

# Chest Game

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## LET'S DO AN OVERVIEW

### Basic Game Mechanism & Marketing

## PROBLEMS



Three of main questions are:

- How to store and deal with **in-game data**
- How to store past data and analyze **players' performance**
- How to evaluate the performance of a specific **marketing strategy**.

## SOLUTIONS



- **(Mechanism & Player)** create a database supporting the game.
- **(Marketing Performance)** To Evaluate the performance of a specific marketing strategy, we will analyze the data, including the KPIs (the increasing number of players) at each level.

# MODEL - OUTLINE



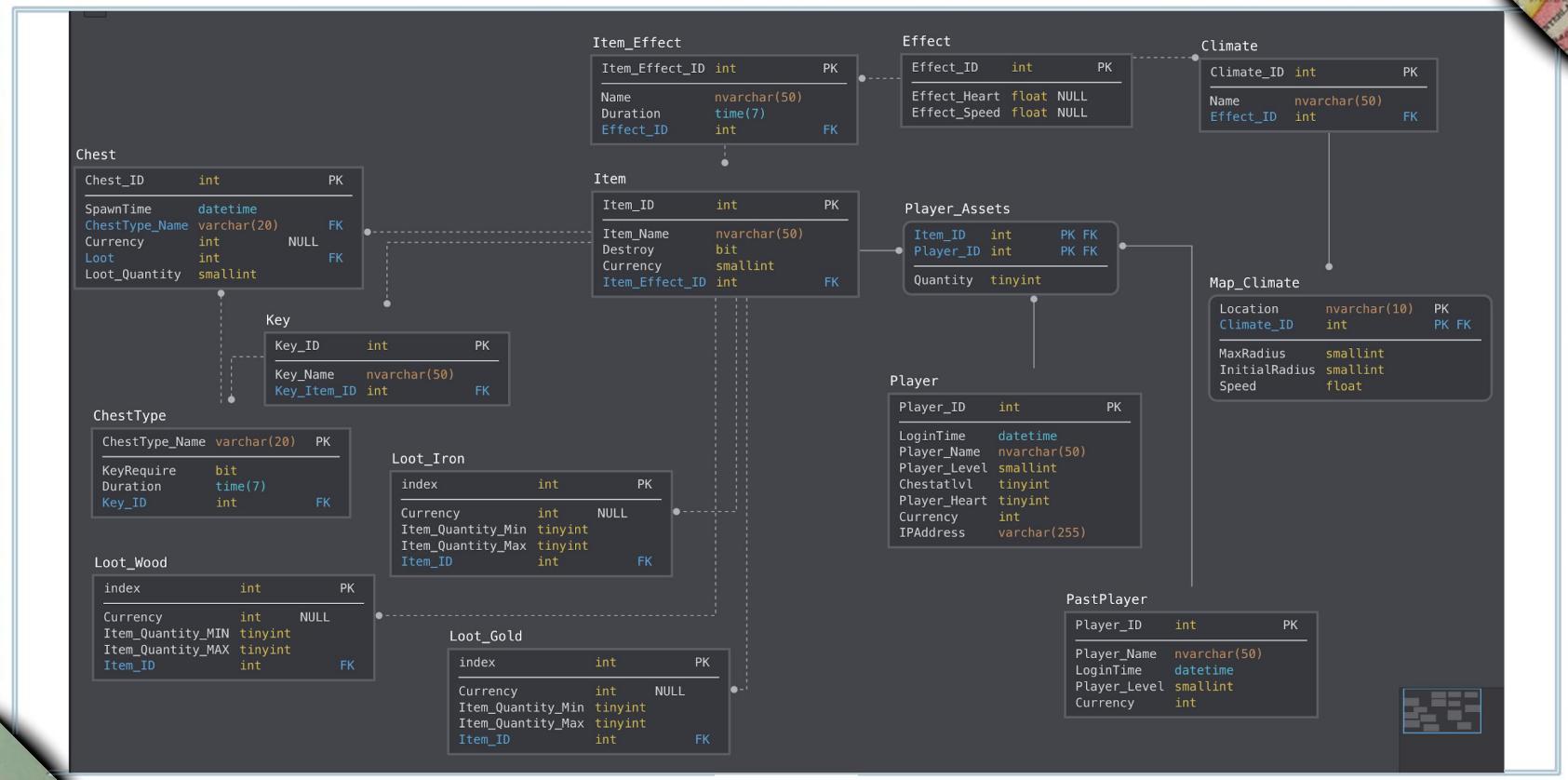
## Game Mechanism

- Core Mechanism
- Loot and Items
- Player
- Map
- UI Display



## Marketing and Data Analysis

- Marketing strategies
- KPI
- Player Archive Table



# DATA FLOW



Player

-> PlayerAsset

ChestType

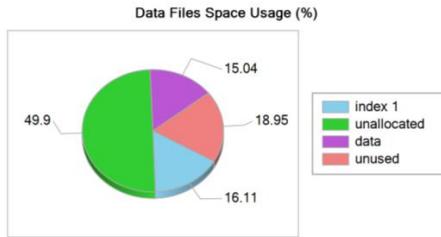
-> Chest

Item -> Loot\_Wood/Iron/Gold

# JOINS AND QUERIES



Total Space Reserved	16.00 MB
Data Files Space Reserved	8.00 MB
Transaction Log Space Reserved	8.00 MB



By Avg. CPU Time

Currently, no executable object has consumed CPU time.

By Avg. Logical Reads

Currently, no executable object has performed logical reads.

