The claim, which came to be known as Fermat's Last Theorem, eventually became one of the most notable unsolved problems of mathematics. Attempts to prove it prompted substantial development in number theory, and over time Fermat's Last Theorem gained prominence as an unsolved problem in mathematics.

However, in 1984, an outline suggesting Fermat's Last Theorem could be proved was given by Frey. The full proof was accomplished in 1986 by Ken Ribet, building on a partial proof by Jean-Pierre Serre, who proved all but one part known as the "epsilon conjecture".

In 1993, after six years of working secretly on the problem, Wiles succeeded in proving enough of the conjecture to prove Fermat's Last Theorem. Wiles's paper was massive in size and scope. A flaw was discovered in one part of his original paper during peer review and required a further year and collaboration with a past student, Richard Taylor, to resolve. As a result, the final proof in 1995 was accompanied by a smaller joint paper showing that the fixed steps were valid. Wiles's achievement was reported widely in the popular press, and was popularized in books and television programs. For his proof, Wiles was honoured and received numerous awards, including the 2016 Abel Prize.

To sum up, it may be said that mathematics professor Andrew Wiles has won a prize for solving Fermat's Last Theorem. He's seen here with the problem written on a chalkboard in his Princeton, N.J., office, back in 1998. The mathematics problem he solved had been lingering since 1637 — and he first read about it when he was just 10 years old.

Furkan Mustafa Solmaz, Turkey
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THE BUTTERFLY EFFECT

During our life we decide a year, a month or a day. Most of these decisions are the decisions make in short time without thinking. So how do these decisions shape our future?

A small snowball can turn into a big avalanche. The small decisions we make in our lives actually shape our future. We can explain this with the best Butterfly Effect.

The Butterfly Effect with the shortest definition is that small changes in the initial data of a system are large is that it creates an unpredictable change and then it is the name given to different results. The name that put forward this theory is American born mathematician and meteorologist Edward Lorenz.

However, when we look at the process, when the transaction made with the second issue reaches the result, completely different results have emerged. İnitially Lorenz called it the theory of chaos, later it was named Butterfly Effect. İn describing this theory, it exemplified that a butterfly's flapping can lead to a hurricane in a different part of the world. Of course, the flapping of every butterfly doesn't mean that it can cause a natural phenomenon somewhere in the world. The butterfly flapping here symbolizes only minor changes at the beginning of events. This change then leads to large-scale changes, helping to create a series of chains of events. So what kind of changes in the beginning of these events can change our lives?

Let's see how a tiny detail changes the world history with an example of history.

İn 1928, a scientist from England returned to his home 1 month after his holiday. This scientist is Alexander Fleming. Fleming was an extremely messy person. After returning from the holiday, he noticed that a new bacteria was growing is one of these containers. Realized that this growing bacterium was Penicillum Notatum. He saw a surprisingly growing bacteria kill other harmful bacteria. Fleming could simply throw these containers away, but he chose to examine them. This antibiotic produced by Fleming accidentally and he saved the lives of more than 200 million people Alexander Fleming saved a lot of lives with this medicine. So what is the effect of this drug of Fleming on Earth history?

Before I come to this topic, I would like to touch again on a Butterfly effect again. Yes now the event I'm going to tell is going to World War I. You may have heard of this name Henry Tandey. He was a soldier in charge of WW I. Henry Tandey faced a wounded and inconvenient German soldier as he roamed the battlefield late in the war. But he didn't find it right to kill an injured and defenseless person, even his enemy.

His decisions here killed millions of people. That name is Adolf Hitler. And Henry saved his life with this behavior. And that soldier became Germany's new leader years later. About 80 million people died at the end of World War II started by Adolf Hitler. Many soldiers who were wounded during the war after WW II started treatment thanks to antibiotics and had a great impact on the course of the war.

İn June 1944, Claus Von Stauffenberg launched a bomb attack on Adolf Hitler. Hitler survived this assassination as injured. But his wounds were infected. İt this infection happened before Penicillin was found. Adolf Hitler had no change to get rid of it. Hitler was cured by treatment with high quality penicillin and ruled his army for another year. İronic part here penicillin, which saved the life of Adolf Hitler, was produced in England. Here are just a few examples of the butterfly effect. Penicillin would never have been invented if the bacteria in those plastic containers were not noticed and thrown away. And in the WW II the life of Adolf Hitler wouldn't be

saved. WW II wouldn't start if Henry Tandey had killed Adolf Hitler on the battlefield in WW I. And millions of people wouldn't die.

The little decisions we make in our lives can cause major changes in the future. So we have to choose all the decisions we make carefully and well. I hope all the decisions you make in your life will be positive for you.

Chahine Issam Lara, Lebanon
NTU “KhPI”

BEKETOV CHEMIST AND BEKETOV ARCHITECT

We live in Kharkov, and I want to tell you about a man who worked in Kharkov for 32 years. His name is Nikolai Nikolaevich Beketov, a famous physicist and chemist.

From 1855 he worked at the Kharkov Imperial University, (now Kharkiv National University of Karazin).

In 1864 Beketov opened a physicochemical department at Kharkov University and headed it.

As a result of research, Beketov discovered the displacement of metals from solutions of their salts with hydrogen under pressure and found that magnesium and zinc at high temperatures displace other metals from their salts.

The scientist showed that at high temperatures, aluminum reduces metals from their oxides. These experiments served as the basis for aluminothermy. Aluminothermy – a method for producing metals, non-metals (as well as alloys) by reducing their oxides with metal aluminum:

$2Al + \underline{Cr_2O_3} = \underline{Al_2O_3} + 2\underline{Cr}$;

$\underline{Fe_2O_3} + 2Al = 2Fe + \underline{Al_2O_3}$.

He investigated the dependence of the chemical properties of elements on the physical (relative atomic mass and radius).

In 1898 Beketov defended his doctoral dissertation and for the first time at the university began to teach a course in “physical chemistry”.

Nikolay Beketov is a corresponding member of the Academy of Sciences, laureate of the Lomonosov Prize. For more than 15 years he was an honored professor at Kharkov University.

During these years, he taught chemistry at the Polytechnic Institute, in a large chemical audience, which is still called the Becket audience.

But the metro station “Architect Beketov” is named after the scientist’s son, Alexei Nikolayevich Beketov, an academician of architecture who was born and died in Kharkov.