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# Word Saga

Journeys

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# Vision

- Shorter gratification loop will increase tendency of players coming back the next day (hypothesis proved in previous opts)
- Longer event duration would allow for more completers, who couldn't complete solo series on the same day
- Bot difficulty might ease out level progression leading to higher completion rates

# Anti-vision

- May lead to cannibalization of other start sources (estimated 0.13 instant bots start from home screen)
- For some users, when Word Saga is available for the first time, the time may not be sufficient to complete the event, hence leading to drop-off
- Due to dynamic bot difficulty, players might not be motivated to use paid swaps leading to economy inflation

# Hypothesis

There are five hypotheses that needs to validated:

1. Instant bot / solo series ladder will drive retention for users with high instant bot engagement share
2. Shorter / intermittent gratification loop will get players hooked to the solo series (number of solo days). This will also help negate the engagement aversion in case of longer period event
3. Surfacing changes will help increase the top of the funnel for the players
4. Rewards - Tiles will hook players and help increase Top of the funnel and Player progression across levels
5. Narrative and visualization will help drive longer period event. Reskinning to provide engagement bursts during the event days

**In the current scope, we will be testing the first three hypothesis by tweaking the existing solo series infra.**

# Business Goals

- Solo top of the funnel to increase by 1000 bps
- Solo apu to increase by 2 moves per user
- Overall moves upside of 0.6
- RR upside of 80 bps

# Design Goals

- Milestones will provide short term goals to the player, keeping them engaged in the game mode for a longer time
- Longer event duration would allow for more players to complete the event
  - Also, creates a hook for them to come again during the event period

# Expected Upsides

- Top of the funnel to increase by 1000 bps to 30% upd
- Overall rolling retention upside 80 bps
- Milestone rewards and the bot difficulty changes should drive 2 additional moves per user from Solo engagement (Solo APU) leading to overall APD upside of 0.6 moves
- LTV upside of **3.58%**

# Overview

## **Word Saga is on its way!**

1. Introducing Word Saga where player will be playing multiple levels over 3 days!
  - a. Player completes multiple milestones and receives rewards for completing each of them
  - b. Players who have played 50 lifetime moves or have seen solo gems FTUE can play this game mode (existing unlock condition)
2. New solo carousel card will be shown on home screen
3. UI changes are made on solo game modes card and more games panel
4. Intro / Outro flow changes
5. Notif changes have been incorporated for this event

# Event overview

# Event Details

Event name : Word Saga

Event duration :

1. 3 days
2. Event starts at 12 am local time → ends 3 days later 11:59 pm local time
3. Each event runs back to back with no gap
4. Time condition remains same on runtime (Player will not see the event if x hrs are remaining for event end)

Total Levels : 15 (runtime controlled)

Replay : ~~Available for cohorts controlled by solo\_replay / solo\_replay\_var runtime (similar to existing)~~ Same conditions as existing in current solo series

Unlock condition :

- ~~For seasons control, player will unlock this event on 50 lifetime moves (same as existing)~~
- Player will unlock this event if they have played 50 lifetime moves (controlled by existing solo series runtime) or they have claimed gems for the first time whichever is earlier (same as in seasons)
- Player will see the event as soon as it is unlocked (satisfied by pt 1 or 2) and experiment is allocated
- There will be a start and an end date in the event config for the event duration

# Event gameplay

1. Player has to complete 15 levels in 3 days to complete Word Saga ([runtime](#) controlled)
2. Rewards for solo series has been revamped
  - a. Players have to complete milestones for which they receive respective rewards
    - i. These milestones and rewards are [runtime controlled](#)
    - ii. Reward granted will be in the range of +/- 20 and at random in multiples of 10
3. Logic for [gameboard](#) remain same as in existing solo series (gameboard resets every 5 levels i.e level 5, level 10 so on..)
4. Bot difficulty logic is stated in the next slide
5. Logic of entry system remains same as existing (free/coins /gems /w2e)

## Note :

1. We will only be using Sol as a bot, other bots will not be present in this experiment
  - a. Following copy on game modes card will be shown
    - i. Beat Sol (total levels remaining) times to unlock mystery boxes!
2. **This event will be replacing the existing Daily Showdown for users in variant**

# Bot Difficulty

We will be using the same set of difficulty as existing in solo series (difficulty level 1 → 5)

1. Difficulty will increase by 1 on 2 consecutive wins
2. Difficulty will decrease by 1 on 1 loss
3. Default difficulty for level 1 will be set to 1
4. Default difficulty for level 2 will be set to 2
5. Difficulty level will be set to 5 as default for the last (total no of levels / 5)[floor value will be taken] levels
  - a. Max bot difficulty for other levels will be 4
  - b. Example : Total number of levels = 20, then  $20/5 = 4$ ,
    - i. Last 4 levels will have default difficulty level set as 5 (i.e. level 17 → 20 [including level 17])
    - ii. Level 1 - 16 will have max bot difficulty level of 4
6. Default difficulty of other levels is based on
  - a. the difficulty of the last level played and
  - b. difficulty increase/ decrease as explained in pt 1 and 2
    - i. Suppose player is on level 3 and has won level 1 and level 2 consecutively,
      1. Player will have bot difficulty level 3 on level 3 start

# Bot Difficulty

Level No.	Level 1	Level 2	Level 3-12	Level 13-15
Default difficulty	1	2	Dependent on last level difficulty and whether player has won last 2 levels consecutively	5
Max difficulty	4	4	4	5
On Loss	On each loss, difficulty decreases by 1 Minimum difficulty is 1 , difficulty doesn't decrease below this threshold for any level			

# New Surfacing

# Carousel card

UI :

1. Header and bot art : Word Saga
2. Level indicator art
3. CTA : Level No. and Sink source (existing logic)

Surfacing :

1. This card is added on the carousel as the Centre card
  - a. Rest of the cards will move by 1 space to the right when this card is viewed
2. Shown on the 1st and 3rd home screen views for a day
  - a. After that, this card will be removed
3. If player has completed all the levels, they will not see this surfacing again in the event duration
4. This card will have priority over the Friends card when both are eligible to be shown
  - a. In such case, friends card will not show

Functionality :

