



## INSTRUCTIONS

### THIRD CHALLENGE

Date of Announcement: 21.01.2019

**KML Open: Round three will be an online round and will be held from 15-25 February, 2019.**

# 1.SUBSTANTIAL INSTRUCTIONS

## 1.1 Starting the Robot

**1.1.1** The robot must be placed in such a way that the black line sensor is at the beginning of the line (path).

**1.1.2** The start of the robot should be done by pressing the button on the robot.

**1.1.3** If the robot is properly turned on, the competitor wins 20 points as the rating table shows.

**1.1.4** If the robots are turned on in any other way, the competitor does not win 20 points, but can continue the race.

**1.1.5** After you press the button, the robots should light the RGB diode in green and begin to follow the black line.

**1.1.6** If the RGB diode is lit in green, the competitor wins 10 points. If the diode is not lit in green, is not turned on, or is lit in any other color, the contestant does not win 10 points but can continue the race.

## 1.2 Barriers in the path

**1.2.1** During the line tracking, the robot using the "Ultrasonic" sensor must detect 2 obstacles encountered along the path, bypassing them to the left and then returning to the black line again.

**1.2.2** Obstacles should be mBot boxes, as the full challenge schema demonstrates.

**1.2.3** If the competitor successfully overcomes the obstacle and to return sto the line, they receive a total of 100 points.

**1.2.3.1** If the robot detects the obstacle and starts to turn, the competitor wins 20 points.

**1.2.3.2** If the robot overrides the complete obstacle, the competitor wins 50 points.

**1.2.3.3** If the robot returns to the black line and continues the path, the competitor wins 30 points.

**1.2.3.4** Other points are obtained by advancing with the robot forward by following the black line.

**1.2.4** When overtaking the obstacles, the robot must light the diode in the blue color, and when it returns to the path (in the black line), it must turn on the diode in green.

**1.2.5** If the RGB diode during the override of obstacles is lit in blue, the competitor wins 10 points.

**1.2.6** If the diode is not lit in blue, is not turned on, or is lit in any other color, the competitor does not gain 10 points but can continue the race.

**1.2.7** If the RGB diode, when the robot is restored to the black line is lit in green, the competitor wins 10 points.

**1.2.8** If the diode is not lit in green, is not turned on, or is lit in any other color, the competitor does not gain 10 points but can continue the race.

**1.2.9** If the robot comes out of the line, the student can turn the robot back to the beginning of the quadrant where the robot has diverted or turn the robot to the beginning of the next quadrant and continue the race. It does not lose points but loses time.

### **1.3. Completion of the path**

**1.3.1** The path is completed when the robot is able to follow the entire black line where the contestant then pulls the robot off the path.

**1.3.2** The timer starts when the competitor presses the robot button and ends when the robot reaches the end of the path where the contestant then moves the robot from the path manually.

**1.3.3** The main criterion for team evaluation is the collection of points, while the duration of the robot is only to make the difference between teams with the same points. (For example, if Team X has collected 300 points and completed the race for an average of 35 seconds, while Team Y has also collected 300 points, but has completed the race for an average of 40 seconds, then Team X will be in the first place). While in the same case if Team X has collected 280 points and finished the race for 35 seconds, while Team Y has collected 300 points and completed the race for 40 seconds, Team Y will be in the first place. Efficiency will be the main criterion of evaluation.

## **2. PROCEDURAL INSTRUCTIONS FOR CHALLENGE**

**2.1** All school teams need to record their performance with a single video and upload it no later than February 25 in the Robotics Database on the Vimeo platform.

