Ingenuity
Initial GameDesign

Engine: Unreal Engine 4
Technology used: Leapmotion, Virtual Reality (Oculus Rift)

This document is supposed to give an impression of what the finished game will look like.
All chapters should have notes on how far it should be worked out until the end of the semester.

Overview:

1.: Game Mechanic
2.: Spells
3.: Traps
4.: Enemies
5.: Graphics
6.: Virtual Reality

1.: Game Mechanic

You have one resource in the game: Creativity-Power (from now on called "Power").
With this resource, you pay for:

-unlocking/creating new traps (taken from the bank)
-unlocking/creating new spells (taken from the bank)
-placing traps in the lane (taken from your current source)
-casting spells (taken from your current source)

Every round, you draw power from the current source. The bigger the source, the harder the level.
The source has two parts: the core power and the sphere power.
Core power is granted AFTER a mission is completed.
Sphere power is given to you over time during a mission, enabling you to defend the core power.

Whenever an enemy reaches the source, he steals from the core power. If you kill him during his escape, the power he stole becomes sphere power which can be collected by you.
That means, if you are not able to stop the creatures before they reach the source, but kill them before they escape, you are granted more power during the mission.
At the end of a mission, some of your sphere power is added to your bank as core power.

The bank is your storage for core power that you collect during missions. You can use the bank to pay for new traps/spells during a round between waves, but not to place traps or cast spells.

In best case, you defend the complete core and receive the full reward +half the power you did not use.

In the worst case, you do not gain any additional core power,but you do not lose any core power either.

Target for media night (first semeser in project): implement resource system in an understandable way (display some numbers, grant points after mission)

2.: Spells

To trigger spellcasting, open your hand with the palm showing upwards in the screen center.

Around the center, 8 Circles appear. By moving your INDEX FINGER from circle to circle, you draw lines between them. A symbol is closed, meaning you finish the symbol by reaching the circle where you started. If the symbol you draw is not correct, nothing happens.
You stop the cast by grabbing before the orb is created.

Once a spell is finished, an orb is floating before you. To fire it, move your hand to the screen center, "grab" and "open" to fire into the direction you are aiming.
Each spell is different.

If you use only one hand to cast a spell, you cast it directly (wind blast, fire cone, ice wind) from your hand.

Using your second hand enables you to change the style. For example, drawing a circle turns the spell to a ball that can be fire and that detonates on hit.
(this feature needs to be tested. Questions: is it really helpful for the player? Are the areas big enough to draw two symbols?)

(longshot idea: allow the user to create his own spells?? [this could be and probably is over the top])

Target for the protoype/MediaNight (first semester in the project):
have at least ONE spell implemented and running with direct cast and orb cast.
(one or more of three: fire, wind, ice)

3.: Traps

Traps are your basic defense against incoming creatures. Place them along the way to make it harder for them to reach their goal.

Some traps will trigger automatically, some can be triggered manually and some canot be triggered at all.
Those who automaticaly trigger fire when a certain condition is fulfilled, e.g. An enemy is staning upon/under/next to it.
Manually triggered traps can be activated strategically. (For example a big rock that falls down on a strong/big enemy)

Untriggered "Traps" might as well only modify the lane (e.g. Swamp fields, thorns, blocking partsto change the path...).

(longshot target: instead of buying complete traps, the player buys parts which allow him to create his own traps [might be too much though, even in the final version])

target for medianight (first semeser in project): catapult-trap, "smasher"

4.: Enemies

Enemies run along the lanes, trying to reach te source. Once they reach it, they steal some energy and try to run away with it.

The escape lane and the incoming lane can be different. (probably will)
if the path is blocked, they will attack. They will also attack you if you get too close.

Longshot: creatures dodge traps if they see them trigger

Target for media night (first semester in project:) the path is always found and changes dynamically, adapting to the circumstances (blocks, moving parts etc.)
if the path is blocked completely... maybe ignore it, for now?

5.: Graphics

The general style is supposed to be a bit cartoony, but not ridiculous or kiddy-like.
Also, the scenes should be colorful and bright. To give a better impression, here are some images:

Abbildung 1: ein etwas stä
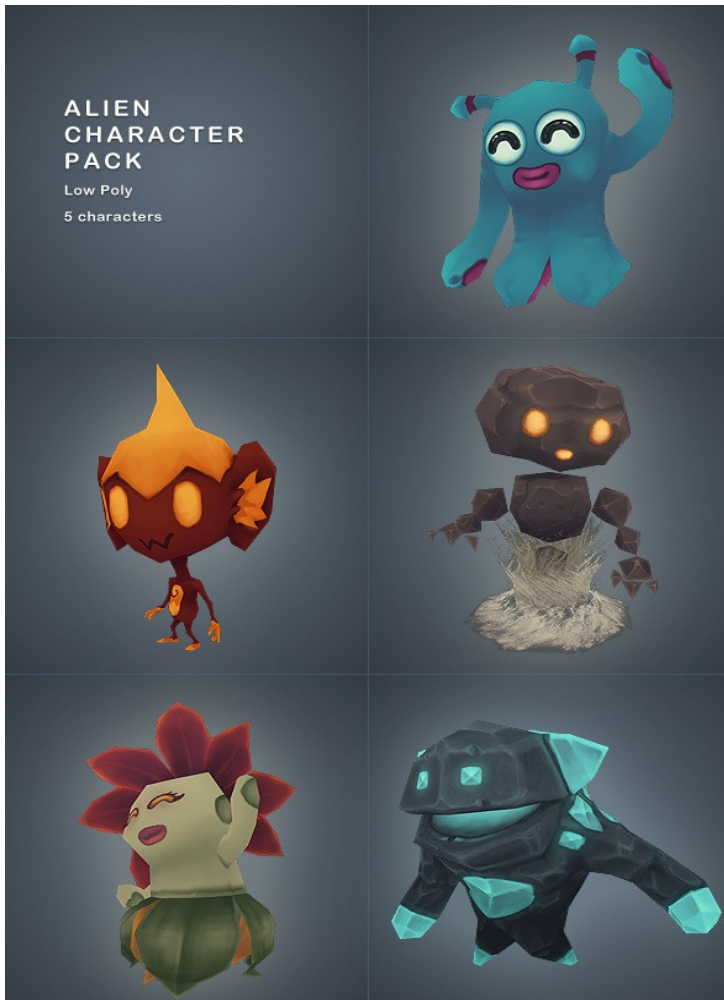

Abbildung 2: special enemies?

Abbildung 3: möglich, aber etwas zu cute

Abbildung 4: ansatz für eigene kreationen: kombination aus simplen Geometrien