Unit 15 LO2

Chris

# P3 Create a design for an identified game concept

We have been tasked in the previous Units to create a game for a food retailer. They are a fresh and modern company who are aware of modern digital marketing techniques. They are clear that they want to have a game developed which will be used as a part of their advertising campaigns. To that end they want to have a game developed that incorporates their branding and mascot, a food ninja. The artifacts in the game must relate to their fast food outlets and the gameplay must be fun and engaging and reflect their healthy attitudes to food.

The game is to be targeted at a younger audience and should have an easy to pickup layout, meaning that the game play should be something most players will have played previously. To that end a platformer has been requested.

## Game elements

### Navigation

The navigation in the game is done by providing important information to the player to the player by either using a Heads Up Display(HUD) for example compasses,maps or arrow signs. Both of these methods are helpful in games and their use depends on game’s genre and how the game designers want the player to experience the game.

The HUD said by Greg Wilson in the article *Off With Their HUDs* described HUD as "A collection of persistent onscreen elements whose purpose is to indicate player status. HUD elements can be use to show, among many other things, how much health the player has, in which direction the player is heading, or where the player ranks in a race"

### Scoring

Scoring in games are key component of game mechanics and it provides a mechanic where the players get rewarded with point value whenever they accomplish a task in the game. In this game the scoring will be based upon the collection of sweets that our client, the food producer creates. Their mascot, a ninja will run sideways on the platformer and will need to avoid or defeat various monsters to be able to continue. As the ninja continues to move they will encounter various sweets that will increase their score, some of these sweets will also be dropped by the monsters which have been killed.

### Movement

Moving a character is so common in games that players and designers often take it for granted. However, while it can be tempting to use the default movement options in a game engine, designing great movement can make simply controlling a character fun. Movement of the character in this game should be very straightforward, as this is a traditional 2D platformer the main character will need to

* Move left
* Move right
* Jump
* Duck / Hide

It would be easy to add other actions such as adding combos that build up actions like Mortal Kombat or Super Smash Brothers but as the remit for this game is something which is familiar we will stick with the basic movements for the first demo to the customer.

The controls will also default to the standard WASD controls but we will add a configuration page so that users can remap the controls if they want to.

### Interaction/Controls

three main principles for good game controls are:

* Accessibility - the controls should be easy to learn and use, and take into account physical and cognitive limitations
* Intent Communication - the controls should communicate the player’s intent in a way the player expects and create a feeling of full control
* Expression Space - the controls should give the player enough expression so that they players can master while also keep a sufficient level of variety.

Accessibility If we want our controls to be easy to learn and use we need to take into account everyone physical and cognitive limitation

### Conveying Information

Classic tutorials are one of the worst ways to convey information to the players about the game. These levels are are often some of the least fun parts of the entire game and some are un-skippable these are worst, making them not every effective at their job.

### Sound

Designing Sounds in a game are: Talking about various sounds found in a particular game, those could be generalised to the following types:

* Sound Effects - The sounds the objects in the game game make
* Music - A game has 2 or 3 main themes for example menu music and the level music
* Voice-overs - are the character lines

### Levels

Their will be 5 levels in our game and all of them are going to themed after our clients food. Each level is unique and different from each other. 5 levels was felt to make the game long enough that players would find it engaging, but not so long that development would take a long time. As the customer is really using this game as an advertising mechanism, they did not want to invest too much money in the game otherwise it would end up losing them money.

### Enemies

The enemies of the game will be small and easy to hit since this game is designed for kids and young teens. The height of these mobs will be half height of the player character. We do this because it makes it easier for our target audience to understand our game and the concepts to the gamer.

### Problem Solving

The is small amount of problem solving in our game because we are 2D platformer and we have small traps and enemies for the player to get around. The traps are disguised to hide/blend them into scenario so that they "get" the player, the traps do look different enough that the players can detect and dodge the traps. This will encourage reply of the game as players will need to memorise parts of the map to be able to progress, this will increase the brand awareness for little outlay in development.

## Interface Design

### Layout

The Layout out of each levels is going to be designed to promoted a different type of food that the client sells.

* Level 1 - The Fruit level. All the food items and associated power ups will be fruit based. There will be fruit based shrubbery like strawberries in the background and the soundtrack will be upbeat and sugary.
* Level 2 - The Bamboo Chocolate level. A more protein based level. There will be hot dogs and buns to be collected. The background of the level will show mustard and red sauce clouds in the sky. The soundtrack will be New York funk.
* Level 3 - The Spring Water level. The player will dive in to a refreshing bottle of spring water. The background will be watery blue and clouds of fruit flavourings will pass be. The soundtrack will be classic water music.
* Level 4 - The Confectionery level. The player will be in a colourful world of hard boiled sweets and chocolate. The player will be sped up doing the level and the soundtrack will be Daft Punk.
* Level 5 - The Sushi Roll level. The player will have to collect rice, rolling pads and fish to create their own sushi. Once the player reaches the end of the level with the correct items then they will win.