**2.2** All teams in the video must wear Kosova Makers League t-shirts.

**2.3** The time during which each robot passes the path should appear in the video of the challenge.

**2.4** All mentors evaluate their teams and complete the form of evaluation in google documents.

**2.5** Any video upload after 23:59 that 25th February will not be evaluated.

**2.6** All school teams will perform at their school premises

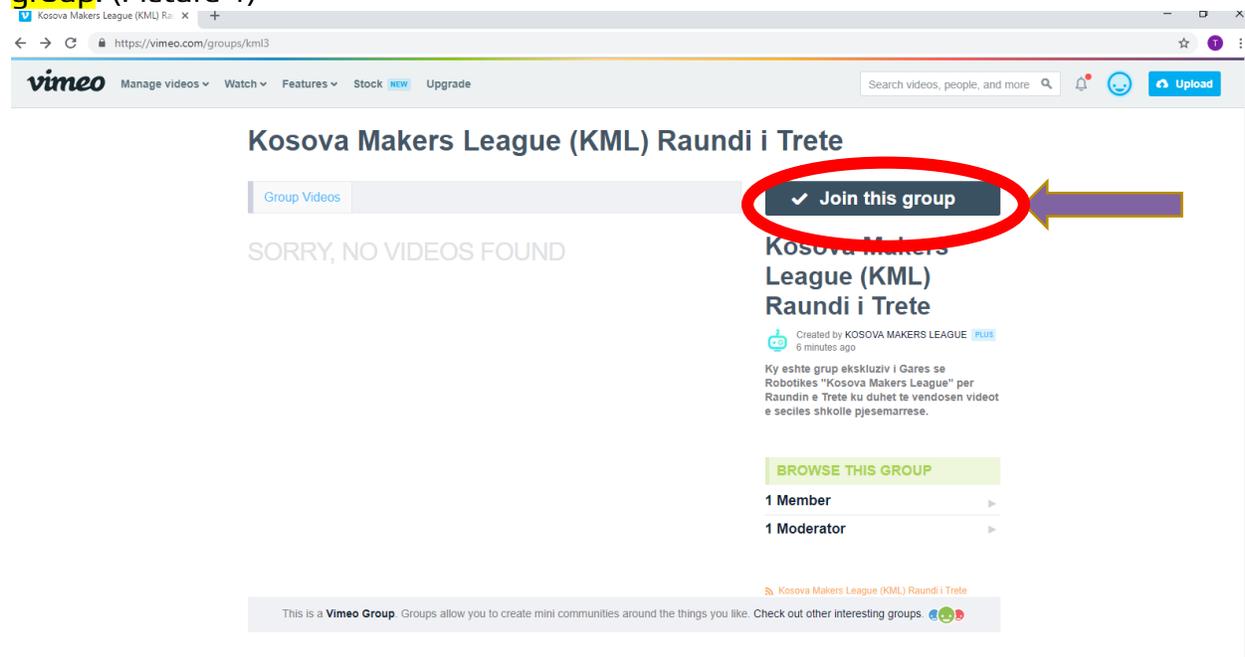
**2.7** Only photos taken during exercises or on the day of video recording can be posted to the KML group on the Facebook platform.

**2.8** From February 15 to February 25, mentors of the BONEVET Foundation will check the preliminary results as well as the video recordings and until the end of the competition period they will announce the final results for the Third Round, where again there will be 48 hours of appeal time.

**2.9** Winners of the Third Round will be invited to the last week of February to accept the prizes.

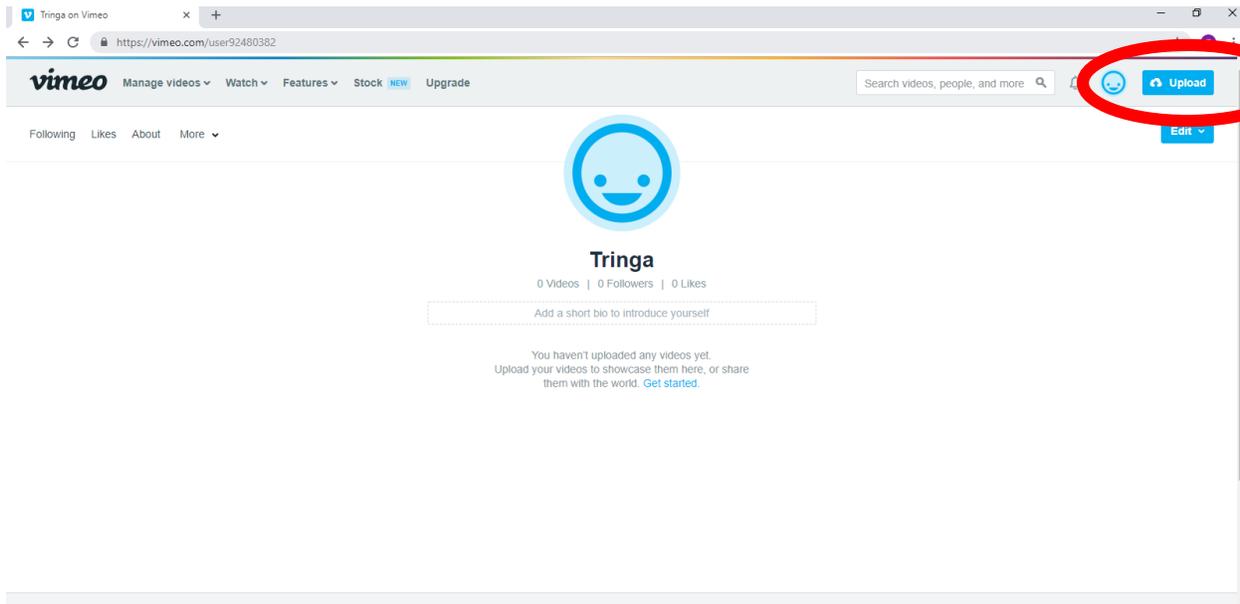
**2.10** Uploading Videos to VIMEO takes place in the KML third round group found on this link: <https://vimeo.com/groups/kml3>