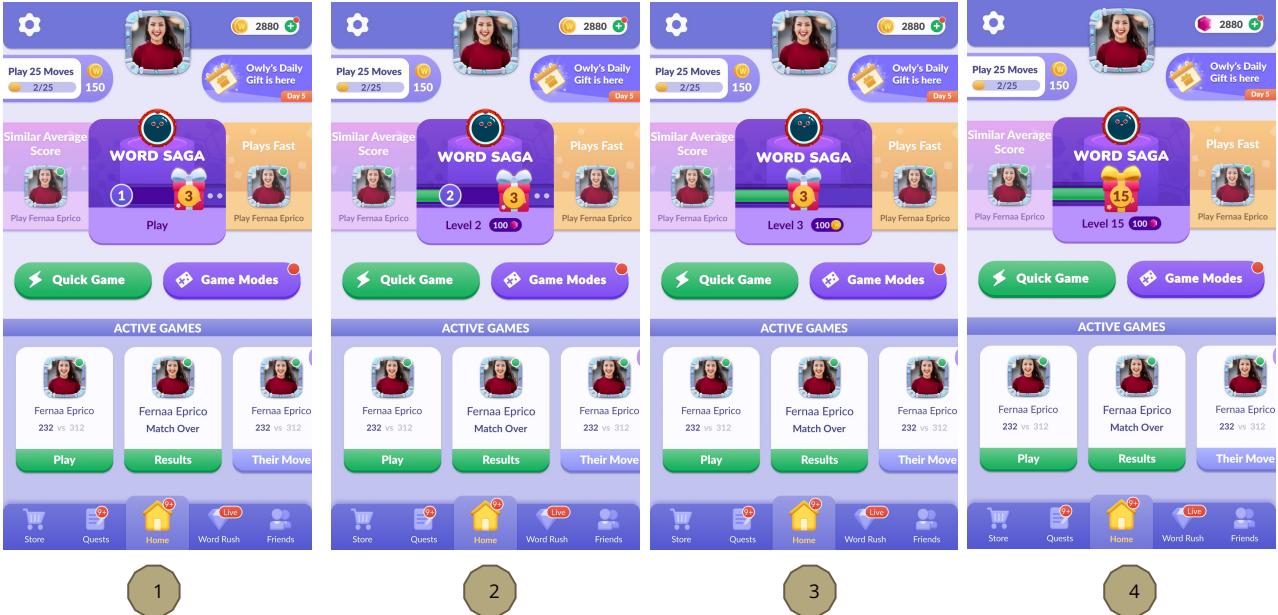
1. Sinks coins/gems/w2e (same as existing)
  - a. **Edge case :** If no sink is available for the player, this card will not show
    - i. Eg : This card will not show if player doesn't have 20 gems/ w2e available or enough coin balance
2. Starts or continues(whichever state player was in) the next level



# Level indicator

There are 4 states according to the kind of level the player is in :

1. **First level** : CTA : Play
2. **Non milestone level** : Player only gets game over rewards here
3. **Milestone level** : Player receives gift box on completing this level
4. **Last level**



## Note :

The art of the progress bar starts from level 1 and ends at level 15, it would have to be made such that it on changing the runtimes the levels are represented accurately

[Mock Link](#)

[Mock Link](#)

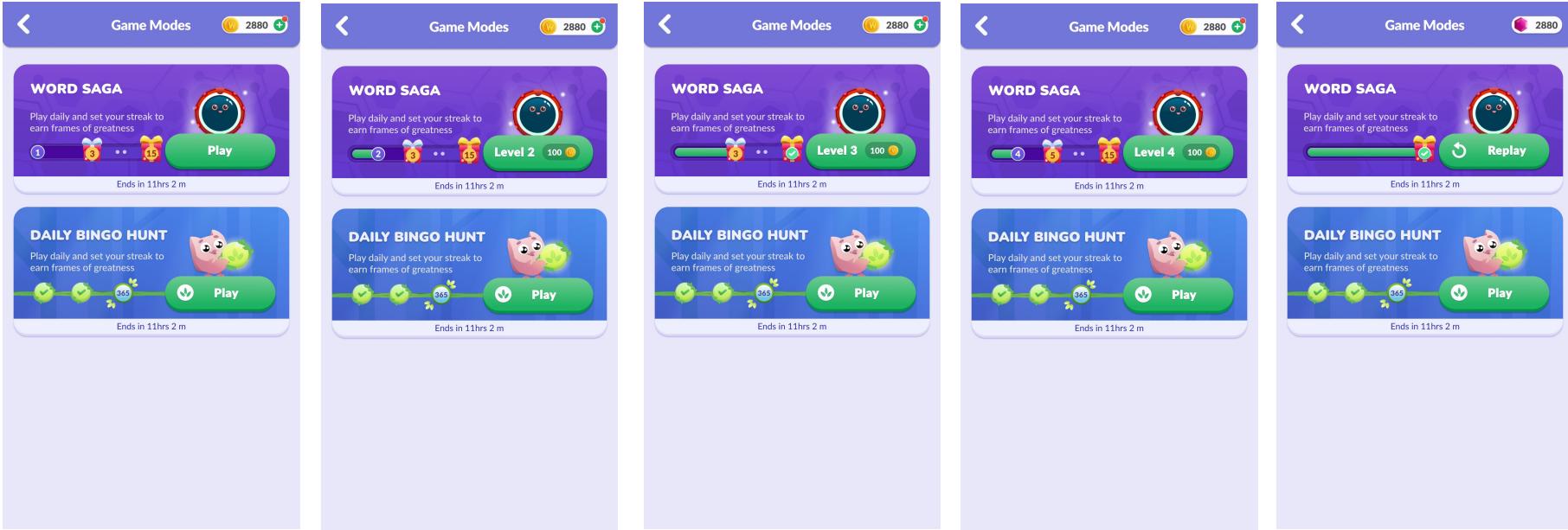
[Mock Link](#)

[Mock Link](#)

# UI Changes

# Game modes card

We will be only changing the progress bar, copy and the event name here (Timer will show xd yh when time >1 day, xh ym in case time < 1day, 1h when time <=1hr)



1st level

When player is on a non  
milestone level

When player progresses  
to a milestone level

State changes back to  
non milestone after  
completion

Last level

Locked State

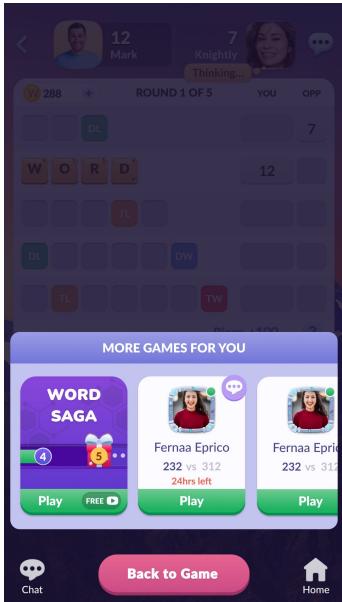
**Note :** The visual for the milestone and non-milestone states remain the same, only the numbers update irrespective of how many levels are between. This is done to allow scalability in terms of level config

