① $12345678_{10} \rightarrow \text{----} 16$

$1000000_{10} \rightarrow \text{----} 16$

$$
\begin{array}{r|l}
12345678 & 16 \\
-12345664 & \overline{771604} \quad | 16 \\
\hline
\enclose{circle}{14} & 771600 \quad | \overline{48225} \quad |16 \\
E & \enclose{circle}{4} \quad \overline{48224} \quad | 3014 |16 \\
& \enclose{circle}{1} \quad 3008 \quad |\overline{188} |16 \\
& \enclose{circle}{6} \quad 176 \enclose{circle}{11}|16 \\
& \enclose{circle}{12} \quad B | \overline{0} \\
& C
\end{array}
$$

$BC614E_{16} = 12345678_{10}$

$$
\begin{array}{r|l}
1000000 & 16 \\
-1000000 & \overline{62500} | 16 \\
\hline
\enclose{circle}{0} & 62496 | \overline{3906} |16 \\
& \enclose{circle}{4} \quad 3904 | 244 |16 \\
& \enclose{circle}{2} \quad 240 \enclose{circle}{15}|16 \\
& \enclose{circle}{4} \quad F | \overline{0}
\end{array}
$$

$F4240_{16} = 1000000_{10}$

② $12345678_{16} \rightarrow \text{----} 10$

$1000000_{16} \rightarrow \text{----} 10$

$$\underset{1}{1}\underset{2}{2}\underset{3}{3}\underset{4}{4}\underset{5}{5}\underset{6}{6}\underset{7}{7}\underset{0}{8}$$

$12345678 = 1\cdot16^7 + 2\cdot16^6 + 3\cdot16^5 + 4\cdot16^4 +$

$+ 5\cdot16^3 + 6\cdot16^2 + 7\cdot16 + 8\cdot1 = 268435456 +$

$+ 2\cdot 16777216 + 3\cdot 1048576 + 4\cdot 65536 +$

$+ 5 \cdot 4096 + 6 \cdot 256 + 120 = 305\,419\,896$

$305\,419\,896_{10} = 12345678_{16}$

$$\overset{6\;5\;4\;3\;2\;1\;0}{1\,000\,000\,0} = 1 \cdot 16^6 + 0 \cdot 16^5 + 0 \cdot 16^4 + 0 \cdot 16^3 +$$

$$+ 0 \cdot 16^2 + 0 \cdot 16 + 0 \cdot 1 = 16\,777\,216$$

$$16\,777\,216_{10} = 1\,000\,000\,16$$

③ Записать в виде лог. выражения
"Сгущённого молока и мёда и
можно без хлеба"

Сгущ. молоко = A

Мёд = B

Хлеб = C без хлеба $\Rightarrow !C$

$\underline{A \,\&\&\, B \,\&\&\, !C}$

④ Доказать тождества:

