7) Be sure to include personal issues in the program (conflict resolution, stress management, personal finance planning, etc.);

8) conduct a study of relations between employees.

Hence, increasing the efficiency of the formation and use of labor resources of the enterprise contributes to reducing the loss of working time and ensuring its rational use, improvement of working and rest regimes. Important reserves for increasing the efficiency of the formation and use of labor resources of the enterprise are the growth of labor productivity and professional development of workers in accordance with the needs of the enterprise, improvement of the system of retraining, as well as improvement of working conditions.

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GAME OF LIFE AS A MATHEMATICAL MODEL

The Game of Life is a cellular automaton, which was created in 1970 by the English mathematician John Horton Conway. This was a manifestation of interest in the problem of John von Neumann, which was invented in the 1940s, and was to develop a hypothetical machine that would have the ability to make copies of itself. For the first time, the description of this game was published in Scientific American magazine in the category of Martin Gardner "Mathematical games".

The action of the game unfolds on a plane, infinite on both sides and divided into cells, which is called the universe. Each cell has eight neighbors: on the sides, top, bottom and on the diagonal. Also, each cell can be in two states: live (inhabited), non-living (not inhabited). The initial distribution of cells that are in a state of living (inhabited), is called the first generation. Depending on the placement of cells in the first generation, the placement of living (populated) cells of subsequent generations is calculated, following the rules that are given below:

• If the living cell has two or three neighbors – then it remains to live further;

• If the living cell has one neighbor or no one at all – then it goes into a state of inferiority, or, in other words, dies of loneliness;

• If the living cell has four or more neighbors – then it dies from overpopulation;

• If the dead cell has exactly three neighbors – then it goes into the state of the living cell.

The rules are applied repeatedly and simultaneously, to create further generations. These rules are called the Conway genetic laws and satisfy the following conditions:

• there should not be any initial configuration, for which there would simply be a possibility to prove the possibility of unrestricted population growth;

• there must be such initial configurations that have the ability to grow infinitely in advance;

• there should be simple initial configurations that grow over a significant period of time, undergo various changes, and end their evolution in one of three following ways: completely disappear, switch to stable configuration and cease to change at all or go to the oscillatory regime with a certain period.

At the beginning of the game there is a placement of living cells, the player, who then acts without any further participation in accordance with the rules described above. In this game there is a huge number of different shapes that are formed due to simple rules. All figures, at the moment, are divided into the following classifications:

• Stable – shapes, placement of cells, which remain unchanged after each generation.

• Periodic (oscillator) – figures, placement of cells, which are repeated in a certain number of generations.

• Moving figures (spaceships, gladiators or gliders) – figures, placement of cells that are repeated, but with some shift in space.

• Guns – figures, placement of cells, which are repeated, but each cycle, they additionally create new moving figures.

• Steamboats are mobile shapes that leave track behind in the form of stable or periodic shapes.

• Eaters – stable (or periodic) shapes that can, when collided with some moving figures, keep their cells in place, destroying the moving figure.

• Long-livers – figures that for a long time change the location of their cells before stabilizing.

In the computer realization of the game, the universe is limited and the upper part is connected to the lower, and the left with the right, which is the simulation of the surface of the torus (a geometric body formed by rotating a circle around an axis that lies in one plane with a circle, but does not cross it. The shape of the torus looks like a bagel outside), but the field is displayed on the screen in the form of a uniformly distributed grid. The algorithm for generation change consistently checks all cells, which calculates the number of neighbors, then checks them with the rules and assigns the cell's status. For full-fledged operation of this algorithm it is necessary to use two two-dimensional arrays.

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THE NEW WORLD: SAFETY OR ILLUSION?

Nowadays people try to protect their lives in all possible and impossible ways. We want to live in a world that is better for us, so we are ready to go for a lot for our own peace of mind. Some of security measures are surveillance cameras, spy pens, fingerprint scanning and a social network based on human DNA. How far is humanity ready to go?

Let's start with the project "Smart Nation", which was set up in Singapore. It is one of the safest and most comfortable cities for life. Here you cannot throw garbage in an