# MG panel card

We will be only changing the progress bar and event name here



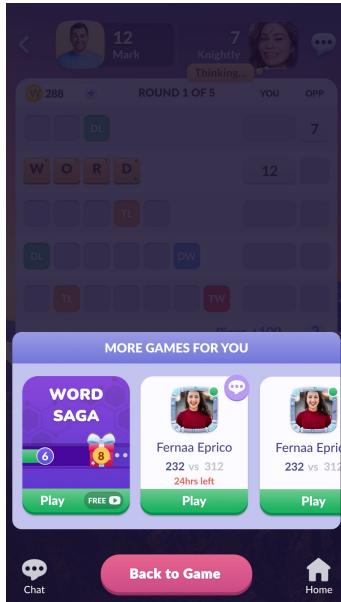
1st level



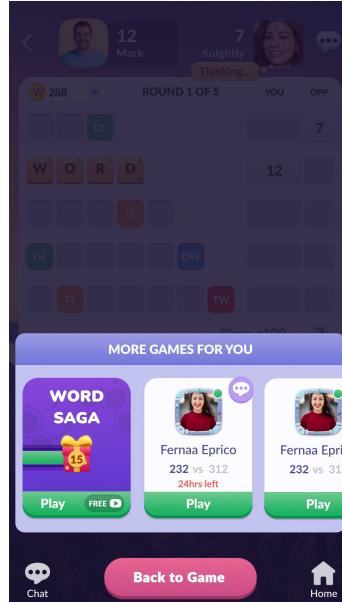
When player is on a non milestone level



When player progresses to a milestone level



State changes back to non milestone after completion



Last level

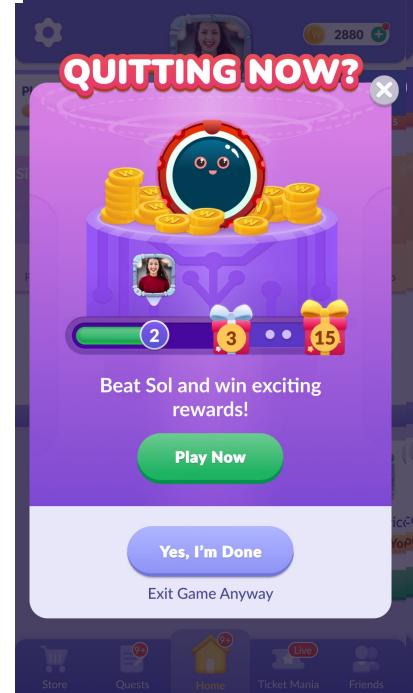
Note : The visual for the milestone and non-milestone states remain the same, only the numbers update irrespective of how many levels are between. This is done to allow scalability in terms of level config

# Quit game popup

UI changes :

1. Copy : Beat Sol and win exciting rewards!
2. Art changes
  - a. Art with bot
  - b. New progress bar showing current state  
(same as in game modes)

Rest remains same as existing



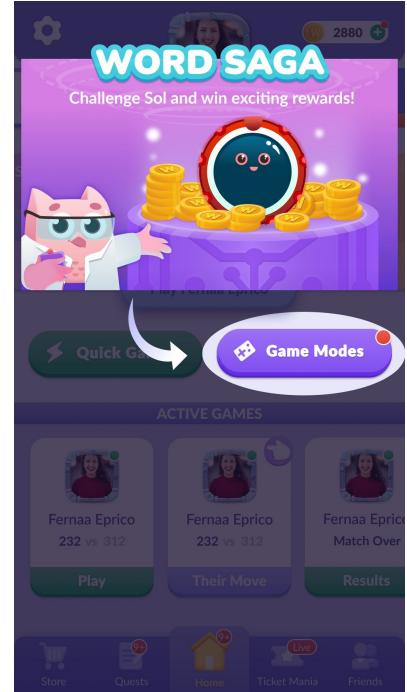
Mock Link

# Solo FTUE

UI changes :

1. Header : WORD SAGA
2. Copy : Challenge Sol and win exciting rewards!
3. Art changes

Rest remains same as existing

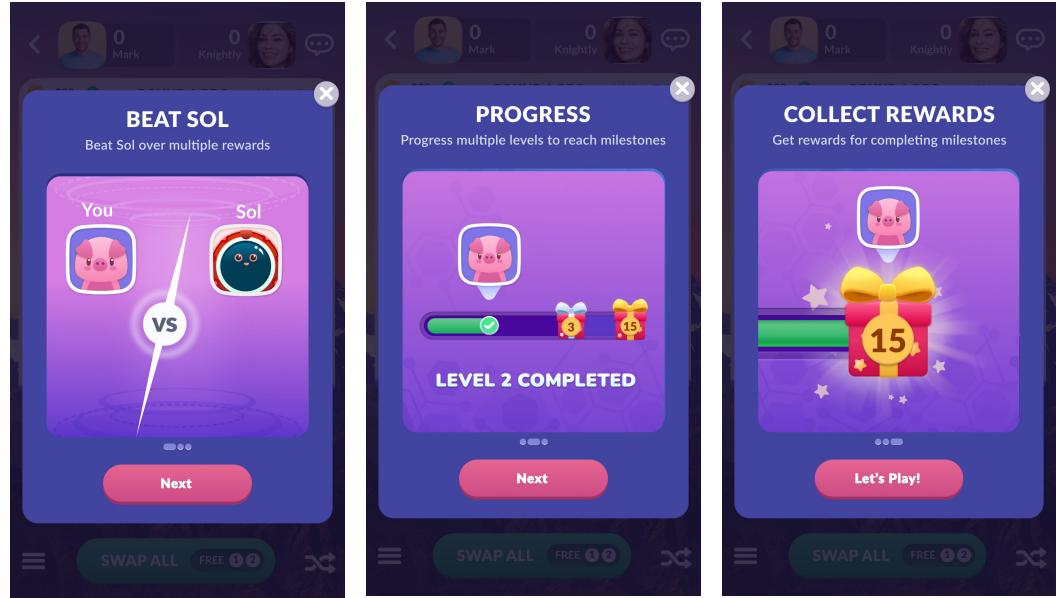


Mock Link

# How to play

In accordance with existing ticket mania how to play, similar carousel pop-up will be used here

1. Only text and art needs to be changed
2. This popup will open when player clicks on i icon in solo game board
3. On clicking Let's Play! or cross will close the popup

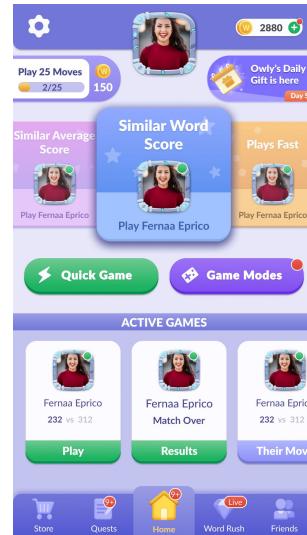


[Mock Link](#)