### Colour Palette

The colour palette is going to be bright eye catching colours for the players. Each level will have a different colour palette which will match the theme of the level. Overall the colours that are used need to match the brand colours of the client where possible. This will be one of the most basic brand awareness tricks that the game will use.

### Text Styles

The text style for the game is going to cartoony style to entice our target audience to click and download our clients game. This should only be seen as being fashionable but it is a look that younger people should be able to associate with. We will need to bring in some of the textual styling that the customer’s brand uses, again to reinforce the branding that we are trying to get across, but we do not want to over do it and annoy the players with this branding.

### Sound

The sound for the game is basic as can be and will be kept to minimum since they are unnecessary and except the game to be muted when playing since it will be on a phone. Some of the levels will have themed music to further enhance and engage the user but they will be in the background and possibly could be muted by the user.

### Stage/Scene

Stage in the game is going to be simple and clean. It would be tempting to add a lot of clutter and overt branding in to every inch of the screen but we believe that this would be contrary to what the customer is trying to achieve. There will never be more that five characters on the screen at time and only one obstacle at a time.

### Actions

Actions that will be incorporated are fighting by bouncing off their heads. Some enemies may need to be hit multiple times to be incapacitated. We will keep the rest of the actions very simple so that it is easy for people to understand the game quickly, and this will also make easier to translate the game to work on different devices. The other actions will will support are moving left and right, jumping to bounce on enemies, avoiding hazards and leaping to higher levels, and finally ducking, to avoid hazards. The text style for the game is going to cartoons style to entice our target audience to click and download our clients game.

### Sound

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### Stage/Scene

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### Actions

Actions that will be done are fighting enemies and

# P4 Produce a logic structure for the identified game concept

# M2 Prepare alternative interface designs for the identified game concept

Alternative interface designs is a hudless design. This done by having these elements integrated into the world for the health,score and timers. The hud can replace by using game elements in the world to show off health,score and time, this can be done by having a bars or having the player character getting more visually hurt.

The score system can be shown either by having the players outfit or having a glow around the player character to indicate the score is increasing. The glow around the player we think is the best because it immediately rewards the player and makes the player want to get higher score since the player will look better the more points they get

The time can demostrated either by using sound or having an effect on the player that makes the player feel dread and cause the player hurry up and finish the levels.Using sound is a better option because it cause more dread for the player while not causing our young audience to be scare of the game.

If our client wants to get rid of the hud and have a seamless interface between the game and the user, having no hud is one of the way this makes of getting the player immersed into game. Getting immersion in game is hard but having no hud can easily increase the immersion a player can have.

Other alternatives to our current game genre is a 3D platform. This might be a good option but coule be more difficult to develop for since there is new dimensions being added to the game. This would be a good alternative since it possibly be a good alternative since it will just like an upgrade. 3D could potentially have a better advertising and promotion for our clients food because you can see more of it and it will open up for doors for more difficult platforming and game mechanics.  
This could potentially be what our might look like  
image  
One other alternative is making it a shooter gamer. This wouldn’t be the best option since it wouldn’t sell the our clients food since there is violence in the game and violence doesn’t do well for promoting our clients food.

## Sprites Look and Feel

As we are developing a 2D platformer, we want to keep with a retro theme. We have an option to be authentic to 80s sprites, which would mean keeping the edges sharp, using a much smaller colour palette and the resolution would be low. This is somewhat tempting as it would look like it would be keeping with the theme of making the game look familiar, but when you actually look at any examples of sprites from that era, they tend to look what can only be described as low-res and rough.

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As retro games became more popular, over the last decade or so, a sort of hybrid of old and new styles have become more popular, and in keeping with the remit of developing something which is familiar, we are going to go with the more modern retro look sprites.

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## It will educate players about the variety of foods, highlighting their unique qualities

It was felt that education of the foods items was a bit shoe horned in and did not sit very well with a platformer game. We went though a number of iterations of how we could incorporate this. The first option was going to be a rolodex or folifax of collected foods. This file could be looked up at anytime to get more information about those foods. Trying this out did not flow very well, no one ever looked the file up more than once as there was no reason to. The second attempt and the one that we stuck with was making each food or food type produce a different power up that matched the food. This gave a practical feed back as to the benefits of collecting and eating those foods.

