unity Certification

Zombie Toys

TECHNICAL DESIGN DOCUMENT

Unity Certified Developer Courseware

Contents

Game Development Team

PRODUCER
Michael Sehgal

PRODUCTION MANAGER
Adam Crespi

PRODUCTION COORDINATOR
Aline Tosini

GAME DESIGNERS
Adam Crespi
Kris Orpilla

SYSTEMS/IT COORDINATOR
Laura Johnston

PROGRAMMERS
Mike Geig
Emil Johansen
Arturo Nunez
Mike Preble

TECHNICAL ARTISTS
Craig Barr
Kris Orpilla
Sergio Gardella

AUDIO ENGINEERS
Caleb Epps
Ben Bromfield

UX TESTERS
Itziar Carnicer
Rafael Rafi
Jonathan Estruch

Executive Summary

Game Overview

Zombie Toys is a third-person, endless, survival arcade game where the Player is a child (boy or girl) who has awoken to discover that all their toys have become zombified. Now the Player must survive by avoiding the zombified toys. They may accrue points by using a special remote control toy to attack the zombie toys in one of four different ways (Lightning Ray, Freeze Ray, Stink Bomb, and Slime). Using points accrued through the various attacks, the Player may also spawn Allies, which include a Sheep and a Dog. The Allies will help the Player avoid the zombie toy Enemies and survive in the game.

Technical Summary

Zombie Toys will be developed in approximately 4 months by roughly 12 people using the Unity game engine. For 3D asset creation, Autodesk Maya 2016 will be used, with Adobe Photoshop and Autodesk Mudbox utilized for texture painting and sculpting. The total production cost of the game will exceed USD $50,000.00. Revenue from the game will offset the investment. The remaining costs will be amortized through the release of future game titles.

The game will be deployed for PC and for Android simultaneously.
The minimum requirements include:

PC, MAC AND LINUX STANDALONE
OS: Windows XP SP2+, Mac OS X 10.8+, Ubuntu 12.04+, SteamOS+
Graphics card: DX9 (shader model 2.0) capabilities; generally everything made since 2004 should work

ANDROID
OS 2.3.1 or later;
ARMv7 (Cortex) CPU with NEON support or Atom CPU;
OpenGL ES 2.0 or later.

Equipment

Hardware

Members of the team will utilize a collection of 15" MacBook Pro computers as the primary hardware platform for game development and asset creation. Additional hardware choices include MacBook Pros, Windows PC computers, and miscellaneous hardware already owned by the team.

PRODUCT	TASK	COST*	QUANTITY	TOTAL
MacBook Pro 15"	Asset Creation Game Development Texture Painting	$2,000.00	2	$4,000
Wacom Intous	Texture painting Sculpting	$200.00	2	$400.00
values listed are general approximations in USD			**TOTAL**	**$4,400.00**

Software

All the software used for the development of *Zombie Toys* will be able to produce high end visuals, while still being able to deploy across different platforms. Not all team members will utilize all software tools. Software requirements and selections will vary based on team member roles and responsibilities.

PRODUCT	TASK	COST*	QUANTITY	TOTAL
Unity Pro	Game Editor /Engine	$1,500.00	6	$9,000.00
Autodesk Maya 2016	3D Asset Modeling 3D Animation	$1,500.00	4	$6,000.00
Autodesk Mudbox 2015	Sculpting Texture painting	$100.00	2	$200.00
Adobe Photoshop	Texture painting	$150.00	4	$600.00
Google Office	Project Management	$0.00	12	$0.00
values listed are general approximations in USD			**TOTAL**	**$15,800.00**

Evaluation

Game Engine

The game engine utilized for the development of *Zombie Toys* is Unity because we can create a 3D game with ease, we can make it highly-optimized and beautiful, and we can deploy it with a click to multiple platforms. In addition, we can use Unity's integrated services to speed up our development process, optimize our game, connect with an audience, and achieve success.

Target Platform

Zombie Toys will be deployed to PC and Android. On one hand, the PC platform is the perfect target for this game as it is designed to educate new game developers on how to create a Unity game. On the other hand, the Android platform is a great target because many aspiring game developers want to learn how to publish mobile games. Deploying across two different platforms will increase visibility and utilization by linking the two products in the different markets.