$A \to B = !A \,||\, B$

$A \leftrightarrow B = (A \,\&\&\, B) \,||\, (!A \,\&\&\, !B)$

A	B	!A	A→B	!A ‖ B
0	0	1	1	1
0	1	1	1	1
1	0	0	0	0
1	1	0	1	1

$A \to B \quad !A\,||\,B$

A	B	!A	!B	A&&B ^{1}	!A&&!B ^{2}	(1)‖(2)
0	0	1	1	0	1	1
0	1	1	0	0	0	0
1	0	0	1	0	0	0
1	1	0	0	1	0	1

как и
для A→B

$$X = !A + A*!B + !A*B$$

A	B	!A	A*!B	!A*B	X
0	0	1	0	0	1
0	1	1	0	1	1
1	0	0	1	0	1
1	1	0	0	0	0

Unity WebGL

BooleanGame

$$X = !B + !A*B + !A*!B$$

A	B	!B	!A*B	!A*!B	X
0	0	1	0	1	1
0	1	0	1	0	1
1	0	1	0	0	1
1	1	0	0	0	0

DEC 41

HEX

| 2 | 9 |

BIN

| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |

BooleanGame

DEC 90

HEX

| 5 | A |

BIN

| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |

BooleanGame

DEC 54

HEX

3   6

BIN   0   0   1   1   0   1   1   0

Unity WebGL   BooleanGame

DEC 76

