

# Developer Diary

Mobile Applications Development 3 Project 2020 SpaceMan RUN (3D Endless Runner Game)

## Developer's Update

Nov 3, 2020

Read the Design Document of SpaceMan Run, research on assets and 3D endless runner.

Made Repository on Git hub for Mobile Application Development 3.

By reading the design document that was provided by the Designer. Main concept idea is you move player run in Endless Environment. In endless environment player have no control on ground running other than to jump over obstacles, break obstacles and collect coins. Researched the expectation of designer and limitation of my expertise including improvement while learning and implementation of it.

Key points about the game:

1. Platformer
  - Endless environment (Space)
2. Objects
  - Coins
  - Jump over fire
  - Break wall
3. Character
  - Has lives
  - Score
4. Front End
  - Play Game
  - Statistics
  - Options
  - Help
  - Quit

Nov 25, 2020

Project setup as 3D Unity and initialise game production. Develop of the basic game on plane and 3D object cylinder and its movement on the plane which will be Caveman eventually.

Nov 29, 2020

Implementation of camera to follow the player.

Dec 3, 2020

Add Jump and gravity on player. Now that the character is moving I wanted to get the character running on a platform. All I have done to do was add a 2D collider to one of the plane objects, change the characters physics and the character was then able to run forward and jump on the platform. By pressing the spacebar the character was able to jump

Dec 7, 2020

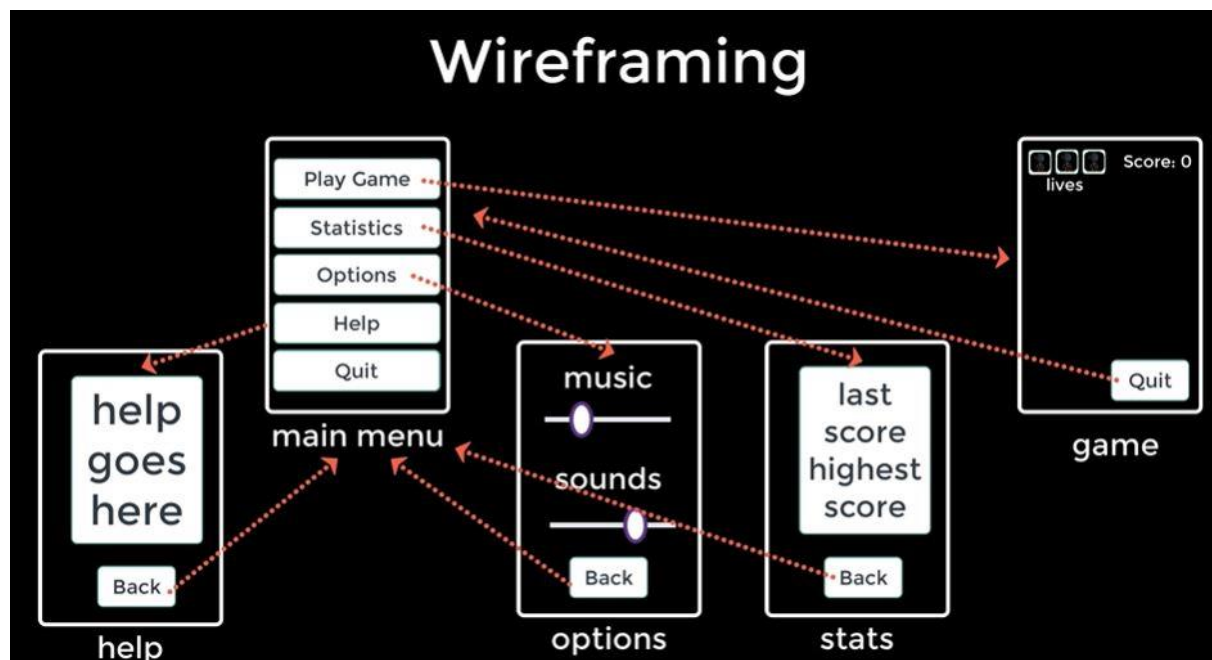
In the given design document, designer gave the 2d character prefabs references to develop game with. But to make a better 3D version of the game I need to use some good 3D models prefabs. For this with the permission of designer through Email I change the character from CaveMan to SpaceMan but the rest functionality and game target to achieve, kept intact.