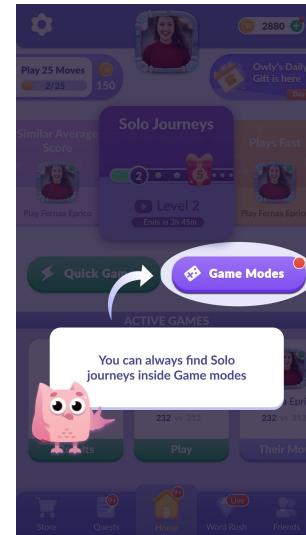
# FTUE and flow Changes

# Redirecting FTUE

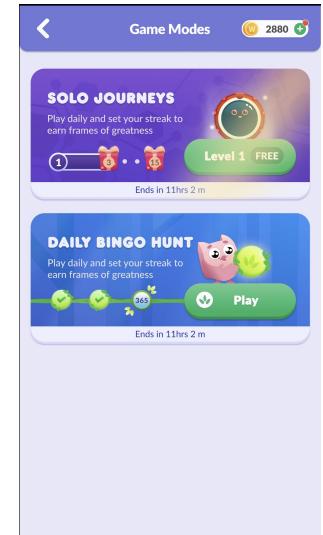
- When the player plays Word Saga from the home screen carousel or more games panel or quit game popup for the first time the player will be eligible for this flow, when they exit Solo
  - Force close> Lands on Homescreen> Redirecting FTUE
  - Clicks on home on outro>Lands on Homescreen> Redirecting FTUE
  - Clicks back on gameboard>Lands on Homescreen(only for the First time scenario) > Redirecting FTUE



Player lands on home screen from solo series



FTUE appears. Clicking on Game modes player will be taken to game modes section. On clicking anywhere else prompt is dismissed.



Sheen effect appears on the entire card > clicking on the card or the CTA will take the player to the Solo series match flow.

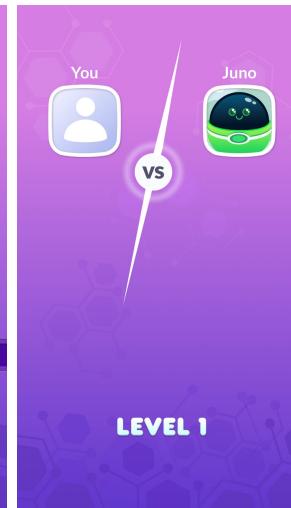
# Intro Flow

## Intro flow when player is just starting with Word Saga

- The intro animation will have a progress bar moves from the last level to the first, showing all the milestones.
- Player will see this flow first time for each event
- In case, player comes to an already started game, player will be taken directly to the game board



Intro flow starts.



Game start anim



Lands on game board

On starting the solo series for the **first time from any surfacing** the player will be seeing the intro flow > match

[Anim Link](#)

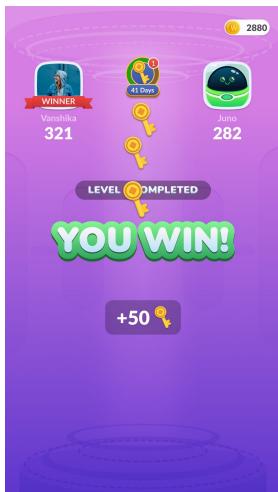
[Figma link for flow](#)

# Outro Flow - Initial Progression

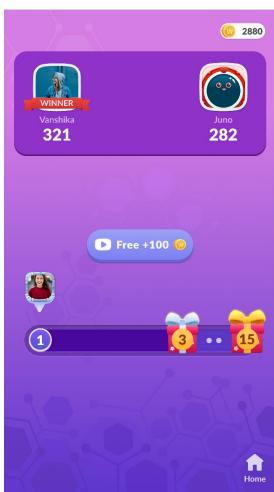
Outro flow when a player moves from lvl1 > lvl2

Note : Timer on CTA button will not be real time, it will update on screen change

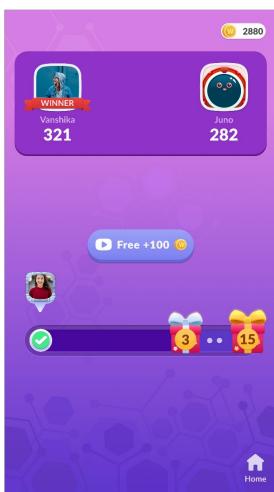
[Figma link for flow](#)



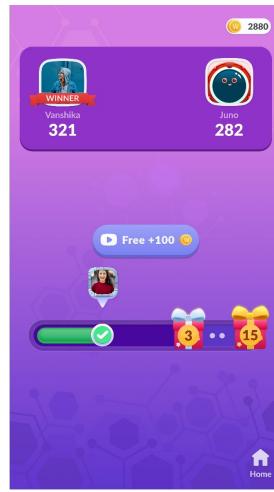
Post win, key grant and win gratif text appears



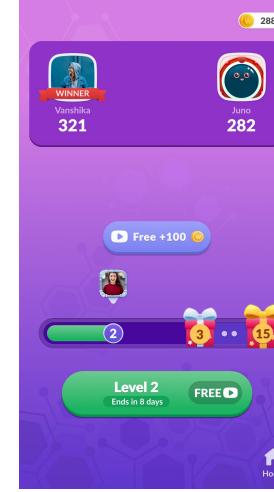
Progress bar appears.



Current level changes to check mark



Current level and avatar moves forward to the next level



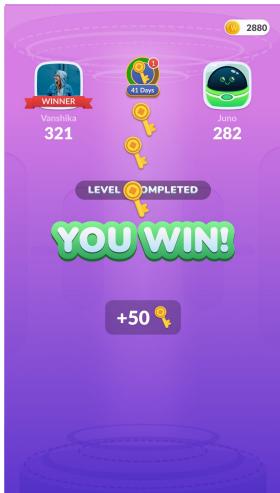
W2e, Level CTA and home icon appears one by one

[Anim Link](#)

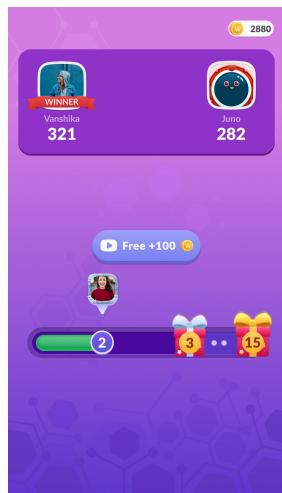
# Outro Flow - Reaching Milestone level

Outro flow when a player moves to milestone level

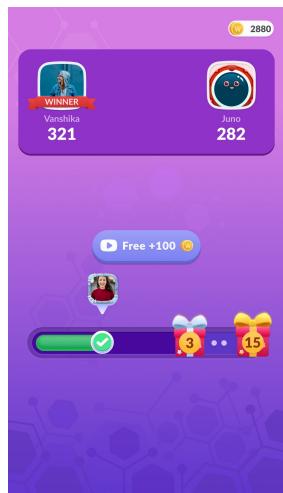
[Figma link for flow](#)



