Software Requirements Specification Document

Project: Android App - Tangram
Team: 16

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Brief problem statement

Tangram Block Puzzle is an android game currently under development by the Playzio Team. Our objective is to implement additional features and functionality to this game such as more levels, multiplayer mode, Facebook integration, etc.

Currently the game supports basic functionality and we can use all 6 modes of the game which have a few levels each.

System requirements

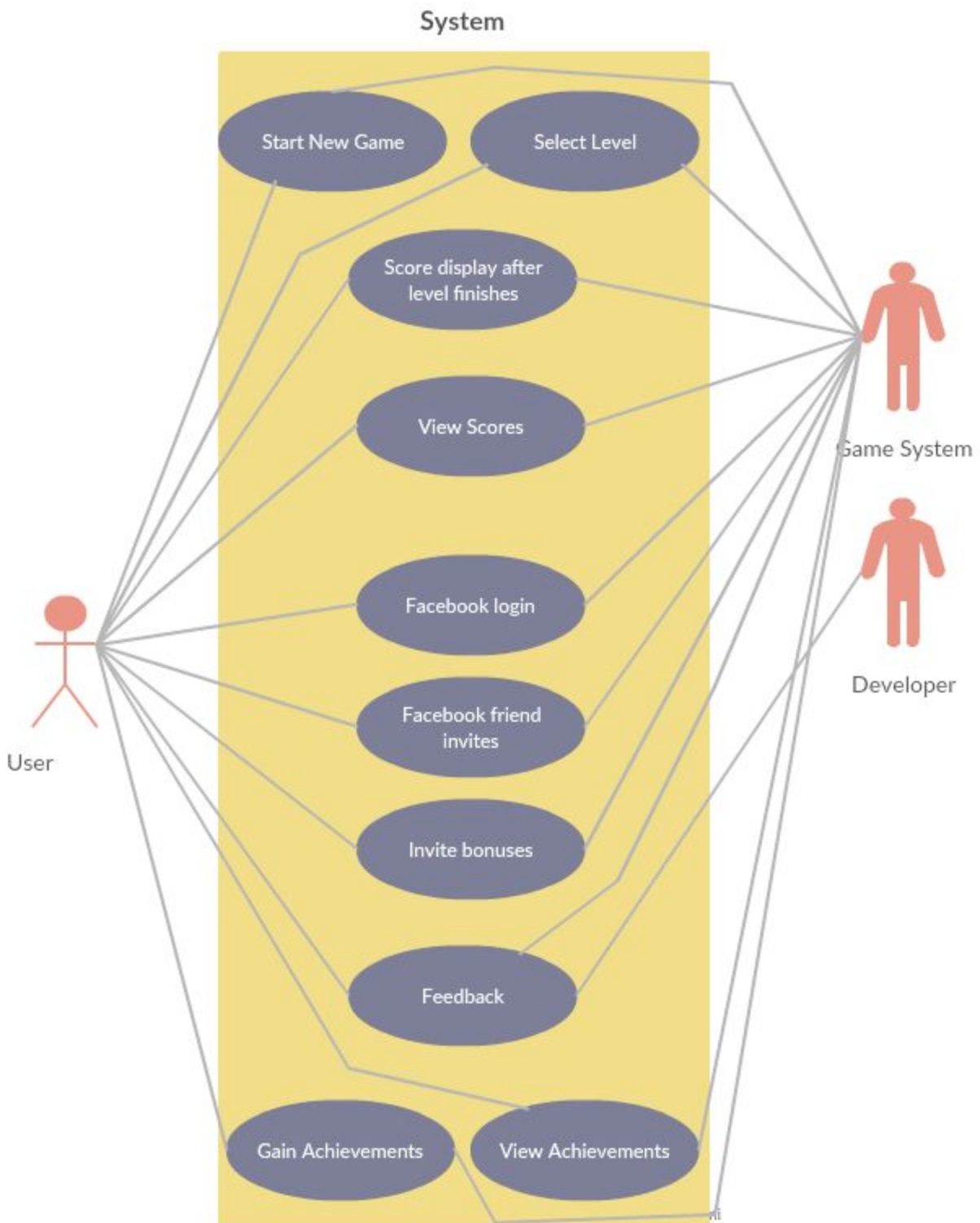The target devices are smartphones operating on Android.

User Profile

The end users are mostly children in their early teens and casual gamers who are looking for a challenge.

Feature Requirements (Described with use cases)

UC No.	Use Case Name	Description	Release
1	Start new game	Starts a new game, allows the user to select game mode.	R1
2	View scores	Show recent scores of players and highscores.	R1
3	Select Level	Allows the user to select a level and starts the game.	R1
4	Score display after level finishes	Shows the user the current score obtained after he finishes a level.	R1
5	Facebook Login	Users can use their facebook accounts to log in.	R2
6	Facebook friend invites	Users can invite friends from facebook to play the game.	R2
7	Invite bonuses	Gives the user a bonus when he invites others to play the game.	R2
8	Feedback	Allows users to send feedback/appreciation about the game.	R2

9	Gain Achievements	Gain achievements and brag to your friends	R3
10	View Achievements	View your current achievements.	R3

Use case diagram

System

- Start New Game
- Select Level
- Score display after level finishes
- View Scores
- Facebook login
- Facebook friend invites
- Invite bonuses
- Feedback
- Gain Achievements
- View Achievements

User

Game System

Developer

Use case description

Use Case Number:	1
Use Case Name:	Start new game
Overview:	Allows us to start a new game, which loads up mode select menu which lets us select a game mode from 6 different game modes.
Actors:	User,System
Pre Conditions:	App launched
Main flow:	1. Shows us 6 buttons to choose from where each button corresponds to a certain game mode. 2. A back button is also present to get back to the main menu. 3. Select a game mode or go back to the main menu by clicking on one of the buttons.
Alternate flow	1. If selected mode has no levels, go back to step 1 of main flow and select another game mode.
Post Conditions:	Game mode selected and level selection is displayed.