**2.11** Once you have received the link of Kosova Makers League group for the current challenge, you need to join this group. To be a part of the group please click **Join this group**. (Picture 1)



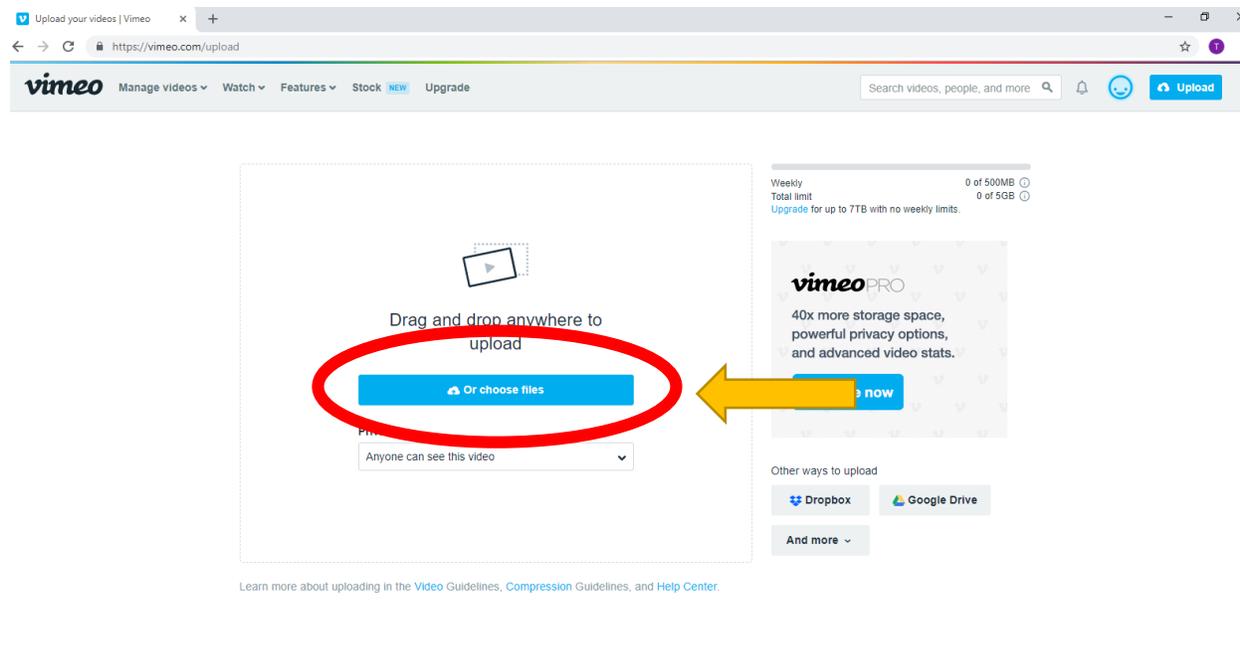
**Picture 1**

2.12 Then go to your profile on Vimeo. On the right side of the page you will see the **Upload** button, click on it. (Picture 2)