# D1 Justify the design rational for the identified game concept

## Original requirements

To justify the design choices in our game we must first explicitly spell out the requirements as they were given to us

* The whole game experience must be familiar and easy to get to understand
* The UX must not be confusing
* Must work on all devices
* Must be appealing to a younger audience
* Players must have seen the likes of the game before
* It must be small in scale, there will only be five levels
* It must be engaging
* It will have the clients food products
* It will have monsters that must be defeated
* It will educate players about the variety of foods, highlighting their unique qualities
* Health boosts should be in the game based on their food products
* As the player progresses through the levels, each level will become harder
* There will be obstacles in the players way which must an navigated around. These should present moderately hard puzzles
* On completion of the game the player is rewarded with a lifetime supply of the client’s food

We will work through these one at a time

## The whole game experience must be familiar and easy to get to understand

This requirement is probably the one that has the largest impact on the game. It has made the design of the game a lot easier and quicker to develop as it has restricted us from try to design a modern AAA game and instead we have been able to take a much more retro approach to designing the game. The logic behind this has been that as games from an earlier age of video games has been around a long time and almost everyone will have experienced these style of games in one form or another. This left the decision as to which style of retro game to use. Games like Space Invaders and Pong, while they are arguably the grandfather of all modern games, they are not so well known in modern times and their gameplay mechanics is likely less understandable to a younger generation. Games of that era tended to be a bit more archaic. Moving on to games such a Pacman, Frogger, etc are also more well known but are a little too simplistic to provide an engaging and interesting gameplay. Slightly more modern games such as Super Mario Brothers are much more well known and understood without have to have any preamble to explain what is happening. It was felt that it was too tempting to make this game as universal as it could be by using a side scrolling 2D platformer, so this is what we decided to go for. It not only means that it will be familiar, but there will also be very little friction for users starting to play the game. We will need to play test the game at an early stage with younger audiences but we are confident that they will have no problems understanding the mechanics.

## The UX must not be confusing

Making the user interface experience not be confusing also partially ties in to the requirement that the game must be familiar. It however goes further than that. We have decided to use standard controls, as these are well known and very simple it means that this part of the game should be intuitive. 2D platforms usually have a retro ’language’ or ’theme’. They are usually blocky but not blocky in the way that 80s sprites would have been but more blocky in the same sort of style as Minecraft, with softer edges and corners. This was one of the considerations in M2, should the sprites look hard or soft. The harder version of sprites are not very popular and would likely put players off, so we went with a more fashionable softer look.

## Must work on all devices

This requirement is self evident in today’s market. As most players / clients will be accessing the internet on many different devices, we are left with no other option than to ensure that our game will at the very least work on the major devices. The mobile market has become the dominant device when it comes to accessing the internet, though the lowly PC is still not far behind <https://gs.statcounter.com/platform-market-share/desktop-mobile-tablet>

image

This means we will have to develop for multiple platoforms. This may mean relying on a games engine or developing everything natively. Either way we will need to test on all relevant platforms, and on multiple mobile phones and PC browsers, to make sure that the majority of customers have a good experience. This will not be cheap but the alternative is a bad experience for a lot of customers.

## Must be appealing to a younger audience

## Players must have seen the likes of the game before

The requirement that the game must be appealing to a younger audience was driven by the client, this is something that has tied in to what our sprite look like and the concept that it must be easy to pickup and play the game. We are not able top make the assumption that younger game players will have experience with older 2D platformer mechanics, so we have had to investigate the character handling in the likes of Minecraft and more recent Mario games. It turns out that the basic concept of moving in one direction by pressing one key is pretty universal. A key for jumping also seems universal as well so it would seem that we can make assumptions on how to control the character. The game play of going from a starting point to and end point and then starting a new level is ubiquitous in Mario games so we felt that we could rely on this mechanic as Mario and Nintendo are arguably the largest video game company at the moment.

## It must be small in scale, there will only be five levels

It can be very tempting to ’Burn the ocean’ as in to try and make a massive world of content that covers everything you or your players can think of. As a part of our remit we were given the opposite requirement, our client wanted us to keep the game small. Their reasoning for this was that they wanted to keep the game simple and fun and also for it to load quickly for players. This meant that we had two requirements. One was that the amount of time to complete the game had to be limited, but also that all the assets had to remain quite small so that the same would start quickly from a clean start on a browser or mobile phone. In keeping with the theme of developing something that was familiar, we went for a side scrolling 2D platformer in the style of the original Mario Bros. This then very heavily lends itself to the concept of levels. Levels have the advantage that it is then possible to record the level that a user has gotten to in the browser, meaning that the game is a lot more casual and appealing to people who progress in the game but do not want to spend a lot of time in each session so that they can have a breather.

The concept of keeping the game short and only to five levels is not as restricting as first thought. It could also be possible to add in speed runs, which are a popular gaming mode. In this mode the person who can complete the game in the shortest amount of time is the winner. We could keep a high score table of the fastest runs, though this is all speculative.