Use Case Number:	2
Use Case Name:	View scores
Overview:	To view the recent scores and high scores of users.
Actors:	User,System
Pre Conditions:	App launched
Main flow:	1. Displays the High scores in a table followed by recent scores.
Alternate flow	1. If there are no High scores, display that no games are played in the high scores table.

Post Conditions:	User viewed High scores and Recent scores.

Use Case Number:	3
Use Case Name:	Select Level
Overview:	To select a level which would start the game
Actors:	User,System
Pre Conditions:	A new game has been started and mode has been selected.
Main flow:	1. Shows us buttons corresponding to each level(approximately 50 buttons corresponding to 50 levels in each mode). 2. A back button is also present to get back to the mode select menu. 3. Select a level or go back to the mode selection menu by clicking on one of the buttons.
Alternate flow	1. If selected level is locked, go back to step 1 of main flow and select another level which is currently unlocked.
Post Conditions:	Level selection completed and the game starts.

Use Case Number:	4
Use Case Name:	Score display after level finishes
Overview:	Shows us the score we obtained once we finish a certain level.
Actors:	User,System
Pre Conditions:	Start new game, Level Select and finish selected level
Main flow:	1. Display the score to the user. 2. User can post the score to his facebook account or press continue to go to the next level in the current mode. 3. They can press quit to exit the game and go back to mode selection.
Alternate flow	1. If you are at the last level of the current mode, then continue takes you back to the mode selection screen. 2. No internet connectivity doesn't allow you to post onto facebook and the button will be disabled.

Post Conditions:	Score has been displayed and user can start another game.

Use Case Number:	5
Use Case Name:	Facebook Login
Overview:	Allows the users to login and connect their facebook account to the game, to store their highscores etc
Actors:	User,System
Pre Conditions:	App Launched and connected to the internet.
Main flow:	1. Gives us a login prompt where we enter our username and password and then login to our facebook account connecting it to our game.
Alternate flow	1. Connectivity issues will allow the user to try login again.
Post Conditions:	Successfully logged in and linked facebook account to the game.

Use Case Number:	6
Use Case Name:	Facebook friend invites
Overview:	Allows the users to invite their friends to the game, the user then gets a bonus for every friend they invite.
Actors:	User,System
Pre Conditions:	App launched and connected to facebook.
Main flow:	1. Shows us a list of friends on facebook who can be invited. 2. We select names of friends whom we want to send invites to. 3. Press the "Invite" button to send invites to the selected list of friends.
Alternate flow	1. Connectivity issues would allow the user to try send invites again.
Post Conditions:	Successfully invited friends to play the game.

Use Case Number:	7
Use Case Name:	Invite Bonuses
Overview:	When an invite has been accepted, the user gets a bonus which he can use during the game. This may be a hint or a powerup.
Actors:	User,System
Pre Conditions:	Has invited at least 1 friend and is connected to facebook.
Main flow:	1. Get a popup alerting the user that their friend request to person x has been accepted and they have gained a bonus y.
Alternate flow	1. If user is within a game, then the message waits until he finished the current game and then the popup is displayed.
Post Conditions:	User has been informed that they have gained a bonus and their friend joined the game.

Use Case Number:	8
Use Case Name:	Feedback
Overview:	Allows users to send feedback about the game.
Actors:	User,System,Developers
Pre Conditions:	App launched
Main flow:	1. Give the name. 2. Give a rating for the game. 3. A message the user wants to convey (This can be an appreciation or a complaint). 4. Give email ID (Optional to get in touch if required) 5. The user then submits the form and waits for a confirmation.
Alternate flow	1. Any errors in the form are pointed out to the user and they are asked to resubmit the form. 2. Connectivity issues ask the user to try again later.
Post Conditions:	Feedback has been sent to the game developers.

Use Case Number:	9

Use Case Name:	Gain Achievements
Overview:	On completing certain tasks the user gains achievements.
Actors:	User,System
Pre Conditions:	App launched
Main flow:	1. On completing any task which has an achievement, the user gets a popup which notifies them about the achievement they have earned. 2. This achievement is added to the user's list of achievements.
Alternate flow	1. If user has already earned the achievement then it is ignored.
Post Conditions:	User has earned an achievement successfully and it shows up on their achievements page.

Use Case Number:	10
Use Case Name:	View Achievements
Overview:	Allows the user to view all their achievements earned.
Actors:	User,System
Pre Conditions:	App launched
Main flow:	1. Displays all achievements earned to the user. 2. User can click on an achievement to display details about the achievement like date/time and a description. 3. User can click back to return to the achievements display page.
Alternate flow	Nil
Post Conditions:	Game mode selected and level selection is displayed.