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Propose a training program based on training method (mixed-repetition) during the competition phase and its effectiveness to developing the speed for football players (U13).

اقتراح برنامج تدريبي قائم على طريقة التدريب (المختلط – التكراري) خلال مرحلة المنافسة و مدى فعاليته على تنمية صفة السرعة لدى لاعبي كرة القدم (U13).

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Motor learning and control laboratory

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الملخص :

هدفت الدراسة الى معرفة اثر البرنامج التدريبي المقترح في مرحلة المنافسة على تنمية صفة السرعة الانتقالية لدى لاعبي كرة القدم فئة اقل من 13 سنة, و كذا التعرف على الفروق بين الاختبار القبلي و البعدي في صفة السرعة الانتقالية لدى المجموعة التجريبية, و استخدم الباحث المنهج التجريبي ذو المجموعات المتكافئة (ضابطة و تجريبية), و تكونت عينة الدراسة من 20 لاعب فئة اقل من 13 سنة تم اخيارهم بطريقة قصدية, و بعد اجراء المعالجة الاحصائية للتحقق من صحة الفرضيات, أظهرت نتائج الدراسة وجود فروق بين العينتين الضابطة و التجريبية في الاختبار البعدي في صفة السرعة الانتقالية لدى لاعبي كرة القدم فئة اقل من 13 سنة, حيث تفوق افراد المجموعة التجريبية على افراد المجموعة الضابطة في الاختبار البعدي للدراسة.

الكلمات المفتاحية : البرنامج التدريبي - التدريب المختلط – التدريب التكراري - السرعة الانتقالية - فئة أقل من 13 سنة.

Abstract :

The study aimed to find out the impact of the proposed training program in the competition stage on the development of the status of transitional speed among football players under the age of 13, and also to identify the differences between tribal and remote testing in the transitional speed status of the experimental group, and the researcher used the experimental approach with equal groups (officer and experimental), and the sample of the study was made up of 20 players under the age of 13 who were

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selected in a meaningful way. After conducting statistical treatment to verify the validity of the hypotheses, the results of the study showed the differences between the control and experimental groups in the remote test of transitional speed characteristic of football players under the age of 13, where the members of the experimental group outperformed the members of the control group in the remote test of the study.
.**Keywords:** Training programme - mixed training - repetitive training - transitional speed - category under 13 years of age.

-Introduction and problematic of the study:

In recent years, sports have been an important factor in everyday life, as the pole has become a large number of practitioners, each of whom has a different goal, some of whom have set their sights on achieving results in various competitions and competitions such as basketball, which is among the most popular team sports of our time. **(Tahir Yasmine, Zouak Adel, 2020, p33).**

Football is keeping pace with technology and the development of science. The development of this sport has increased as a result of research in the field of sports and the interaction of various sciences with each other, as the nature of performance in it is characterized by instability in terms of maximum speed and less than maximum, transitional speed, jumps and anchors, change of direction, running and walking forward and backwards, As imposed by the circumstances of the match, this is what **Ayman Khazal Abdo (2014)** said: During a football match, the player performs a lot of movements that require speed and strength, such as fast running and changing direction quickly **(Ayman Khazal, 2014, p. 24).**

According to **Seghiri Rabah (2014)**, several studies after the players' motor analysis showed that within 90 minutes the player runs at different speeds of 5.2 to 7.8 kilometers, of which 1.3 to 2.7 kilometers have a top speed of less than the maximum, while running the ball in general is from 40 to 60 meters.

(Saghiri Rabah, 2014, p365).

Mufti Ibrahim Hammad (1997) defines modern sports training for various group games as a structured educational process based on scientific principles aimed at bringing players to the highest levels of good, advanced, and rapid performance to achieve the best results and level based on various means and possibilities and underlining programs, courses, and training units **(Mufti Ibrahim Hammad, 1994, p08)**. Sports training is an art when the coach analyzes and exploits the data and observations that he writes and employs in the training program that he builds to help the athlete accomplish and raise challenges. The methods of this analysis and the use of this data depend largely on the experience of the coach and his comprehensive knowledge of the sport of football and of the category he trains and its requirements and accompanying it.

(Sadouk Hamza, Kabouya Mohammed, 2020, p 414).