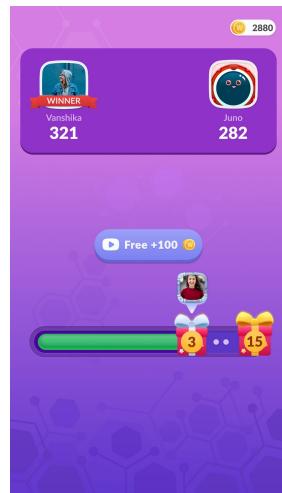
Post win, key grant and win gratif text appears



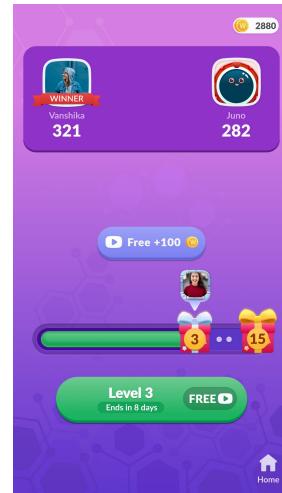
Progress bar appears with the player's current level (lvl 2). (Progression anim starts)



Current level changes to check mark and the progression starts along with avatar



Check mark changes to the next level during transition.

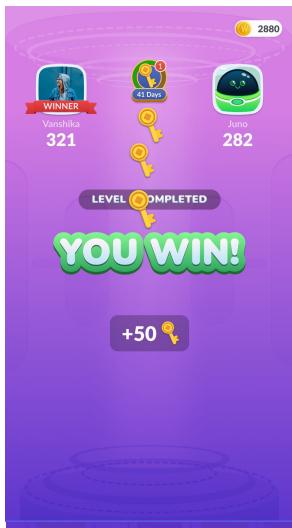


Play CTA and home icon appears

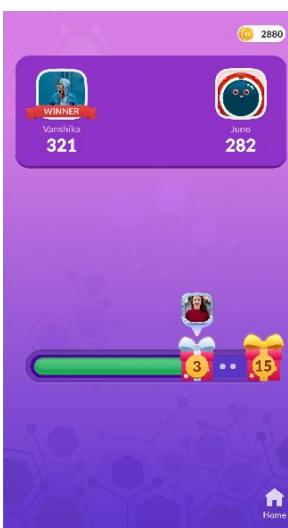
# Outro Flow - Post Milestone Level

Outro flow when a player progresses from milestone level

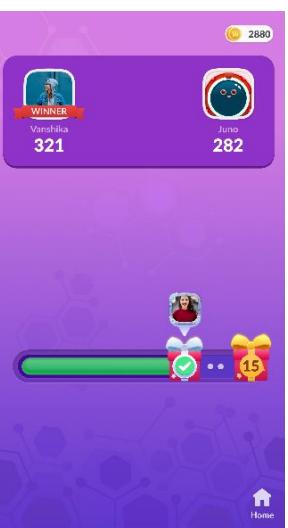
[Figma link for flow](#)



Post win, key grant and win gratif text appears



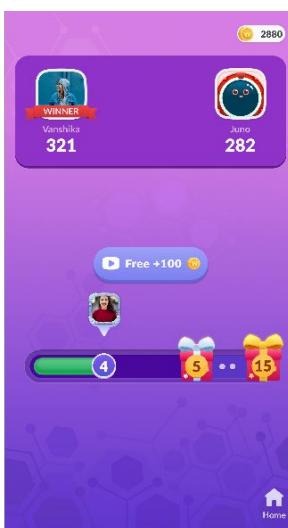
Progress bar appears with the level the player just played (lvl 3). (Progression animation starts)



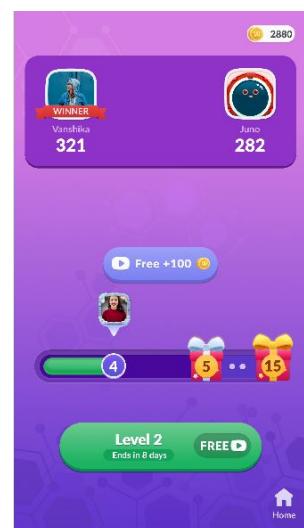
Current level changes to check mark and the progression starts along with avatar.



Mystery box grant anim > progress bar change to new state (existing grant anim)



Progress anim happens > current level indicator sits at next lvl(lvl 4)

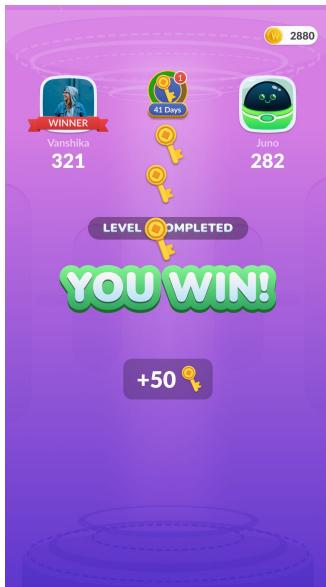


W2e, next level CTA and home icon appears

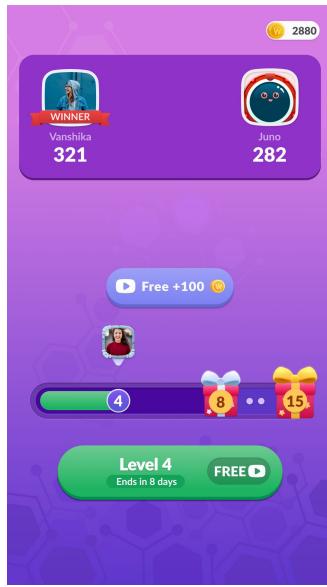
# Outro Flow - Multiple non milestone levels (1\2)

Outro flow when a player progresses from one non milestone level to another

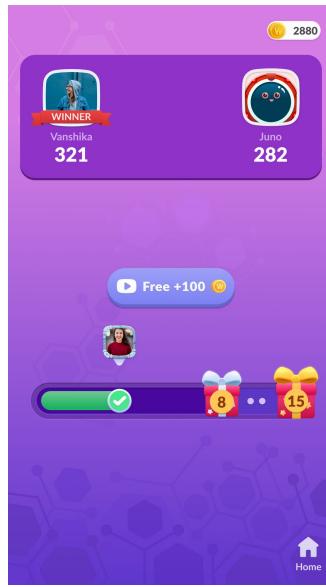
[Figma link for flow](#)  
[Anim Link](#)



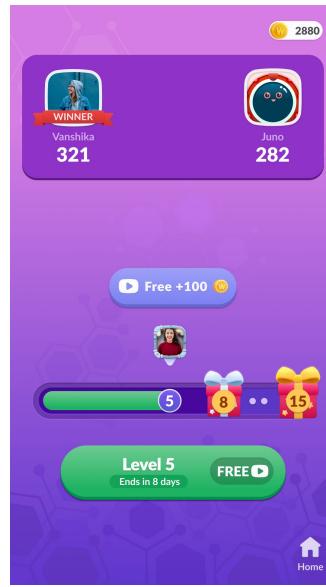
Post win, key grant and win gratif text appears



Progress bar appears with the level the player just played (lvl 4). (Progression animation starts)



Current level changes to check mark and the progression starts along with avatar.