HEX

4   C

BIN   0   1   0   0   1   1   0   0

Unity WebGL   BooleanGame

HEX 3D

DEC
+ 0 6 1
BIN 0 0 1 1 1 1 0 1

HEX EF

DEC
- 0 1 7
BIN 1 1 1 0 1 1 1 1
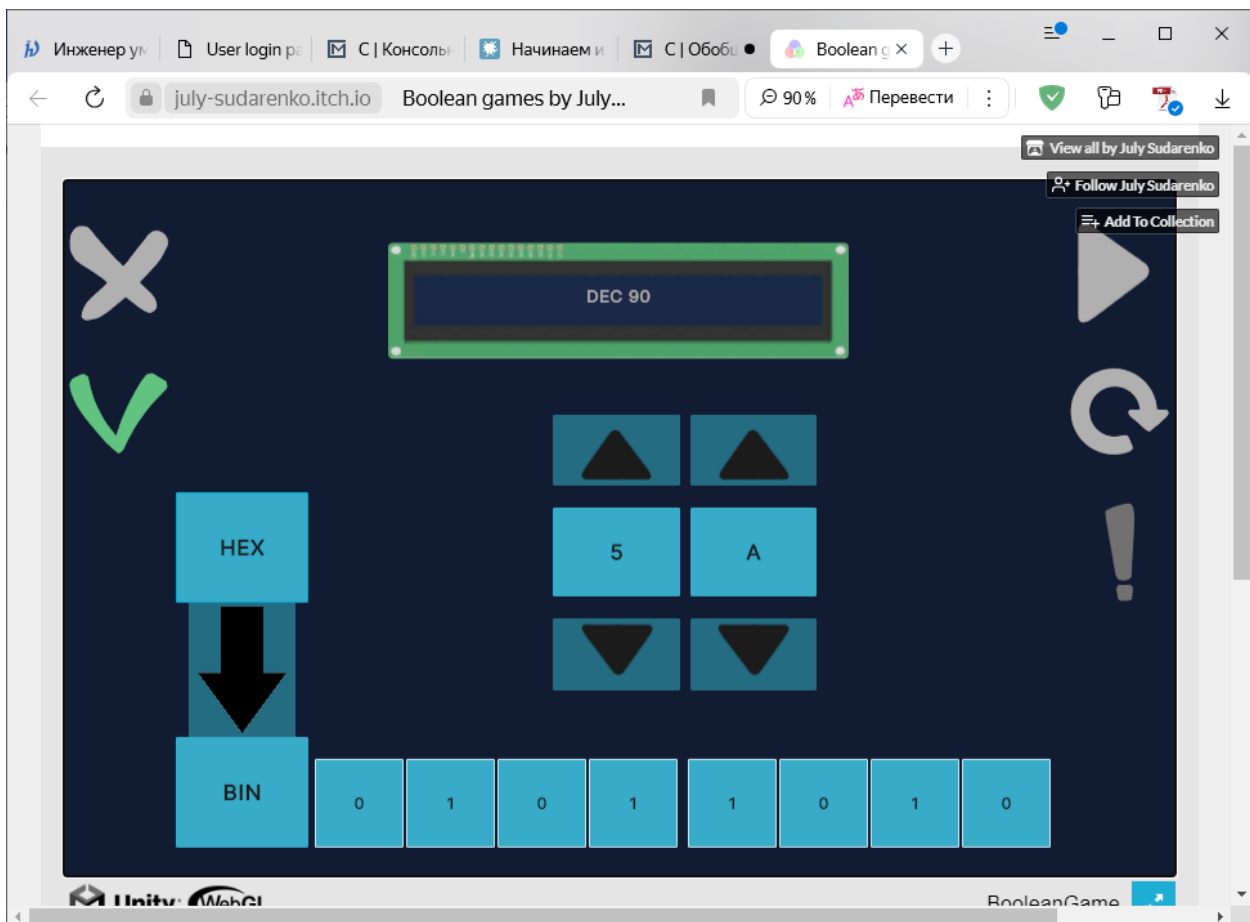