Training programs are one of the most effective means in the process of modern sports training, since the higher the level of competition, the more important it is to underline the various courses and training programs for players to develop various aspects and requirements of preparation, as the researchers (J**ohn Loc cayla** and **Remy Lacrompe(2007**) say: The goal of each training is to prepare well for the competition through the development of physical abilities, skills, planning and psychological preparations for players, He adds (**Hanafi Mahmud Mukhtar, 2000, p177**): The coach should work to develop various physical, skill, planning, and psychological abilities in conditions similar to those of the game, such as the training installed with the colleague, based on integrated training that takes into account the preparation of all the factors that make up mathematical excellence. **(Jean-Luc Cayla, Rémy Lacrampe, 2007, p29).**

Alexandre Dellal defines "mixed training" as training that aims to increase the player's ability to perform short and fast distances repeatedly during the same exercise and works to develop the fitness of players in general.

(alexandre dellal , 2008, p158).

It is one of the most important requirements that must be developed by the football player, especially among the younger groups, the status of transitional speed, where **Majid Al Mouali (2017)** said: that fast starts in football are important because they are one of the most important events performed by the player where they focus on short distances in the least possible time, which is one of the main components of the elements of fitness and necessary for the footballer. **(Majid al-Mouali, 2017, p. 89).**

She has dealt with many local studies on topics similar to this subject, including:

- The study of **Douida kaiss, Boureghda messaoud (2020**): This study aims to identify the effect of a proposed training program using intermittent Training method on some physical qualities during physical preparation phase for football players junior under 19 years old, the researcher has chosen thirty (30) football players from Najm BENI OULBANE Club, under the age of 19. The sample is divided randomly into two groups (12 controlled and 12 experimental), using the experimental method for this study. Our study was based on three physical tests : Transitional speed test - Sargent test - YO-YO test . After applying the proposed, we obtained the results that we statistically treated with SPSS. the results were as follows : that there are statistical differences between pre and post tests in benefit of the experimental group in terms of transitional speed and strength characterized by speed as well as endurance.

- The study of Ouali abdennour (2021), where the study aimed to know the impact of a proposed training program on the fatigue index, explosive power of the legs and speed of movement of football players (U17). We assumed that there are significant differences between the before and after tests for the two experimental and control samples for the after tests, the experimental method was used and the study was conducted on a sample of 12 players from the (OM)

msila football, season 2020-2021. After the statistical treatment we come to There are significant differences for the proposed training program on the fatigue index and physical qualities (explosive power of the legs, speed of movement).

-The study of **Smail mokra, Hacen berrouage (2021**), where the study aimed to identify the impact of the preparation of a proposed training program by the method of integrated training on the development of some physical qualities of football players category Cubs (17-18) years, and to achieve This research was conducted on a sample consisting of 32 players in state of oum el bouaghi , and the researcher used the experimental method of measurement before and after the two groups and then the researcher found parity between the experimental group and the control group in some variables that may It also affects the use of physical tests that measure the physical aspect of the football player In the municipal stadium in the state of Oum El Bouaghi, the results were as follows : the need to use the method of integrated training within the training curriculum because of its positive impact on the development of some physical qualities of football players.

-The study by **Megage Kamal (2011):** The Role of Repetitive Training in Improving the Speed of Footballers (12–15 Years), aimed to identify the differences between tribal and remote tests in the control and experimental groups at the level of speed in the 12–15 year old football group. The study was based on the experimental curriculum, and the research sample was made up of 22 players selected in the mayoral manner. The results showed that the proposed training program in a repetitive manner was effective in improving the performance of the physical variables of the study.

Through all this valuable data and the opinions of the researchers, a training program based on mixed and repetitive training was proposed, and we concluded to ask the following questions in the form of a general question and

partial questions that illustrate the problem of research and represent **the general question:** in Is the proposed training program based on mixed training effective in developing the status of transitional speed among footballers under the age of 13?.

-The partial questions are:

- Are there any differences in the characteristics of transitional speed between pré and post testing in the experimental group?.
- Is there any difference in the status of transitional speed between the control and experimental groups in the post tests of akramov?.

