

HERO VALLEY

Puzzle and Action RPG Game For Mobile Devices

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INTRODUCTION

Hero Valley is a 2 and 2.5D game which combined with the most popular game play systems in modern world such as puzzle solving and action role playing system. It tries to provide iOS and Android devices users good gaming experience.

Story

12400 years ago, the world is surrounded by monsters. All of them came with different elementary type. At that time, humans were going to extinct.

Moony, a brave girl with special ability to collect elementary power was trying to save the world. To Save the world, she tried to collect different elementary power to confront with the monsters. Can you help her to change the history?



Project Elements

This game project consists these parts

Hero Valley Game



Official Webpage

Items					
Filter item type:					
Any					
Consumable					
Equipment					
Misc					
Weapon					
		Attack Point	Defense Point	Value	Description
Wooden Helmet		0	18	70	Most basic helmet for a
Wooden Armor Plate		0	26	135	It provides least protect
Wooden Arm Glove (Left)		0	6	40	Left glove provides exc
Wooden Arm Glove (Right)		0	6	40	Right glove makes adv
Wooden Legging (Left)		0	8	80	You will not have broke
Wooden Legging (Right)		0	8	80	You will not have broke
Wooden Sword		7	0	100	Only Sword Master and
Stone Helmet		0	26	200	Smash enemy with a tr
Stone Armor Plate		0	38	310	It will not break even w

Database with a Ranking System

Rankings		
Player ID	Player Name	Completed Stage
5	John	8
2	Xanthus	6
4	Mark	5
3	Ken	4
1	Mike	3

GAMEPLAY

Puzzle Solving Mode

Hexagonal puzzle are closely packed in Hero Valley's puzzle solving system. Players can link puzzles with more composition. Puzzles may grant the hero with special ability.



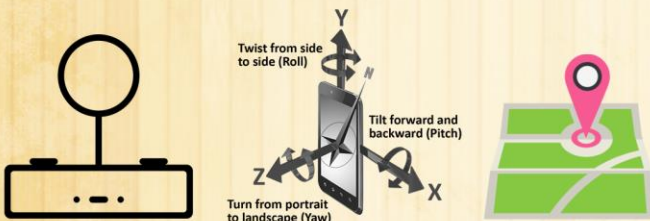
Action Battle Mode

Release elementary attacks stored in Puzzle Solving Scene. Players should perform well in Action Battle Mode to slay all the monsters.

3 Control Modes

Action Battle Mode comes with 3 control methods:

1. JoyStick
2. Gyroscope
3. Tap and Go



Inventory System

Too difficult to win the stage? Try to acquire better equipment and items from lower stage or upgrade your equipment to give your character a boost.



METHODOLOGY

Sprite Animation

Hero Valley uses sprite to animate the character and the monster.



Box2D Physics Engine

In Action Battle mode, Box2D physics Engine has been used. All movement, collision, etc. are according to physics laws.

Multi-player Connection Architecture - 3-Tier Architecture



Remote Database: A MySQL database is created as Corona support MySQL DB format. It has tables which stored player information, item information and monster information.

Logic Middleware: PHP scripting language is used for pulling data from the MySQL database and encoding it into the JSON format before returning the data to the mobile device.

Client: Connect the device to the middleware layer and download the data to the local device from the remote server. Then decode the JSON formatted information and save the data to a local SQLite file. Then load the data from the SQLite database to the screen.

Data Connection between Two Devices

To connect the devices, both devices should run the exactly code (for both server and client). If the code is not the same, the game would out of synchronization. However, there are others factors affect the synchronization of the devices.

Network Latency

Sending a packet through device takes time and depending on the network traffic. This can be significant even on a local network. If the latency were too large, it would affect the gaming experience.

Protocol

games we do not care if packets are out of order, we are just interested in the most recent state of the game. As a result, we used UDP. UDP provides a faster and uses fewer overheads than TCP.