Dec 9, 2020

Generated Endless world environment by using different prefab tiles used in pool arrays which can generate world according to given tiles in array including turning corners on T intersection Prefabs.

Dec 11, 2020

Add obstacles like fire, build wall and wall breaker on the same tiles prefabs and added to generate in pool arrays. Create GUI menu and create menu pop ups according to it.



Dec 12, 2020

Add and generate Animating Coin on platform by adding animation on rotation by using unity animation feature, picking up coins and resetting it in to future tiles coming on platform.

Dec 13, 2020

Adjust jumping and obstacles collider and picking up coins using box colliders and resetting in code.

Dec 14, 2020

Add GUI functionality like upon playing games max lives and replace the live icon of spaceman to dead icon. After colliding obstacles and regenerate page to give a go to player to max lives. Added the explosion to wall and fog using unity features.

Dec 15, 2020

Add sound and sound effect adding in Audio Source Array and calling in code accordingly to its sound feature like jump, shoot coin picking etc.

Add multiplayer functionality by letting one player first play the game and then letting second player play the game. So implemented this by creating two game scene platformMut1 which is for first player and platformMulti2 is for second one by duplicating assets and required scripts calling their platform Multi references .

		<b>Purpose:</b>	This set of tests is intended to check main functionality developed in the SpaceMan Run									
<b>Menu Page of Game</b>				Test Run on Windows 10 and Unity 2019.1.14f								
Requirement ID	Sprint	Test Case Ref	Test Case Name	Descriptions	Search Parameters / Instructions	Checks	Expected Result	Actual Result	Results Pass/Fail	Bug #	Comments	
1.00	1	TC.001	SpaceMan Logo	GUI	SpaceMan man logo on the main Gui Page	Display Game name logo on the top of menu screen	Display Game name logo on the top of menu screen	Display Game name logo on the top of menu screen	Pass			
2.00	1	TC.002	Menu Buttons	GUI	menu buttons under name and SpaceMan pic	show menu field under logo and Spaceman pic according to wire frame picture	show menu field under logo and Spaceman pic according to wire frame picture	show menu field under logo and Spaceman pic according to wire frame picture	Pass			
3.00	1	TC.003	Play game button	GUI	On click give option of single player or multiplayer and back to menu button	On click give option of single player or multiplayer and back to menu button	On click give option of single player or multiplayer and back to menu button	On click give option of single player or multiplayer and back to menu button	Pass			
4.00	1	TC.004	Statistics Button	GUI	On click show Statistics of last score and high score with back button	show Statistics of last score and high score with back button	show Statistics of last score and high score with back button	show Statistics of last score and high score with back button	Pass			
5.00	1	TC.005	Options Button	GUI	On click show sound and music adjust slider with slider effects on it with back button	show sound and music adjust slider with slider effects on it with back button	show sound and music adjust slider with slider effects on it with back button	show sound and music adjust slider with slider effects on it with back button	Pass			
6.00	1	TC.006	Help Button	GUI	On click show instructions how to play game with back button	show instructions how to play game with back button	show instructions how to play game with back button	show instructions how to play game with back button	Pass			
7.00	1	TC.007	Quit Button	GUI	On click Exit game	Exit game	Exit game	Exit game	Fail		will work outside unit	
8.00	1	TC.008	Single Player	GUI	on click Single player load and begin with back button	Single player game begins with back button	Single player game begins with back button	Single player game begins with back button	Pass			