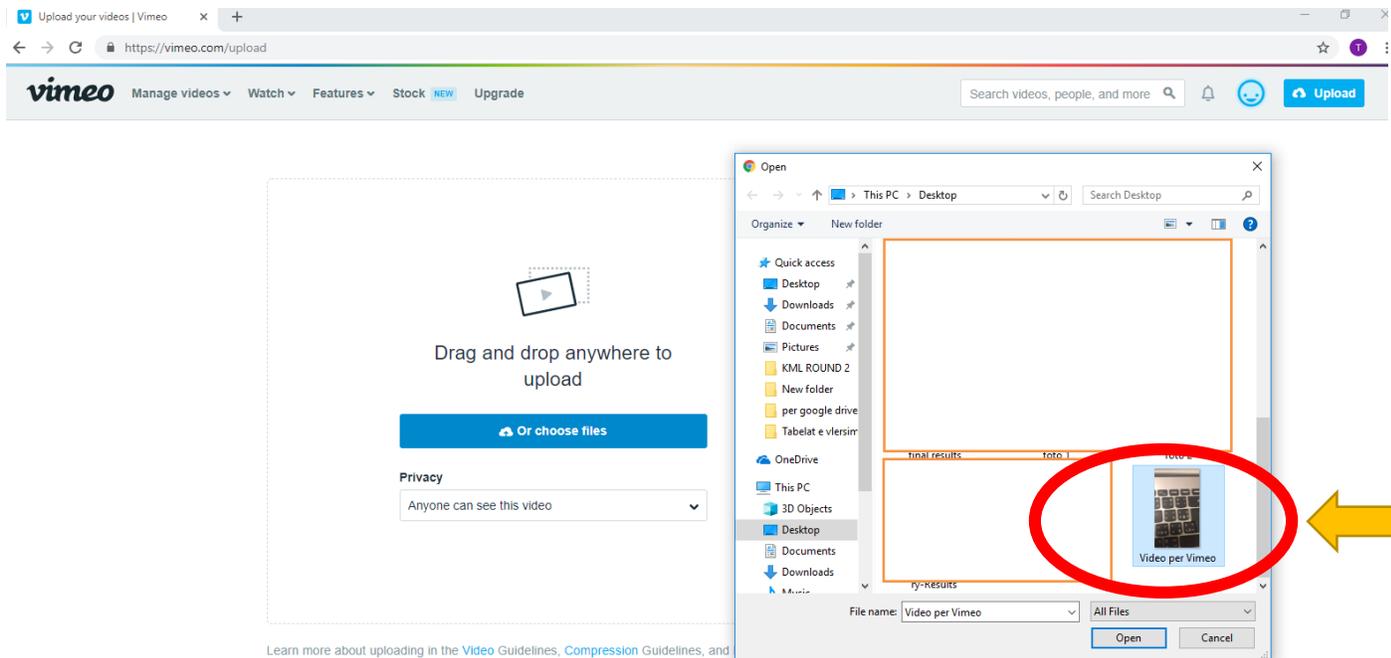
Picture 2

2.13 Then click **Or Choose Files**. (Picture 3)



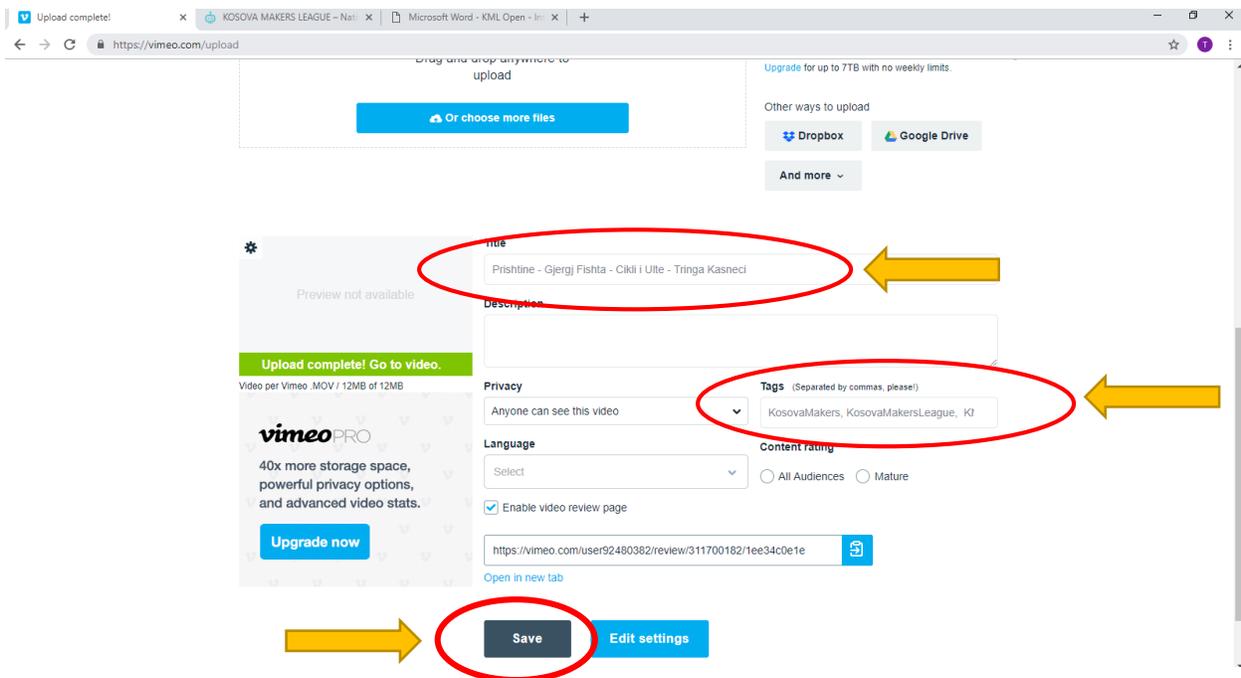
Picture 3

2.14 After clicking, a new window will appear, where you will need to select your challenge video. (Picture 4)



**Picture 4**

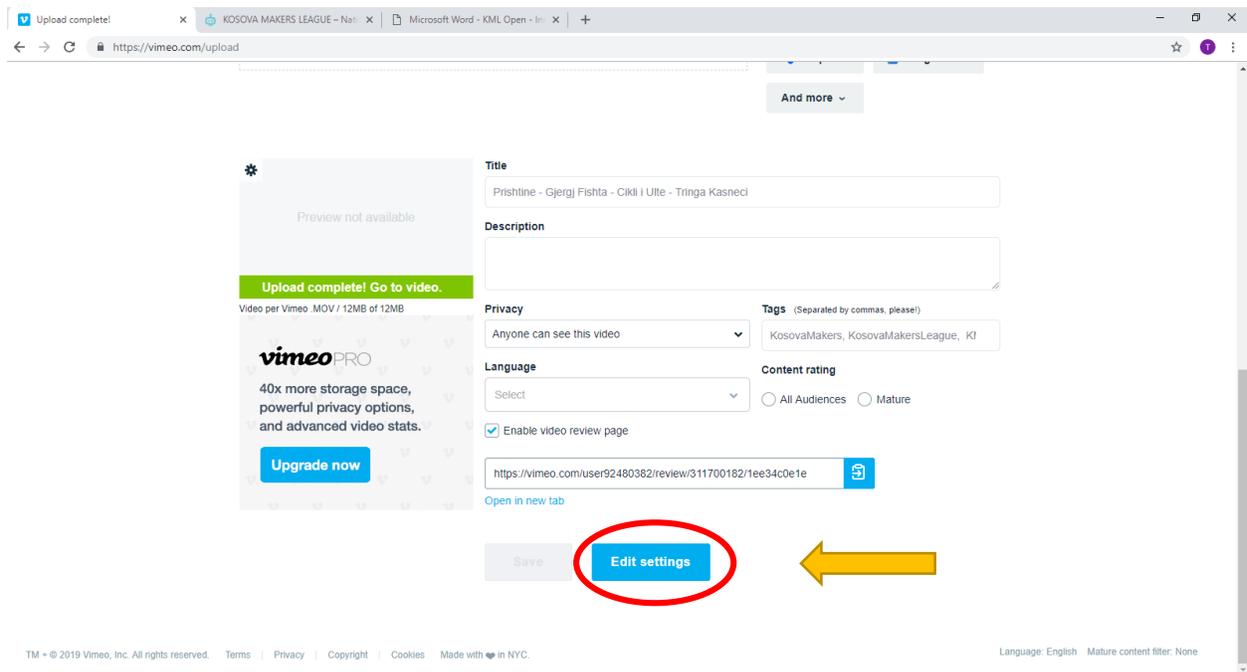
**2.15** After uploading the video you have to create the title of the video, this is done in the **Title** box. Create the title as follows: City / Location - School-Cycle (Low, High) - Student Name. The example used in the photo, "Pristina- Gjergj Fishta- Low Cycle - Tringa Kasneci". Do not enter anything in the "Description" field. In the "Tags" box, place these: KosovaMakers, KosovaMakersLeague, KMLOpen # 2, KML18. Make sure that you put a comma after each word. Finally, press the **Save** button. (Picture 5)



Picture

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2.16 After clicking Save, in the same page click **Edit Settings**. (Picture 6)