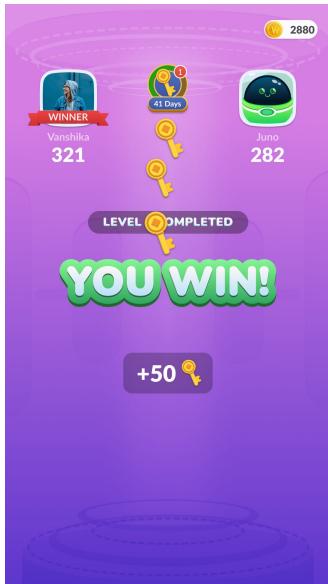


The marker stops halfway between start position and mystery box position and displays new level

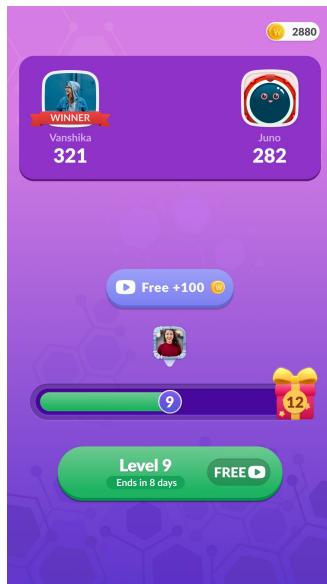
# Outro Flow - Multiple non milestone levels (2\2)

Outro flow when a player progresses from one non milestone level to another when only last milestone is left

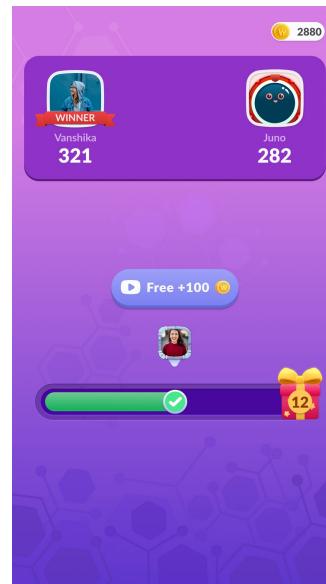
[Figma link for flow](#)  
[Anim Link](#)



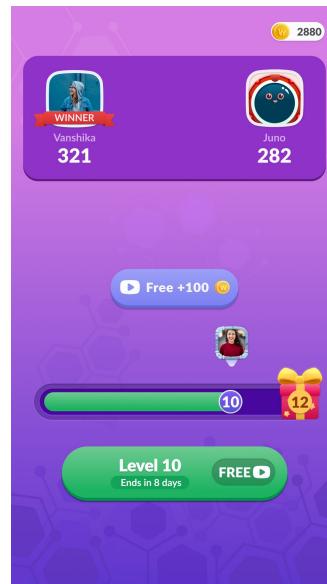
Post win, key grant and win gratif text appears



Progress bar appears with the level the player just played (lvl 9). (Progression animation starts)



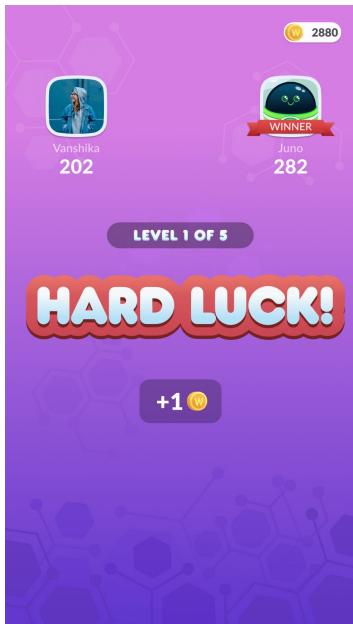
Current level changes to check mark and the progression starts along with avatar.



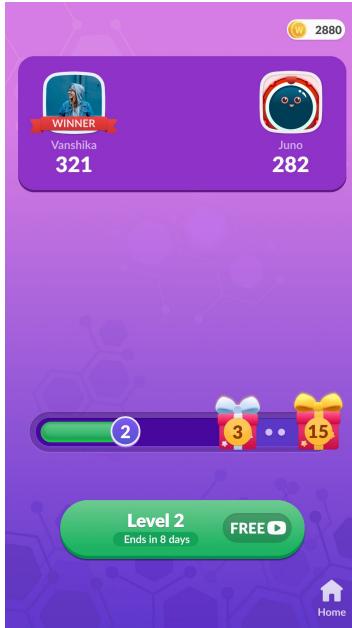
The marker stops halfway between start position and mystery box position and displays new level

# Outro Flow - Game Loss

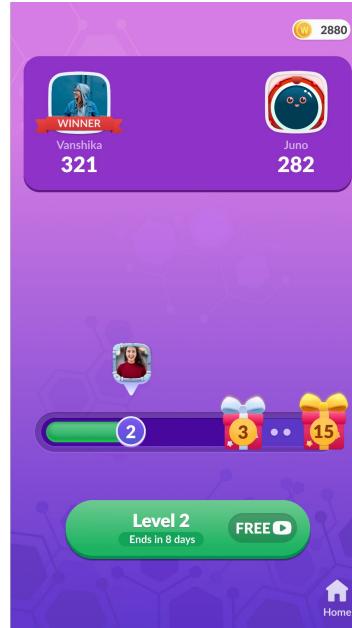
[Figma link for flow](#)