## It must be engaging

Engaging is a far reaching term. The only real way we can tell if a game is engaging is to play test it. To that end we will be play testing iterations of our game, section by section and gathering all the metrics we can about player satisfaction. This is a deliberate choice as a part of our design decisions. Through extensive development of games we have found that it is impossible to perfectly predict what players will and will not enjoy. In face game play mechanics which we love in house can turn out be a complete flop while the smallest features such as a mini power up can excite users. Play testing allows us to discover the small things that players enjoy and build on those instead of spending all our time developing a game which flops the first time a player tries it out.

## It will have the clients food products

This is a fundamental part of the customers requirements. The use of their food is the cornerstone of this game. Most importantly the food items need to be seen in a positive way, and not used for negative purposes such as killing monsters or even subtler things such as standing on them to get to a higher stage as standing on food could be seen as unhygenic. The main aim of the game is to get to the end with the highest possible score. As gaining score is the desired positive outcome we then decided that the collection of the customer’s food is what would increase your score.

## It will have monsters that must be defeated

A platformer which is a straight race to the end of the level would be very boring. We need to build in some sense of excitement and danger. The easiest and most familar way to do that is to bring in monsters that block your character’s way. These monsters could take any form, other ninjas, random objects, blobs, etc. It was felt that we should keep the elements of the game familiar so the design of the monsters was left as small hairy non-descript beings. We do not want to introduce the idea that the corporate ninja would fire objects as this could be seen as a negative trait e.g. using projectiles to kill things. Instead we stuck rigidly with the familiar concept of jumping on top of monsters to decapacitate them. Doing this adds an element of risk and skill but does not make the game grotesque.

## It will educate players about the variety of foods, highlighting their unique qualities

## Health boosts should be in the game based on their food products

This proved to one of the hardest elements to introduce to the game. We considered a number of ways to add this in to the game, like adding a rolodex of the currently collected food items that gave the player more details about what the foods contained. This was felt to be too complicated and not really a part of the game. After careful consideration we decided to build the features of each food in to the games by adding "Power Ups" that were granted by the food items. As we wanted the player to collect as many food items as possible, we felt that the power ups should not be additive, instead your current power up will be the last thing you collected. We had to use some artistic license when assigning the power ups as there is no natural fit for in game power ups and good items, but the gernal jist of what we ended up doign is as follows

* Marshmallow - Enemies slow down
* Hot Chilli - Enemies on screen blow up
* Runner bean - Speed boost for Ninja
* Fruits - Ninja regains all health / lives
* Chocolate - Ninja returns to normal speed
* Sushi - Ninja does a roll

## As the player progresses through the levels, each level will become harder

In order to keep the game interesting we add more features as the player progress such as added new foods and monsters. The only gameplay change we wanted to add was the classic one of making the levels harder. The concept of harder can be a very subjective one and what makes a game harder for one person just makes it frustrating for another. This is where our extensive play testing will keep us on the correct path. We have a number of ways of making the game harder and we will try them all out and play test them to an inch of their lives. The options are

* Add more enemies
* Make the enemies harder to kill
* Make enemies faster
* Add enemies from behind, i.e. they force you to move on
* Add projectile enemies
* Make platform smaller, harder to jump to

## There will be obstacles in the players way which must an navigated around. These should present moderately hard puzzles

In an effort to make the game more interesting we will add traditional objects and constructs they need to be worked around by the player. These are in line with the requirement that the game gets harder as the player progresses. Initially there will be none of them and as the game progresses more will be seen. This has been done to add another layer of engagement and interest to the game. We have to be careful with all of these elements though as if they are too hard to work out or seen as impossible then it will irritate the players instead of interesthing them, so again we will be play testing all of these. They will consist of

* Moving platforms - These will change the player’s movement vector to try and be in line with the direction that the platform is currently moving. These can become harder in later levels where they will change direction according to a pre-determined pattern which the player will need to work out to progress
* Falling platform - If a player stands on a falling platform for too long then the platform will crumble and the player will fall to the level below. In most cases this will kill them. This feature will be introduced to the player early on as they will likely die first time they walk on it and we don’t want to irriate players who have gotten far in to the game only to have th die out of the blue. This concept can be expanded later in the game to have drop downs that do not kill the player and lets them clip through a wall in to a secret area
* Trap box - This is abox that looks like a normal box but once activated a monster will appear. In later levels more powerful monsters will appear

## On completion of the game the player is rewarded with a lifetime supply of the client’s food

While we can generate a unique code at the end of a game that would allow a player to win a lifetime’s supply of food, it has been suggested that finishing the game would allow a player to enter a draw where they could win a lifetime’s supply of food. We suggested this to the company and they agreed that it’s probably a better idea.