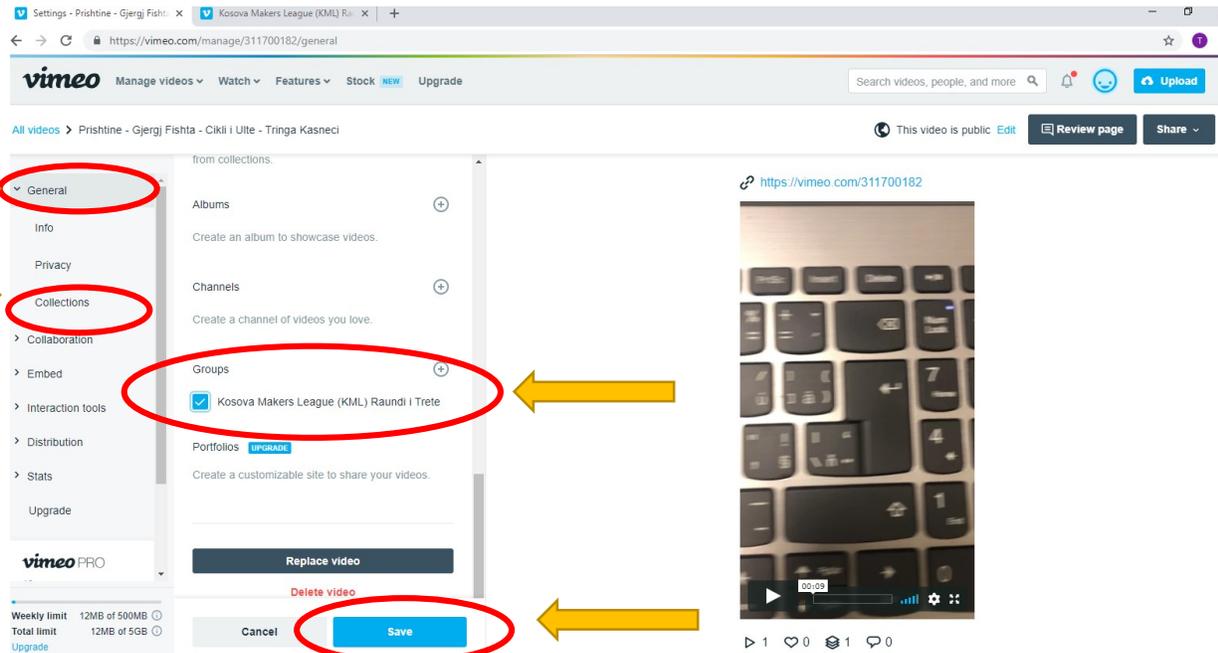
Picture

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2.17 In the menu that will appear, select the **General** menu and the submenu **Collections**. Once you are part of the group, in the **Groups** section you will also see the

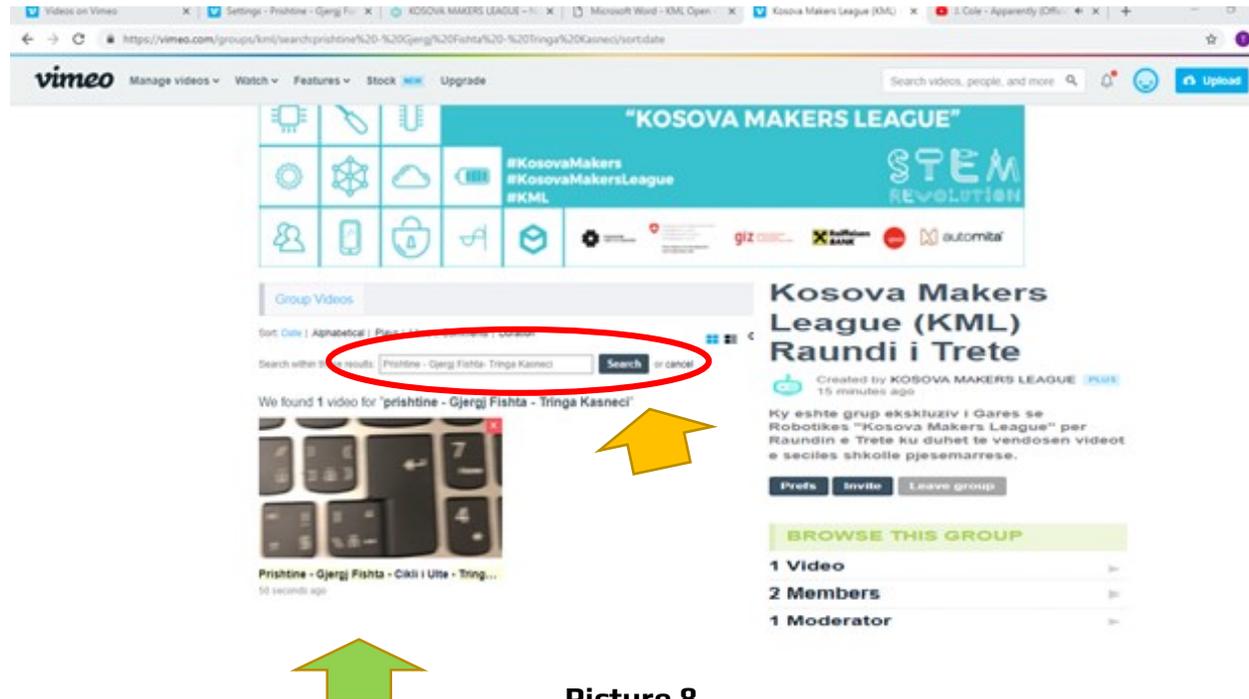
7

group of Kosova Makers League, click on the group and save the changes with the **Save** button. (Picture 7)