Total CPU Time (%) By Objects\*

Currently, no executable object has consumed CPU time.

## Index Usage Statistics

Shows how the users and system use the indexes.

Currently, there are no index usage statistics for [UCLA3] Database.

## Index Operational Statistics

Shows details of the no. of operations performed on the indexes.

No entry found for autogrow/autoshrink event for UCLA3 database in the trace log.

## Disk Space Used by Data Files

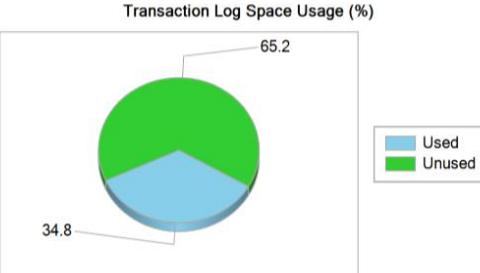


Table Name	# Records	Reserved (KB)	Data (KB)	Indexes (KB)	Unused (KB)
dbo.Chest	0	0	0	0	0
dbo.ChestType	3	72	8	8	56
dbo.Climate	4	72	8	8	56
dbo.Effect	5	72	8	8	56
dbo.Item	8	72	8	8	56
dbo.Item_Effect	5	72	8	8	56
dbo.Key	2	72	8	8	56
dbo.Loot_Gold	2	72	8	8	56
dbo.Loot_Iron	3	72	8	8	56
dbo.Loot_Wood	4	72	8	8	56
dbo.Map_Climate	4	72	8	8	56
dbo.Player	4	72	8	8	56
dbo.Player_Assets	7	72	8	8	56
dbo.PlayerArchive	4	72	8	8	56
dbo.sysdiagrams	0	0	0	0	0

## NORMALIZE AND DENORMALIZE



- Player & Player Assets
- Item, Item Effect and Loot tables
- Chest & ChestType
- Climate & Map

## Joins and Queries



- Create player
- Create chest
  - Item of a number(in a range) + money, all generated randomly
- Create PlayerArchive
- Create KPIMarketingStrategy

	Player_ID	LoginTime	Player_Name	Player_Level	Chestativl	Player_Heart	Currency	IPAddress
1	1	2018-06-17 00:00:00.000	Nyancat	3	2	4	76	127.60.153.81
2	2	2018-08-03 00:00:00.000	GLHF	2	3	3	58	49.193.236.153
3	3	2018-11-19 00:00:00.000	CaptainTeemoOnDuty	3	0	4	61	87.207.84.134
4	4	2018-09-12 00:00:00.000	abrymmer	1	3	2	5	41.4.250.111
5	1002	2018-11-28 23:46:13.187	Cassini	1	0	2	0	172.16.4.48

	Chest_ID	SpawnTime	ChestType_Name	Currency	Loot	Loot_Quantity
1	1	2018-11-28 23:45:29.197	Wood	265	4	4
2	2	2018-11-28 23:45:29.220	Iron	258	2	7
3	3	2018-11-28 23:45:29.227	Gold	8305	1	1

## Security & Auditing



- We remove players of more than a months ago from player table, and put them into archive table.
  
- Prevent delete action if those player's are not past players.

## PERFORMANCE IMPROVEMENT

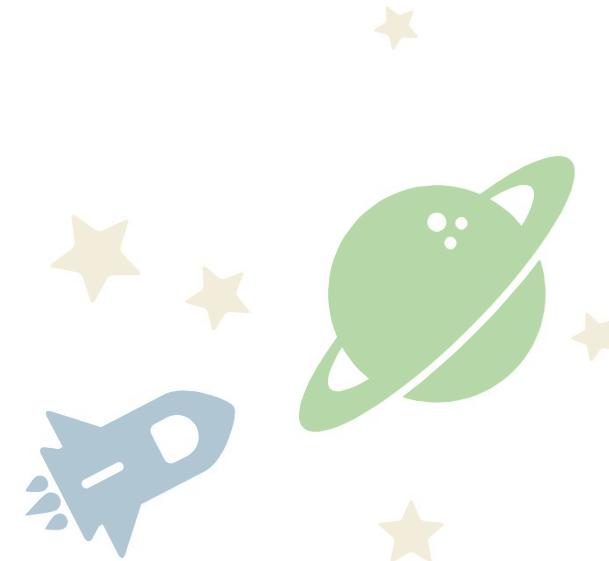


- Cluster constraints added for primary keys

## CONCERNS

- Inactive Players(heartbeat)
- Flow Control
- Unstable Connection

# Future



# FUTURE OF AN IDEA



## 1. Social, integrate with other software

Integrate with other login systems, eg. gmail, facebook, wechat, line, kakaotalk

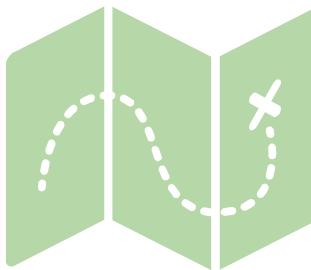
Games with friends instead of alone, social, real-time, real location.

**Example:** climate in this game is related to their real location (los angeles- hot; new york- cold; otherwise, mild; this is simple but real fun design at this stage.

## 2. Real time & locations

In the future, locations may be real, eg, shopping mall, parks, flight; rewards may be real as well, such as coupon for shopping.

**Example/application:** shopping instruction/map before or during flights, users can spend their time shopping and gaming in their spare time.



THANKS!

Any questions?