Loss key grant and gratif text appears

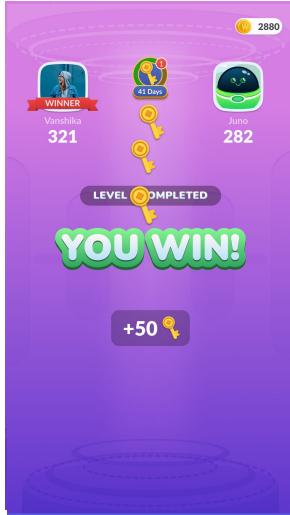


Progress bar appears with the level that the player just lost

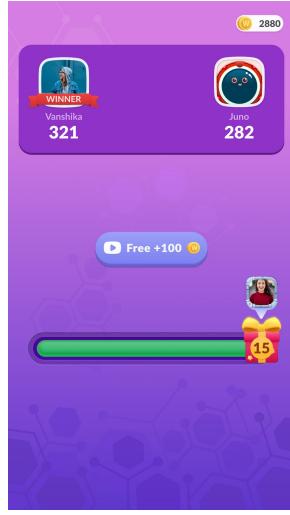


Player avatar appears over current level > W2E, current level CTA and home icon appears

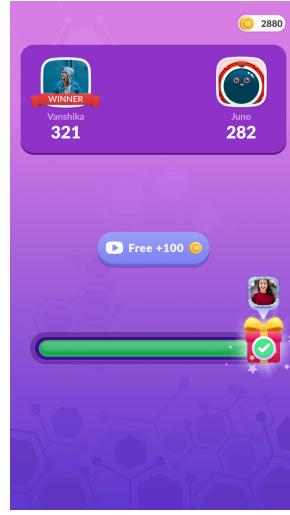
# Outro Flow - Last Milestone Progress



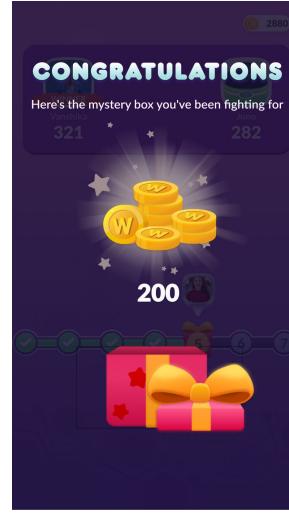
Post win, key grant and win gratif text appears



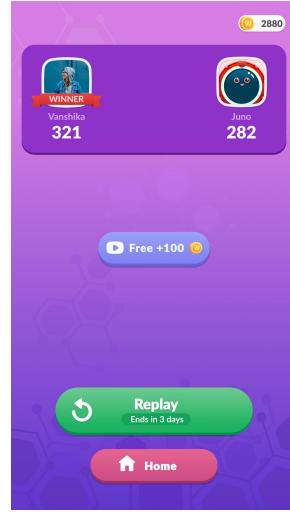
Progress bar and w2e appears



Level indicator changes to check mark and particle animation happens

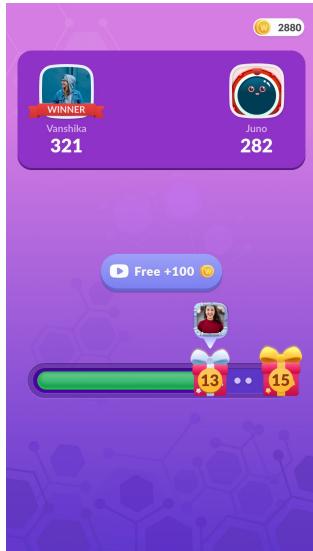


Mystery box grant anim, progress bar gets removed simultaneously

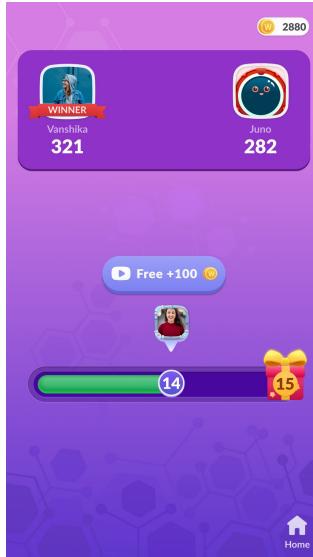


Outro Screen appears> CTA appears

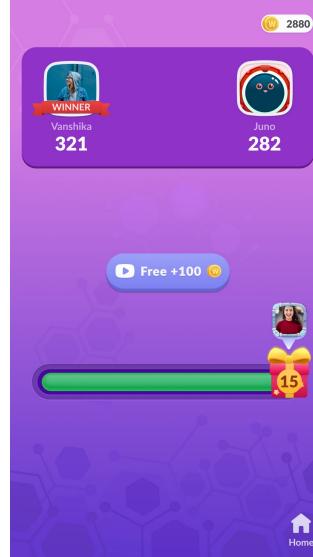
# Outro Flow - Last Milestone States



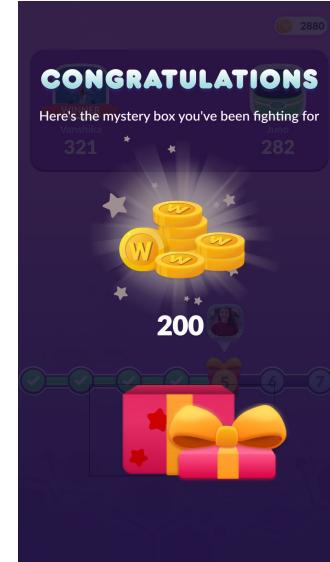
After completing level 13,  
mystery box grant  
happens simultaneously  
progress bar changes into  
its new state



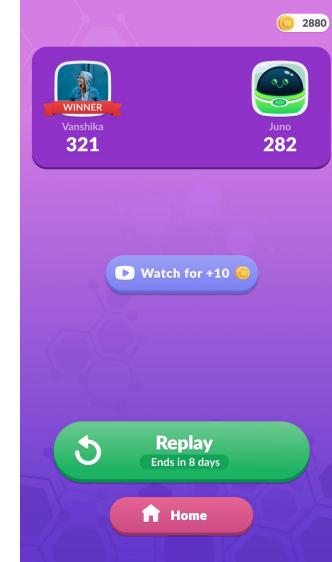
Current level is placed in  
the middle and the  
progress bar extends till  
the last level



On reaching last level,  
current level indicator  
moves to last milestone  
reward.



Mystery box grant anim for  
last milestone, progress  
bar gets removed  
simultaneously



Outro screen appears >  
CTA's appear.

# Notifs

# Notifs

## Word Saga reset

**Notif Type :** Image → Image

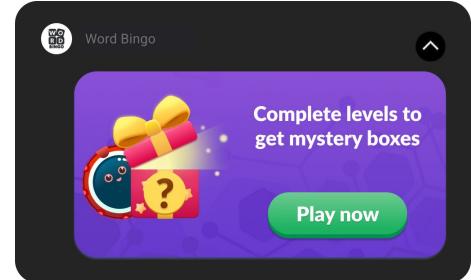
### Small Notif :

1. **Art + Copy** : Word Saga is here!



