goal Quality: *How objective is your goal? SimCity is open ended, and doesn't provide you as much with a goal.*

Goal Frequency: *Goal changes mid-game, how to get to the ultimate goal?*

Actions:

Action Quality: *The feel of the game, how do the actions feel? (ex. The Sensitivity range of racing games)*

Action Frequency: *How often does the player have to provide input, for an action? How fast-paced is the activity level?*

Action Clarity: *How clear is an action handled within the game? Responsiveness, interactive results bound to the controls.*

Challenge 5-2

Space Invaders Scheme

	Choice	Goal	Action
Quality	++	++	+
Frequency	++	+	+
Clarity	+++	+++	+++

Challenge 5-3

Asteroids Scheme

	Choice	Goal	Action
Quality	+	++	+++

Frequency	++	+	+++
Clarity	++	++	++

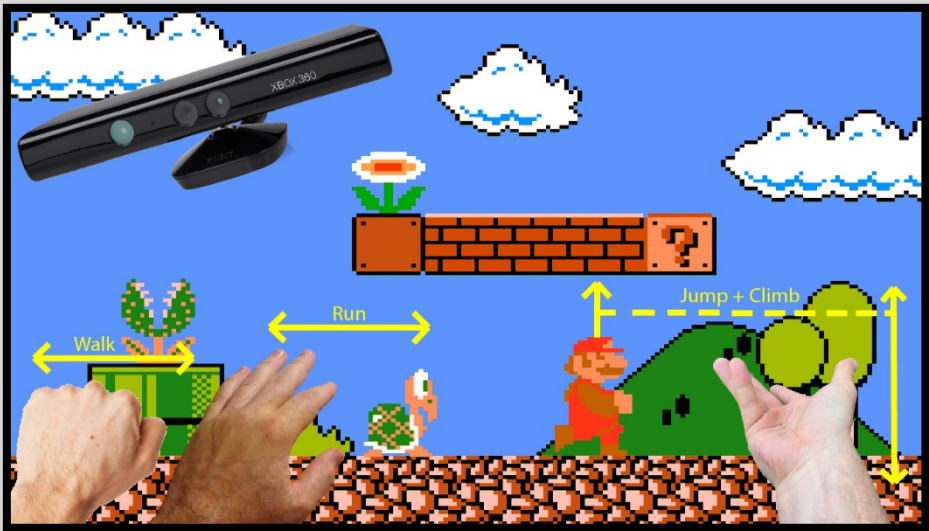
Challenge 5-4

God of War Scheme

	Choice	Goal	Action
Quality	++	++	+++
Frequency	++	++	++
Clarity	+++	++	+++

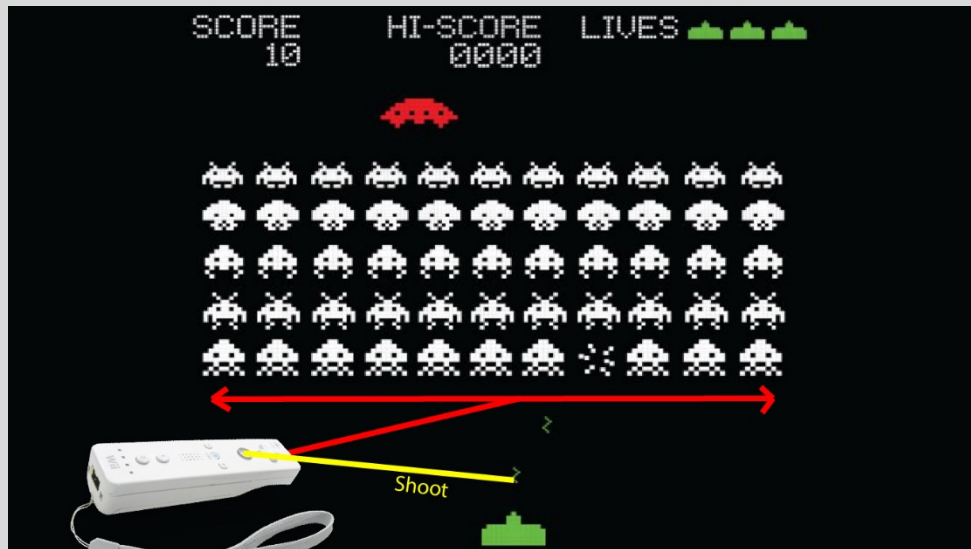
Challenge 5-5

Map the controls of Kinect to Super Mario Bros.



