**Project Proposal**

Project members:

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In this game, there is a main character, which needs to pass some obstacles and collect some gems, but also be careful of some enemies on its way to the finish line, by jumping and moving, where in the last level, the game is finished and it tells us that we won.

Our 2D game will focus in a main character that will move in a 2D environment, where this environment is filled with a lot of different objects including: enemies, obstacles, flags, gems etc. In this game there will be 3 different levels, where, as in other games, the first level is easier with less enemies and as we pass the levels, other levels will be harder and will be filled with more enemies which means that the game will be harder.

Our main character has 3 lives, where every time it falls from the main platform or touches an enemy, the lives will be lost, and when we are left with 0 lives, our game is over and we have to start it all over again. In our game we also have gems for our score, where for each gem that we get, our score is updated +1. The color of the gem does not matter for our game. In the end of each level, we have a Kosovo flag, where when we touch it, we go to the next level, where the platform is different. Also, the maximum score for our game is 17, and we did this in honor of the Kosovo’s Independence Day which is for 17th of February, 2008.

We also used sound effects for this game. There is a background sound, a sound when we collect a gem, a sound when we lose a life and also a sound when we collide with an enemy.

Our UI has a text in the left for lives and also a text on the right for our score. We have a starting menu where we have three buttons: the play button to play the game, the instruction button to see the instructions of the game, and the exit or quit button, to exit the game. When we click the play button, it takes us to the first level of the game. When the game is over, that is we have 0 lives, we have a game over scene with two buttons: to try again the game, or go back to the main menu.

The way we implement the physics of this game is as follows:

* Main character - we used animation and a Rigidbody2D for our main character, after it moves and we play with it. The main character also has colliders and gravity, so that it stands in the platform, but also when it collides with the enemies, the lives are lost or when we get the gems, our score is increased by 1.
* Enemies – we use animation and also box colliders for the enemies, where when we collide with the main character, our main character’s lives are lost.
* Kosovo flag – we used box collider for the flag, and programmed it, so that when the player touches the flag, it takes us to the next level.

The tools that we used to build this game are: Unity Engine and also different pictures where we used them as sprites for example for our main character, gems, enemies, flag etc.

On our way of making the game, we had difficulties first with the score of the game when we changed the levels. When we made it to the next level, our score was getting restarted to 0. We fixed this bug by searching in google, and using the: PlayerPrefs.SetInt(), PlayerPrefs.GetInt() and PlayerPrefs.Save() unity functions, we saved the score for the next levels.