As for the hypotheses of the study, they were also in the form of a general hypothesis and partial hypotheses, and the general hypothesis was: that the training program based on mixed training and repetitive training, proposed in the period of competition, effectively developed the status of transitional speed among footballers under the age of 13.

-The partial hypotheses are:

-There are differences in the characteristics of transitional speed between the pré and post testing in the experimental group.

-There are differences in the status of transitional speed between the control and experimental groups in the post tests of akramov.

The objectives of our study are:

-To know the effectiveness of the training program based on mixed training and repetitive training proposed during the competition phase to develop the status of transitional speed among footballers under the age of 13.

-Knowledge of the statistical differences in the transitional speed between the pré and post testing in the experimental group.

-Knowledge of statistical differences in the transitional speed between the control and experimental groups in the post tests of akramov.

-The study gained its importance through: the researcher's proposal for a training program based on training (mixed-repetitive) during the competition phase to determine the effectiveness of the development of the transitional speed characteristic of football players. The researcher hopes that this study will provide a scientific and practical addition in the academic and training fields and highlight the importance of mixing the ball in the physical work of young players, thus developing the skilled side also on a scientific basis and in new ways. We have also addressed the issue of planning in football and the training programs it imposes on coaches on a scientific basis and based on the use of new concepts and training methods.

-The terms of the study:

5-1- Training program: It is the optimal use of a set of scientifically proven training methods in order to develop physical, technical, tactical and psychological qualities and raise the level of sports performance for players to achieve a specific sports goal. **(Rahmoune Mohamed Amine and others, 2021, p47).**

Mixed (integrated) training: is a way to develop the physical aspect by using football's motor abilities by modifying physical qualities within the real conditions of the game. **(Fédéric Lambertin, 2000, p09).**

Repetitive training: this method is characterized of the Maximum intensity during the operation which done in similar as in the competition in all characteristics, and it must to give an long phases of rest between the small repetition to get good intensity with high level.

(**Seraiaia Djamel and others, 2022, p495**).

Transitional Speed: is one of the forms of speed, It is moving from one place to another at the fastest possible speed, that is overcoming a certain distance in the shortest possible time. **(Hossam El-Din cheriet, Laban Kamal, 2017, p152).**

-**group under 13 years of age (early adolescence):** it extends from the age of 11 to 14 and is characterized by rapid biological changes.

(A.T., January 13, 2021; Human Growth Stages) (https://mawdoo3.com).

1-Methodological methods used in the study:

1-1- The study curriculum: The method is chosen according to the nature of the research. The study method is directly related to the topic of the study, as the nature of the topic is what determines the choice of the method to be followed **(Belamri yassine, bouali lakhdar, 2020, p185),** In our study, we relied on the experimental approach of the two groups (control-experimental), and this was to suit the nature of the subject as it allows us to verify the validity of the hypotheses that have been formulated.

1-2-Community study: The original community of study in all players represented a group under the age of 13 who are involved in the teams within the city of M'sila, namely (03) teams: Olympic Team M'sila (O.M) - M'sila Youth Football Team (M.C.M) - W.R.M.

1-3- sample study: Our study sample, which was selected in a deliberate manner, was represented by a group of 20 players from the Olympic liquefied football team under the age of 13 and divided into two equal groups.

1-4- Research areas: The research was carried out within the following areas:

1-4-1- Spatial domain: Experimental research was carried out in the basketball courts of the First November School, located near the Directorate of Education in the Wilaya of M'sila.

1-4-2- Time scope: The research was carried out from November 2021 to March 2022, and the field study was divided into 3 phases:

1-4-2-1- Tribal tests stage: the dimensional measurement of the study variables (speed and shooting skill) was applied on Friday, 24 December, 2021.

1-4-2-2- Training program implementation phase: Our proposed training program consisted of 12 training sessions, which were implemented at a rate of two sessions per week, from Tuesday, 04 January, 2022 until Friday, 11 March, 2022.