Picture 7

**2.18** To verify if your video has been uploaded to the Kosova Makers League group. Go back to the group, and in the **Search** button type some keywords from your video title, if your video appears, the process has been successfully completed. (Picture 8)



Picture 8

## **2.19 Uploading Results to Google Drive to KML**

**2.20** The evaluation table should be placed in this folder: <https://goo.gl/57L9f9>

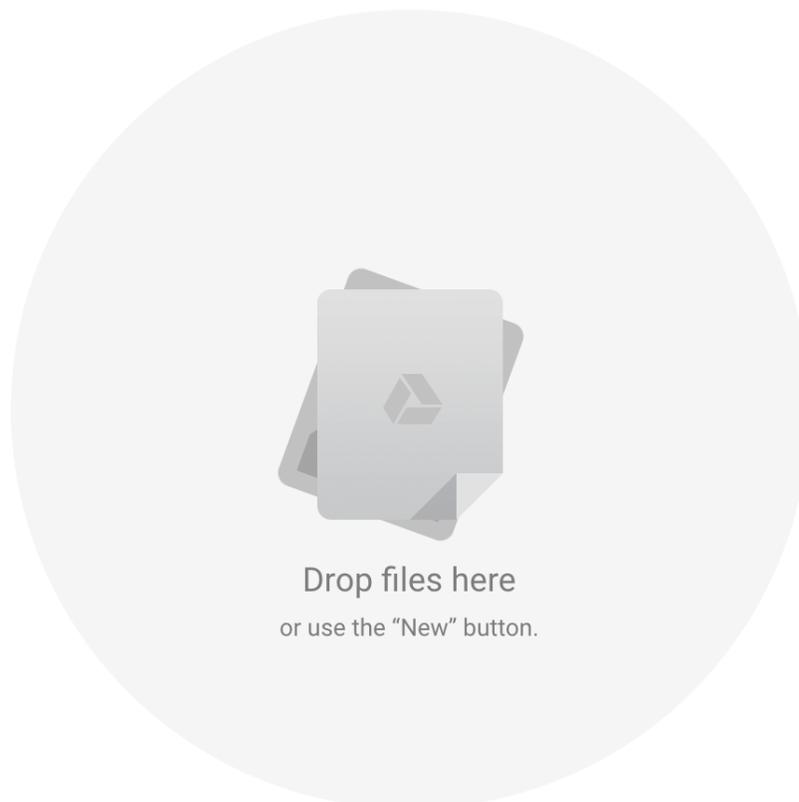
**2.21** The name of the assessment document should be titled as: School\_City\_KML3

**2.22** The evaluation table should contain clearly the names of the contestants, the performance times of their robots and the scores. The team should have the average rating, the name of the mentor rating, as well as the video links in Vimeo.

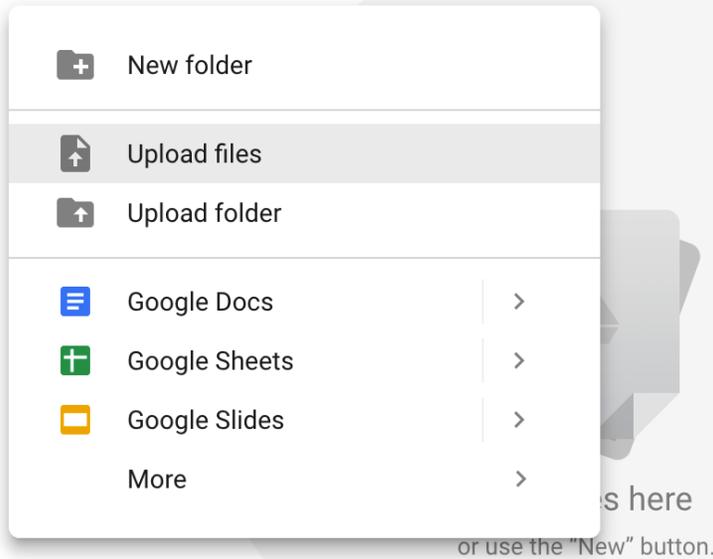
**2.23** To place the excel file here, just get it from your computer and drop it in the folder (drag-drop) (Picture 9) or right-click it and type "upload files" (Photo 10).