Scheduling

Development Plan

PRODUCT	DECEMBER 2015	JANUARY 2016	FEBRUARY 2016	MARCH 2016
2D Art	Characters Concept designs Props references Sketching level design	Character texturing Props and environment textures	HUD prototype	Final Hud design for PC and Mobile
3D Assets	Blocking of props Low resolution prototype of characters Blocking animation	Final character modeling First pass animation Final props and environment modeling	Lighting first pass Material setup for characters and environment Animation final polish	Final lighting and backing
Scripting	Character control PC Navigation and enemy agents	Player attacks Enemy attacks Game manager Ally behavior Final 3D assets integration	Defining the walkable area Creating spawn points Adding audio	Refinement
Audio	Main soundtrack	Main soundtrack Audio fx	Audio fx variances	
Misc			Prepare beta testing reports Beta testing Create SEO campaign	Trailer and images for publishing QA Publish to Steam Publish to Google Play

Milestones

17 Dec 2015	Prototype test-out
29 Jan 2016	Final 3D asset integration to the game
18 Feb 2016	First Beta
31 Mar 2016	Gold

Updates, Maintenance & DLCs

Jun 2016	Beach skin	Create a skin representing the beach theme
Sep 2016	Dog Ally	Add a Dog Ally with a different behavior than the Sheep
Nov 2016	Christmas skin	Create a skin for Christmas theme

Work Environment

Remote Collaboration

The team is multi-national; collaborating on this project from around the world. Because of this, we are developing the game utilizing Google Drive for documents and Unity Collaborate to maintain a single, synched project that allows us to iterate on the deliverables in an organized manner.
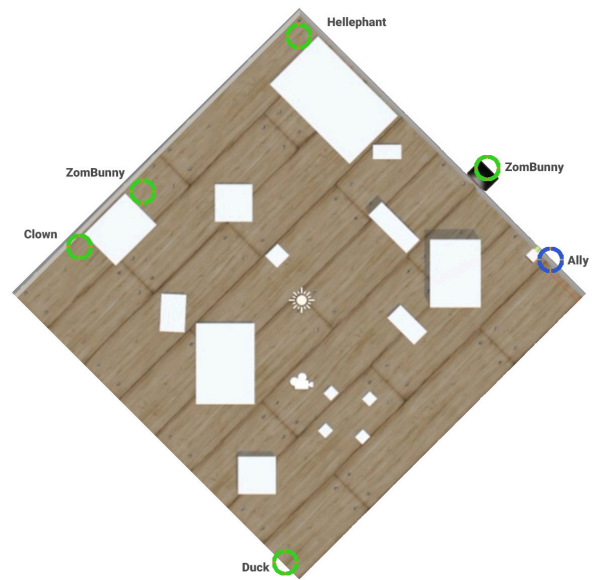
File Formats & Naming Convention

ASSET TYPE	SUBTYPE	NAMING CONVENTION	FILE FORMAT	ANNOTATIONS
3D Asset	Characters	CharacterName	FBX	
	Props	PropName	FBX	
	Environment	EnvironmentName	FBX	
Animations		AnimationClipName	In the Model FBX	Idle Move Death
Textures		CharacterName_TextureChannel PropNameTextureChannel	JPG PNG TIFF	
Scripts	Attacks	WeaponAttackType	C#	**Weapon:** Frost, Lightning, Slime, Stink **Attack:** Attack, Debuff, Bolt, Projectile, Hit
	Characters	CharacterNameBehavior	C#	
	Player	PlayerBehavior	C#	
Materials	Characters	CharacterNameMaterial	*.mat	Materials do not have a specific naming convention in this project
	VFX	ElementMaterial		
UI		UIElementState	TGA PNG	

Levels

Level 1

Zombie Toys will consist of one endless level. The level will consist of the children's room, with toys (dispersed around the floor) that will act as obstacles for the Player and for the Enemies. The toy elements (that serve as props) are placed so the Player can not be occluded easily when they move behind one.

There will be four (4) different spawn points in the level. Each spawn point is displayed as a green circle in the scheme below. Enemies will appear from these spawn points at a precise rate.

Asset List

Players	Boy
	Girl
Enemies	Clown
	Hellephant
	ZomBear
	ZomDuck
	Zombunny
Allies	Sheep
Props	Arches
	Bat
	Blox
	Clock
	DollArm
	Dollhouse
	Drawers
	Firetruck
	Hearse
	Lighting
	Robot
	SpinningTop
	Stool
	Train
Environment	Wall
	Floor
	WallStar