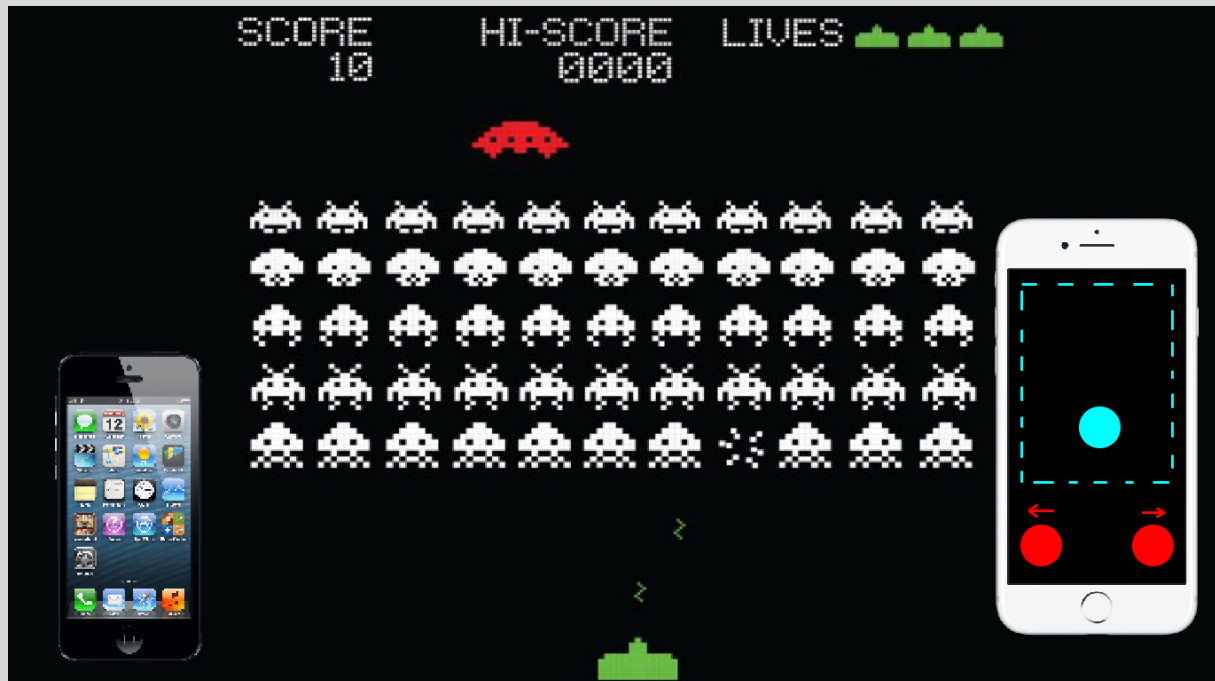
Challenge 5-6

Map the controls of a Wii-mote driven Space Invaders.



Challenge 5-7

Put Space Invaders in an iphone app context.



Challenge 6-1

1) What was the first game you ever played?
AirXonix / Super Mario World on the Super Nintendo

2) What was your favorite game as a child (6-12)?
Minecraft

3) What was your favorite game as a teenager (13-19)?

Team Fortress 2

4) What is your favorite game now? What kind of words would you use for your game experience?

Silent Hill 2. It dragged me right in, and gave me this weird feeling throughout the game which is pretty cool. It handles immersion pretty well.

5) What do you think is everyone's favorite game genre?

Action / Adventure

Challenge 6-2

1) What abilities are challenged in the following activities?

- **Chess** -> *Strategical thinking*
- **Poker** -> *Decision making / Critical Thinking*
- **Dungeons & Dragons** -> *Creativity*
- **Football** -> *Cooperative Strategizing, Endurance*
- **Reading a book** -> *Visual thinking / Story Following*
- **Watching a movie** -> *Understanding the story / characters*

2) List the emotions you have experienced playing video games and the games that caused this emotion.

- **Excitement** -> *Unlocking items, unboxing crates (Team Fortress 2)*
- **Anticipation** -> *Any horror game with jumpscars*
- **Annoyance** -> *Said horror games after the jumpscars*
- **Rage** -> *Frustration when unfair consequences take place over and over again despite changing your playing style. (Battlefield 2, Call of duty)*
- **Pensiveness & Remorse** -> *Following the narrative, and the game's mood influencing your emotion. (Silent Hill series)*
- **Fear** -> *Dark atmospheres of the Silent Hill series, again*
- **Submission** -> *Accepting my multiple losses in Street Fighter*
- **Vigilance** -> *Being careful in Splinter Cell Conviction, also in Jenga*

Challenge 6-3

1) Choose a game you played for many hours. What did the game have?

- Anticipation
- Surprise
- Pleasure
- Understanding

- Mastery
- Composure
- Empowerment

I've spent many hours in Team Fortress 2 because it revolves around Mastering the classes. It also gave me pleasure in its visuals and gameplay. Did not feel empowered though because I often got annihilated by other players who were way better than me.

2) Choose a game you stopped playing after a short while. What did the game miss?

- Anticipation
- Surprise
- Pleasure
- Understanding
- Mastery
- Composure
- Empowerment

I've stopped playing DOTA 2 after one long playsession, with a friend who's been playing it for a long time. Besides not being my favorite style of game, it lacked pleasure for me. And some empowerment as well, because the point and click aspect didn't feel powerful enough for me. It lacked a lot of understanding aswell, because it was too complex for me.

Challenge 6-4

1) Think up a game concept with the target audience being your classmates. You may only describe the three core aspects below. No themes!

- a. What is the core?*
- b. What is the progression?*
- c. What is the game-play experience?*

The game is a two-to-four player fighter game, where players compete against each other until a side has been wiped out completely.

The core mechanic revolves around the use of a variety of terrible game design choices (as moves) available to the player, which all work/result differently for the other team. (for example, you can force a Quick Time Event onto a player, and if they miss it they will lose health).

The player progresses by successfully pulling off these moves, and eventually killing the other player/side. A side goal/progression aspect is the player "unlocking" more terrible game design-based moves, in-game. These unlocks reset per match. So in short, it's a brawl/fighter game in which you gain/unlock powers depending on your kill count. It is a competitive arcade-fighting experience, meant to stimulate more people to play with/against each other.

2) Pitch your game concept to 3 other students. Report on the feedback and include their names.

- a. Would it be their next favorite game?
- b. Why would they play your game? Or why would they not?
- c. What aspect of the concept do they like?

Loes -> **1)** No it wouldn't. **2)** It would be fun to annoy other people in a fighting game **3)** I like the fact that it progresses as you play good

Jirre -> **1)** No. **2)** If it's splitscreen, I would play it at parties **3)** It combines multiple game systems into one game mechanic.

Simon -> **1)** Yes. **2)** Like the fighting/competitive mechanic and the progression of gaining more moves and killing the opponent! Give me more quick time events! The more the better! **3)** The aspect of using different moves to beat your enemies. The core mechanic.