My Drive > ... > 6.3 Round Three > Vleresimet - Raundi 3 ▾ 

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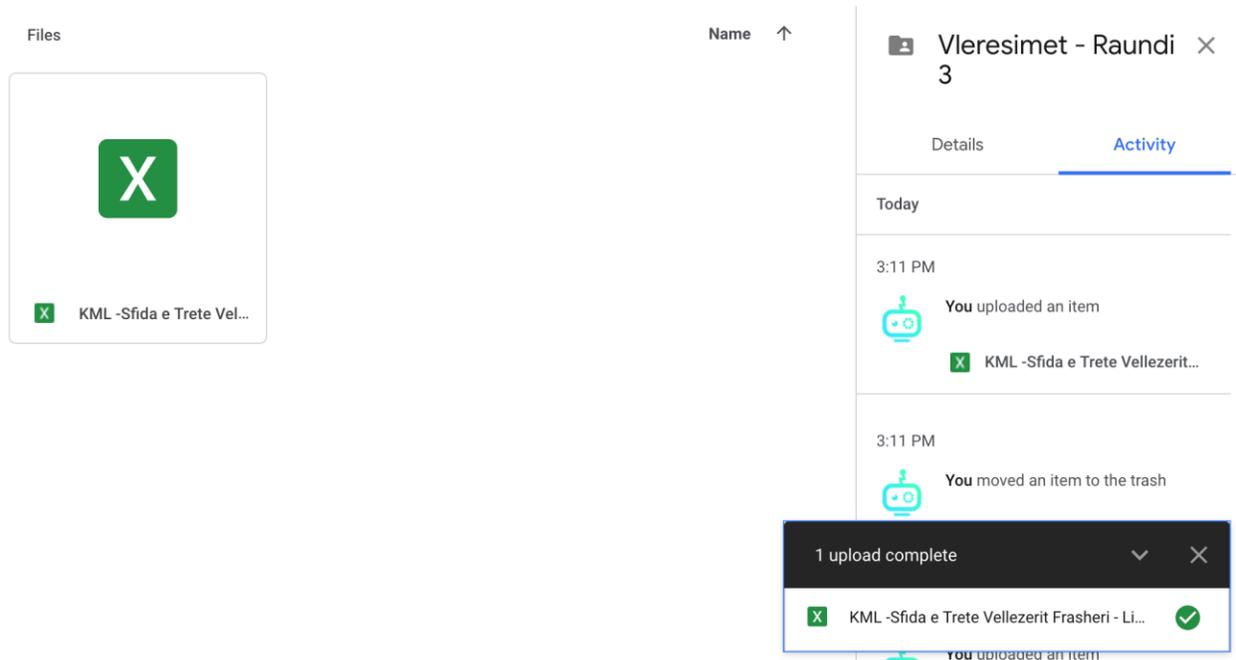


**Picture 9**



**Picture 10**

**2.24** In the right-hand corner of the screen will appear a "complete upload" dialog that marks the successful completion of uploading your file to our file (Picture 11).



Picture 11

**2.25 The final score of the school (average grade, average time) should be placed in the draft document of the results you find in this link: <https://goo.gl/ywTNI>**

**2.26** Please be careful when writing the average score for your school, the document (picture 12) is shared and everyone can work at the same time. While errors can be corrected, it may take us time to get back something, so first find your school and carefully place the results and the video link from Vimeo.

KML OPEN: ROUND THREE (DRAFT) Results - 15-25 Feb. 2019			
Nr.	SCHOOL	POINTS	TIME
1	Fazli Grajevci		
2	Hallil Bajraktari		
3	Ismail Qemali (Afrim Citaku)		
4	Lasqush Poradeci - Muzeqinë (1-5)		
5	Deshmoret e Vitise (1-5)		
6	Lasqush Poradeci - Muzeqinë (5-9)		
7	Alli Kelmendi		
8	Deshmoret e Vitise (5-9)		
9	Lasqush Poradeci - Rashince(5-9) Adil Qorrolli		
10	British School of Kosova		
11	Ismail Qemali (1-5)		
12	Ylli Morina (5-9)		
13	Lasqush Poradeci - Rashince (1-5) Adil Qorrolli		
14	Dardania		
15	Shaban Jashari (5-9) Skenderaj		
16	Akademia Ora (5-9)		
17	Akademia Ora (1-5)		
18	Emin Duraku - Heterm Neziraj		

Picture 12