9.00	1	TC.009	Game Screen	GUI	On Click Single player game begins with max lives panel, score panel, running space on ground with zero score with back button	Single player game begins with max lives panel, score panel, running space on ground with zero score with back button	Single player game begins with max lives panel, score panel, running space on ground with zero score with back button	Single player game begins with max lives panel, score panel, running space on ground with zero score with back button	Pass			
10.00	1	TC.010	Game Screen	GUI	On click of arrow keys with A and D keys player move or turn	Arrow keys with A and D keys player move or turn	Arrow keys with A and D keys player move or turn	Arrow keys with A and D keys player move or turn	Pass			
10.01	1	TC.011	Game Screen	GUI	Upon passing on coins, coins disappear and add 10 in score for each coin	passing on coins, coins disappear and add 10 in score for each coin	passing on coins, coins disappear and add 10 in score for each coin	passing on coins, coins disappear and add 10 in score for each coin	Pass			
10.02	1	TC.012	Game Screen	GUI	Upon passing on Fire or wall player is dead and one deadicon appears instead aliveicon in reload scene	passing on Fire or wall player is dead and one deadicon appears instead aliveicon in reload scene	passing on Fire or wall player is dead and one deadicon appears instead aliveicon in reload scene	passing on Fire or wall player is dead and one deadicon appears instead aliveicon in reload scene	Pass			
10.03	1	TC.013	Game Screen	GUI	Upon coming of wall or fire escape obstacles by pressing space to jump on fire and M key to break wall	coming of wall or fire escape obstacles by pressing space to jump on fire and M key to break wall	coming of wall or fire escape obstacles by pressing space to jump on fire and M key to break wall	coming of wall or fire escape obstacles by pressing space to jump on fire and M key to break wall	Pass			
10.04	1	TC.14	Game Screen	GUI	Achieve Max lives which is 3 in this game to game over	Achieve Max lives which is 3 in this game to game over	Achieve Max lives which is 3 in this game to game over	Achieve Max lives which is 3 in this game to game over	Pass			
10.05	1	TC.15	Game Screen	GUI	Achieve 20 coins to change level up	Achieve 20 coins to change level up	Achieve 20 coins to change level up	Achieve 20 coins to change level up	Pass			
10.06	1	TC.16	Game Screen	GUI	Apply past five Test for multiplayer	Apply past five Test for multiplayer	Apply past five Test for multiplayer	Apply past five Test for multiplayer	Pass			
10.07	1	TC.17	Game Screen	GUI	Multiplayer player 1 and player 2 names stored with back button	Multiplayer player 1 and player 2 names stored with back button	Multiplayer player 1 and player 2 names stored with back button	Multiplayer player 1 and player 2 names stored with back button	Pass			
10.08	1	TC.18	Game Screen	GUI	In statistics last score and highest score saved and appears	In statistics last score and highest score saved and appears	In statistics last score and highest score saved and appears	In statistics last score and highest score saved and appears	Pass			
10.09	1	TC.18	Game Screen	GUI	After playing multiplay winners name and score shows	After playing multiplay winners name and score shows	After playing multiplay winners name and score shows	After playing multiplay winners name and score shows	Pass			

## References

Platformer Tutorials: [https://www.youtube.com/playlist?list=PLXuZVK\\_0K\\_6VXcSajfFbXDXndb6AdBLO](https://www.youtube.com/playlist?list=PLXuZVK_0K_6VXcSajfFbXDXndb6AdBLO)

Respawning - [https://www.youtube.com/watch?v=udUNv5aEXIU&t=0s&list=PLad18qy5\\_05wiFDIyaHeQLYvi4oGKDCn&index=3](https://www.youtube.com/watch?v=udUNv5aEXIU&t=0s&list=PLad18qy5_05wiFDIyaHeQLYvi4oGKDCn&index=3)

Unity Main Menu - <https://unity3d.com/learn/tutorials/topics/user-interface-ui/creating-main-menu>

Music : <https://freesound.org/>

Assets : <https://holistic3d.com/resources/>

Tips : <https://www.gamasutra.com/>