### Large Notif :

1. **Art+Copy** : Complete levels to get mystery boxes
2. **CTA** : Play Now



### Notif sending criteria :

1. This notif will be sent to those users who have unlocked the event
2. This notif will be a local notif and will fall under the special events channel
3. If player has already started the event (started atleast one game), this notif will not be scheduled
4. This notif will be scheduled on app pause and will be sent to the player at 2 PM - 3 PM local time on the day the event goes live
5. Priority : Priority in slot : Seasons reset > Word Saga reset > DLR > WOTD > Solo reset > DBH reset > DMB reset > DQ reset

**Landing Flow :** Open Game modes screen

[Mock Link](#)

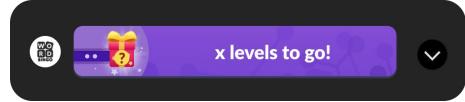
# Notifs

## Word Saga progress

**Notif Type :** Image → Image

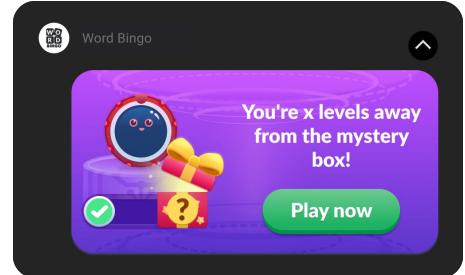
### Small Notif :

1. **Art + Copy** : x levels to go! [ x denotes the no. of levels left to complete the current level]



### Large Notif :

1. **Art+Copy** : You're x levels away from the mystery box!
2. **CTA** : Play Now



### Notif sending criteria :

1. This notif will be sent to those users who have unlocked the event
2. This notif will be a local notif and will fall under the special events channel
3. This notif will be scheduled on app pause and will be sent to the player at 4-5 PM local time (Slot 2)
4. Priority in the slot : Word Saga progress > DBH progress > Food Fiesta Progress > Seasons Progress > DMB progress > DQ progress > Backfill

**Landing Flow :** Open game modes screen

[Mock Link](#)

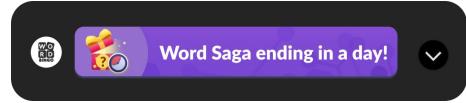
# Notifs

## Event end reminder

**Notif Type :** Image → Image

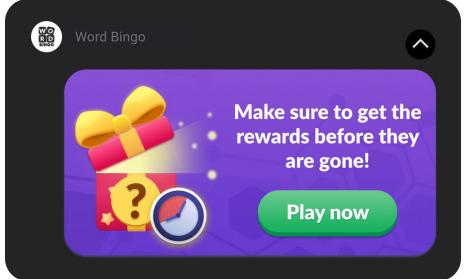
### Small Notif :

1. **Art + Copy :** Word Saga ending in a day!



### Large Notif :

1. **Art + Copy :** Make sure to get the rewards before they are gone!
2. **CTA :** Play Now



### Notif sending criteria :

1. This notif will be sent to those users who have unlocked the event and will be shown only on the day before the event ends
2. Players who have completed the event once will not receive this notif
3. This notif will be a local notif and will fall under the special events channel
4. This notif will be scheduled on app pause and will be sent to the player at 6-7 PM local time (Slot 3)
5. Priority in the slot : Seasons end reminder > Food Fiesta End Reminder > DBH End Reminder > DMB end reminder > DQ End Reminder > Backfill (this will not fall in existing slots as notifs gets scheduled only for the next day in these slots)

**Landing Flow :** Open game modes screen

[Mock Link](#)

# Edge Cases

1. If this experiment is ramped down, player will see control from the next session and onwards
2. Currently, word saga and solo series have different progress,
  - a. So if player changes variant in between the same event time limit, their progress will be restored

# Word Saga Config

1. For the word saga we have now included Bot difficulty, Replay cohorts and Levels structure inside one config.
2. [Sheet for config](#)
3. [Json Link](#)

Nomenclature for Headers in config:

1. ***RematchCoinCount*** is for wallet balance above which we will show coins sink option to move to next level
2. ***PaidMatchCoinCount*** is for how many coins have to be sink for next level
3. ***LevelType*** is for milestone demarcation, (1 is for that level is milestone level)
4. ***MysteryBoxRewardTypes*** is for if mystery box has to be given in the milestone level or not, '[0]' denotes level is eligible for mystery box

# Experimentation Plan

**Experiment Name:** word\_saga\_v1

Control: 50% - No changes

Variant: 50% - As per spec

## **Runtime:**

word\_saga: This runtime will have three sub-fields representing -

1. max number of levels: It will accept values from 5 to 20 only. [ Default value: 15 ]
2. Milestone levels: It will accept values separated by # and will denote the levels where players receive rewards. [ Default value: 3#5#8#10#13#15 ] The number of values separated by # denotes the number of milestone levels available to players (Last level will always be a milestone level)
3. Rewards: It will accept values (coins) separated by # and will denote the rewards that players would receive on each milestone level. [ Default values: 250#300#300#350#500#1000 ]

## **Note :**

1. Any change in the runtime will reflect from next event
2. Solo metrics should be carried forward to word saga

# Tracking requirement

[Tracking Link](#)

# Dev Requirement

[Dev Requirements Link](#)

# Analysis Plan

- Is instant bot ladder gameplay motivating players to do multiple sessions across days, thereby increasing rolling retention
- Are intermittent milestones driving players to engage with solo series across multiple solo events (despite not completing the event)
- Level progression of players and does the final completion rate have an impact on the propensity of players to interact with multiple solo events
- Level progression in accordance with the bot difficulty, is there scope to tune the bot difficulty progression
- Inflation in the economy due to engagement of players with relatively lower difficulty bots in the event

Levers	control	variant
Top of the funnel	NA	1000 bps
Milestones - shorter gratification loop		800 bps
HS surfacing		200 bps
Solo APU upsides	NA	2
Bot difficulty tuning + Milestones		2

# Changelog

Slide No	Change
<a href="#">Slide 9</a>	Updated event conditions for event start
<a href="#">Slide 14</a>	Updated condition to not show friends card when solo carousel card is showing
<a href="#">Slide 17</a>	Updated mock
<a href="#">Slide 19, 20, 21</a>	Added mocks for UI changes in solo FTUE, quit game popup, h2p popup
<a href="#">Slide 36</a>	Added a point in runtimes where last level will always be milestone level
<a href="#">Slide 25</a>	Added a note where CTA timer on outro will not be real time in any case
<a href="#">Slide 28 , 29</a>	Added 2 flows for multiple non milestone levels
<a href="#">Slide 24</a>	Updated intro flow, now player will see intro flow once every event
<a href="#">Slide 10</a>	Updated the copy on game modes card
<a href="#">Slide 9</a>	Mentioned the solo series unlock runtime to also act word saga unlock runtime