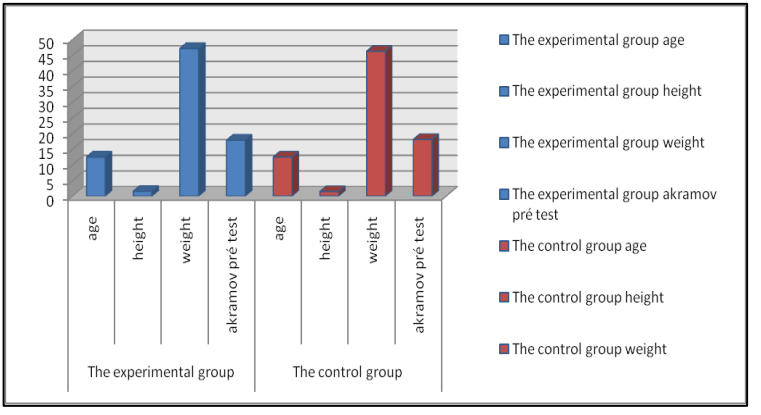
1-4-2-3- Post-test stage: The post-measurement of the study variables (speed and shooting skill) was applied on Tuesday, 15 March, 2022.

1-5- Equivalence and homogeneity of the study sample:

Table 01: Shows sample homogeneity in terms of age, height, weight, and Akramov pré test results.

Axes / Variables	Value of (F) levante	moral Degree of probability (sig)	statistical Index
Age	0,101	0,755	Do not exist
Height	0,130	0,722	
weight	0,383	0,544	
akramov Pré test	3,246	0,88	
sample Volume: 20	Level of signification : 0,05	Level of trust : 95%	

- The following graphs 01: represent the homogeneity of the two group.



-Through table No.01 It is clear that there are no statistical differences between the control and experimental groups in the age, height, weight and pré test

results of Akramov, where the value of F (0.101 - 0.130 - 0.383 - 3.246) respectively, while the F indication (0.755 - 0.722 - 0.544 - 0.88) respectively was greater than the level of indication 0.05, and it can be said that there is an equivalent between the control and experimental groups in all the specific variables to start the application of the training program.

1-6-Data collection tools and information: The researcher used the following tools:

1-6-1-test tool is defined as follows: the test is defined as a set of triggers that are provided to an individual in order to elicit responses necessary to provide him with a digital score for the property the test measures. **(Ary. D, 1996, p233).**

In his study, the researcher relied on the following tests:

1-6-2-1-The Akramov test:

The goal of the test: is to measure the transitional speed of the player.

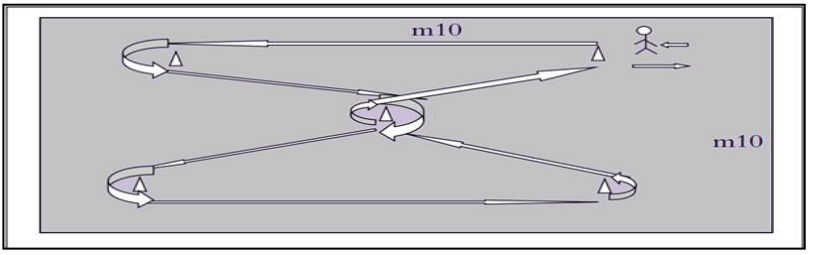


Figure 01: represents how the Akramov test is performed.

(Sedouki bilal, 2021, p 470).

1-7-The scientific conditions for the study: There are two conditions:

-Stability: It means consistency of test scores, accuracy of results, and freedom from the effect of coincidence when applied to a specific sample of individuals on two different occasions separated by time. **(Anastasi, 1988, p116-117).**

-Honesty: The extent to which the test serves the purpose for which it was designed means that honesty varies according to the purposes to be measured

Table 02: Rpresents the results of the stability and sincerity tests of the akramov test.

Axes / Variables	Sample volume	Test stability	Validity of the test
Akramov Test	05	0,635	0,769
Degree of freedom : 04	Level of signification : 0,05	Level of confidnace : 95%	

- Through the table it is clear that the values obtained mathematically and for both the stability and sincerity of the Akramov test are high and close to (1) where the value of the stability factor reached 0.635 and the value of the honesty factor was 0.796, which indicates that the test is characterized by two high degrees of stability and honesty factors.

2-Examination of exposure, analysis, and results:

Table 03: presents the results of the pré and post test of experimental group in the akramov test.

Axes / Variables	(T) indication (sig)	(T) Calculated	statistical Index
Experimental group (pré test – post test)	0,001	4,530	exist
A sample Volume : 10	Level of signification : 0,05	Level of trust : 95%	

Presentation, analysis, and discussion of the results of the pré and post tests of the experimental group in the Akramov test:

- Through the table, it was found that the experimental group achieved in the pré measurement of the Akramov test a mathematical average of (17.87) and a standard deviation of (0.322), while in the post measurement it achieved a mathematical average of (17.11) and a standard deviation of 0.575, and the calculated value of the Akramov test was 4.530 at the degree of freedom (09)

and the same test (0.001) at the indication level was 0.05, Given the value of the test (indication t) it is below the level of indication 0.05, which indicates that there are statistical differences between the pré and post measurement in the transitional speed status of the players of the experimental group under 13 years of age, Our study is a consistent with the study of **Douida kaiss, Bouerghda messaoud (2020)**, and also with the study of **Ouali abdennour (2021),** in that there are statistical differences in the results of the pré and post tests in the experimental group in the variables studied, and **Alexandre Dellal (2013) said:** when analyzing the activity of football as a sport characterized by repeated high intensity and interspersed with breaks, as **Ayman Khazal Abdo (2014)**: During football, the player performs a lot of movements that require speed and strength, such as speed and changing directions, and also **Muwaffaq Madjid Al-Mouli (2017)** said: "The rapid starts in football are important because they are most of the events carried out by the player, where they are focused on short pieces as long as possible.

Through all this, it can be said that the results of our study agree with the study of **Douida kaiss, Bouerghda messaoud (2020)**, and study of **Ouali abdennour (2021)**, from which it can be said that the first hypothesis **has been achieved.**

- The following graphs 02: presents the results of the pré and post test of experimental group in the akramov test.

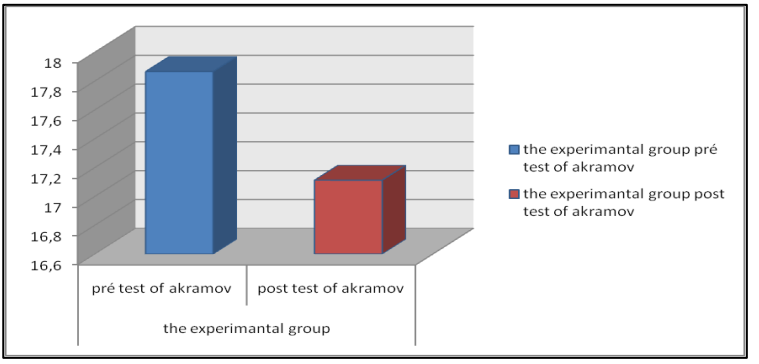
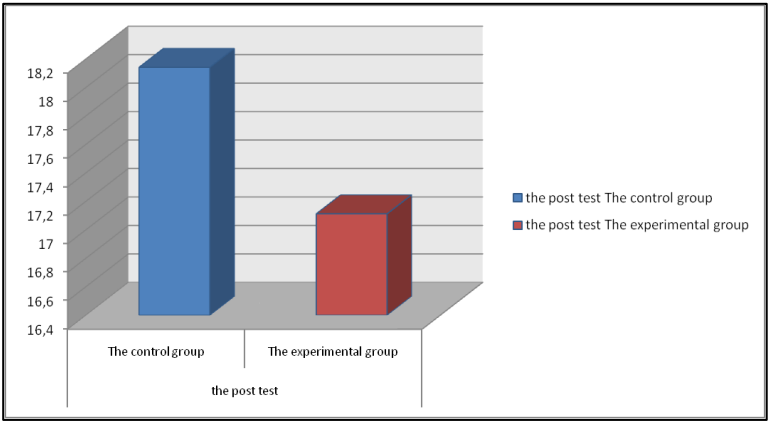


Table 04: presents the results of the control and experimental groups in the post test of akramov.

Axes / Variables	(T) indication (sig)	(T) Calculated	statistical Index
post test (Control group - Experimental group)	0,001	4,208	exist
A sample Volume : 20	Level of signification : 0,05	Level of trust : 95%	

- The following graphs 03: represent the results of the control and experimental groups in the post test of akramov.



Presentation, analysis, and discussion of the results of the control group and experimental group in the post test of Akramov test:

Through the table, it was found that the experimental group achieved a mathematical average of (17.11) and a standard deviation of (0.575), while the control group achieved, in the same measurement (post test) as the Akramov test, an average mathematical average of (18.89). With a standard deviation of (1.203), the calculated value of the Akramov test was (4.208) at the degree of freedom (18) and an indication of the same test (0.001) at the indication level of

0.05. Given the value of the test (indication t), is below the 0.05 level of significance, which indicates statistical differences between the control and experimental groups in the post measurement in the transitional speed characteristic of players under 13 years of age. Our study agreed with the study of **Smail mokran, Berrouage hacen (2021)** , and the study of **Megage kamel (2011)**, In that there are statistical differences in the results of the post test between the control and experimental groups in the variables studied, where **Adel Abdul Basir ali (1999) said**: Speed plays an important role as one of the basic physical capabilities of the components of physical preparation in football, and as **Fawzi (2004)** indicates, training programs are important in the development of the element of speed, which is considered of great importance in this game, especially in movements that require speed in implementation. As **Erick Mombaerts (1996)** said: "The coach must put his players at a permanent level and connected to the ball in order to get enough of the elements of play and quick and direct competition.

Through all this, it can be said that the results of our study agree with **Smail mokran, Berrouage hacen (2021)** , and the study of **Megage kamel (2011)**, and from him it can be said that the first hypothesis **has been achieved.**

Table 05: Cohen's test results represent a measure of the magnitude of the impact the course has on the experimental group.

Axes / Variables	(T) indication (sig)	(T) Calculated	Cohen's test (effect size)
Experimental group (pré test – post test)	0,001	4,530	1,445
A sample Volume : 10	Level of signification : 0,05	Level of trust : 95%	

Presentation, analysis, and discussion of the results of the Cohen's test of the experimental group of the Akramov transitional speed test:

Through the table, it was found that the experimental group achieved in the pré measurement of the Akramov test a mathematical average of (17.87) and a standard deviation of (0.322), while in the post measurement it achieved a mathematical average of (17.11) and a standard deviation of (0.575). The calculated value of the Akramov test was (4.530) at the degree of freedom (09), and Cohen's test value for the Akramov test was (1.445) at the semantic level of 0.05, which is a large effect, indicating a significant impact. This means that the proposed training program has had a major impact on improving the transitional speed of footballers under the age of 13. Our study is consistent with the study of **Douida kaiss, Boureghda messaoud (2020)**, who found that there are statistical differences between pre and post tests in benefit of the experimental group in terms of transitional speed and strength characterized by speed as well as endurance., and the study of **Megage Kamal (2011)**, who found the role of repetitive training in improving the speed of football players (12–15 years old), in that the training program has had a positive impact and significant development in the variables studied. He emphasizes that good and proper planning based on scientific grounds necessarily leads to an effective and positive impact **(Belferitis Yassin, Ghannam Noureddine, 2020, p240)**, and **Saad Mohsen Ismail (1996)** emphasizes that any training inevitably leads to the development of achievement if built on a scientific basis (training principles-intensity-repetitions-comfort), taking into account individual differences and good training conditions, and **Medjadi mefetah and others said:** "Training science should be relied upon in selecting training and identifying modern methods and methods used in the application of training programs.

Through all this, it can be said that the results of our study agree with the 2018 **Nowari Jamal al-Din 2018** study and the study of **Kamal Megage 2011**, from which it can be said that the general hypothesis **has been achieved.**

3-Finding and proposition results:

3-1- Conclusions: The following conclusions have been reached:

-There are statistical differences in the status of transitional speed between tribal and remote testing in the experimental group.

-Statistical Differences in the Status of Transitional Speed between the Remote Tests in the Control and Experimental Groups

-The proposed training course has an effective and positive impact on the development of the transitional speed status of footballers under the age of 13.

3-2- Recommendations: A series of proposals have been made that we hope will be constructive and work to improve the level of football, namely:

-Use the method of training integrated with the ball and diversity the training methods of the football players. Put the players in changing positions similar to the competition, allowing them to adapt to the competition and its diversity of events.

-Planning training programs based on integrated training to develop the physical qualities of young people in the football game.

-Applying the various physical tests needed to young people at the beginning of each training season to detect their physical level helped to underline training programs based on the results of those tests.

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