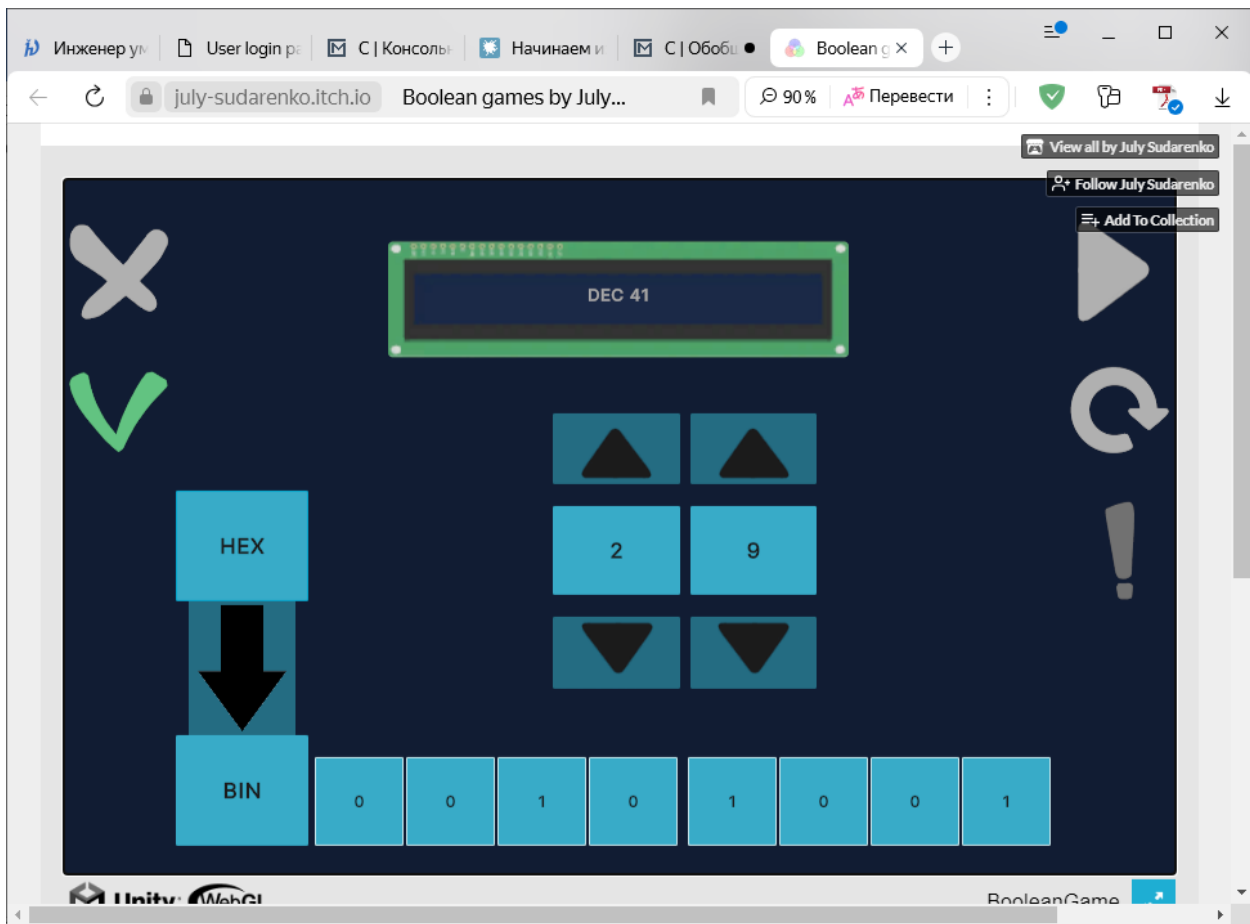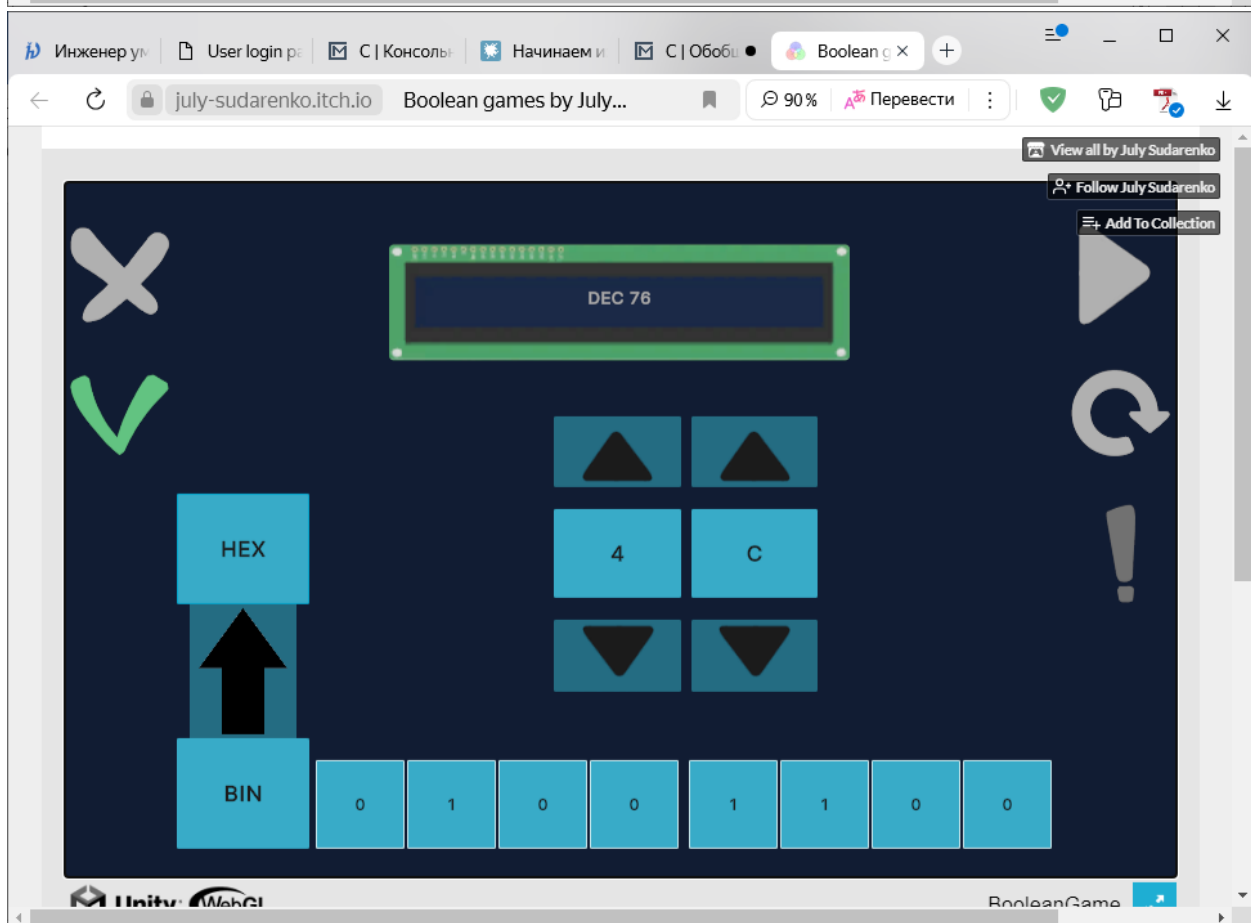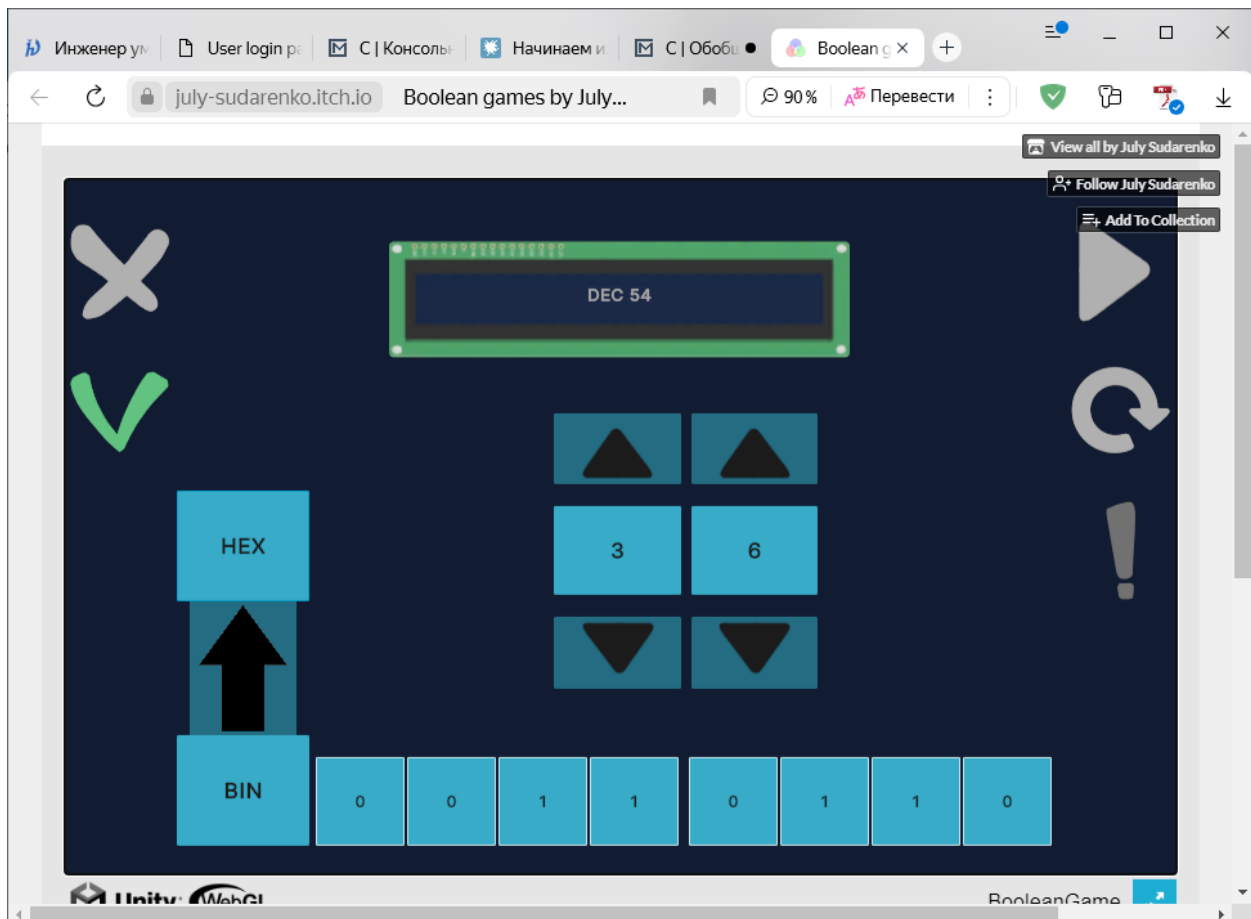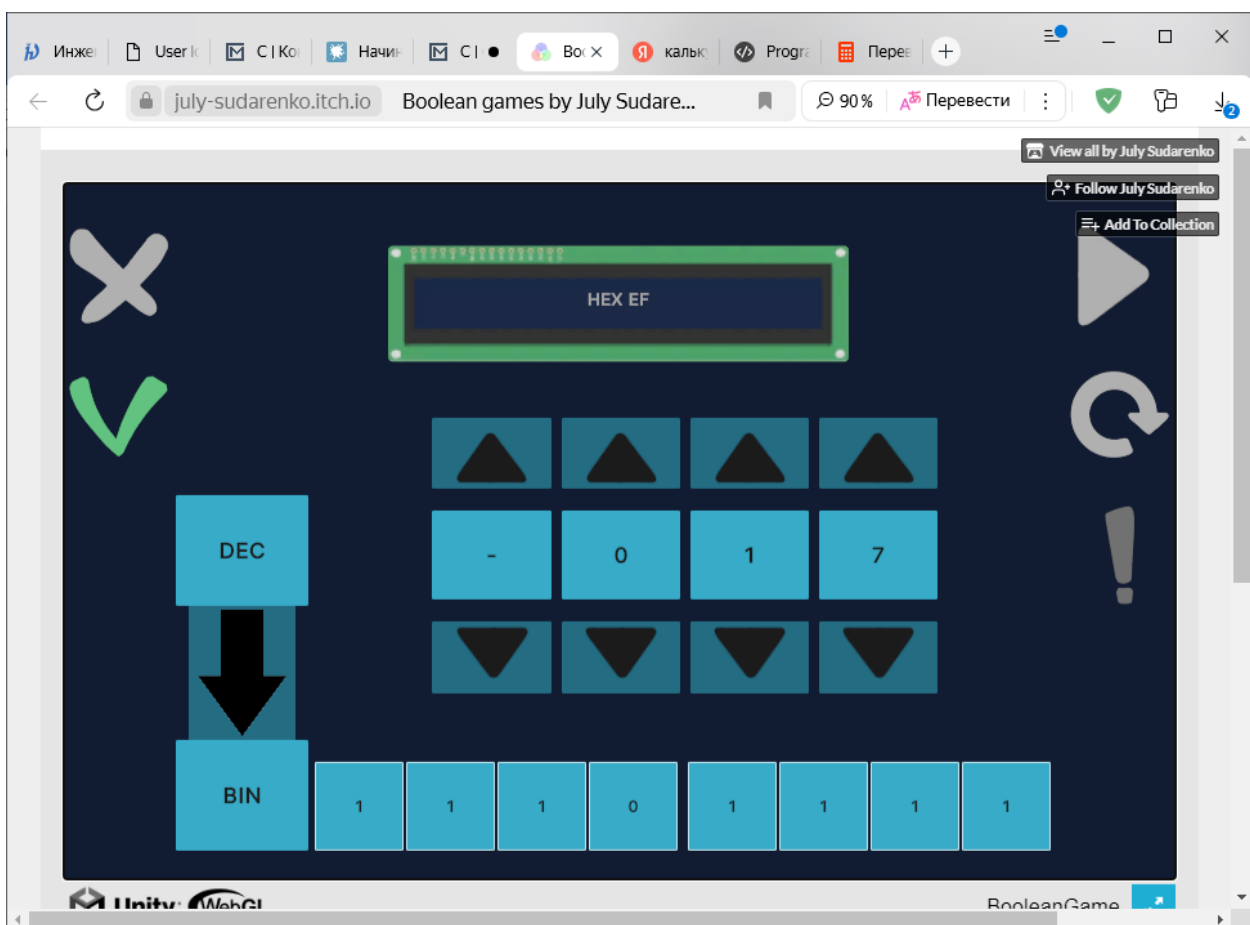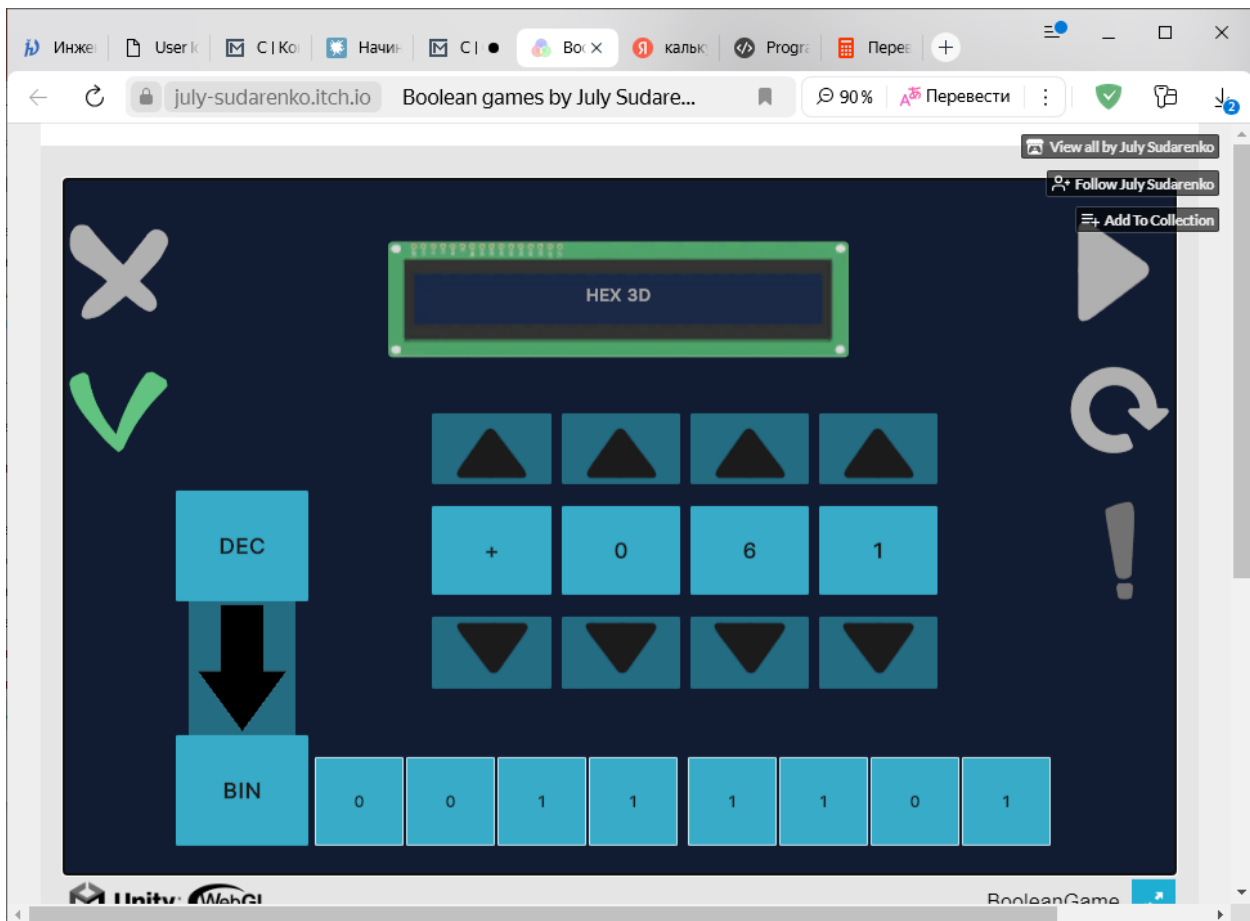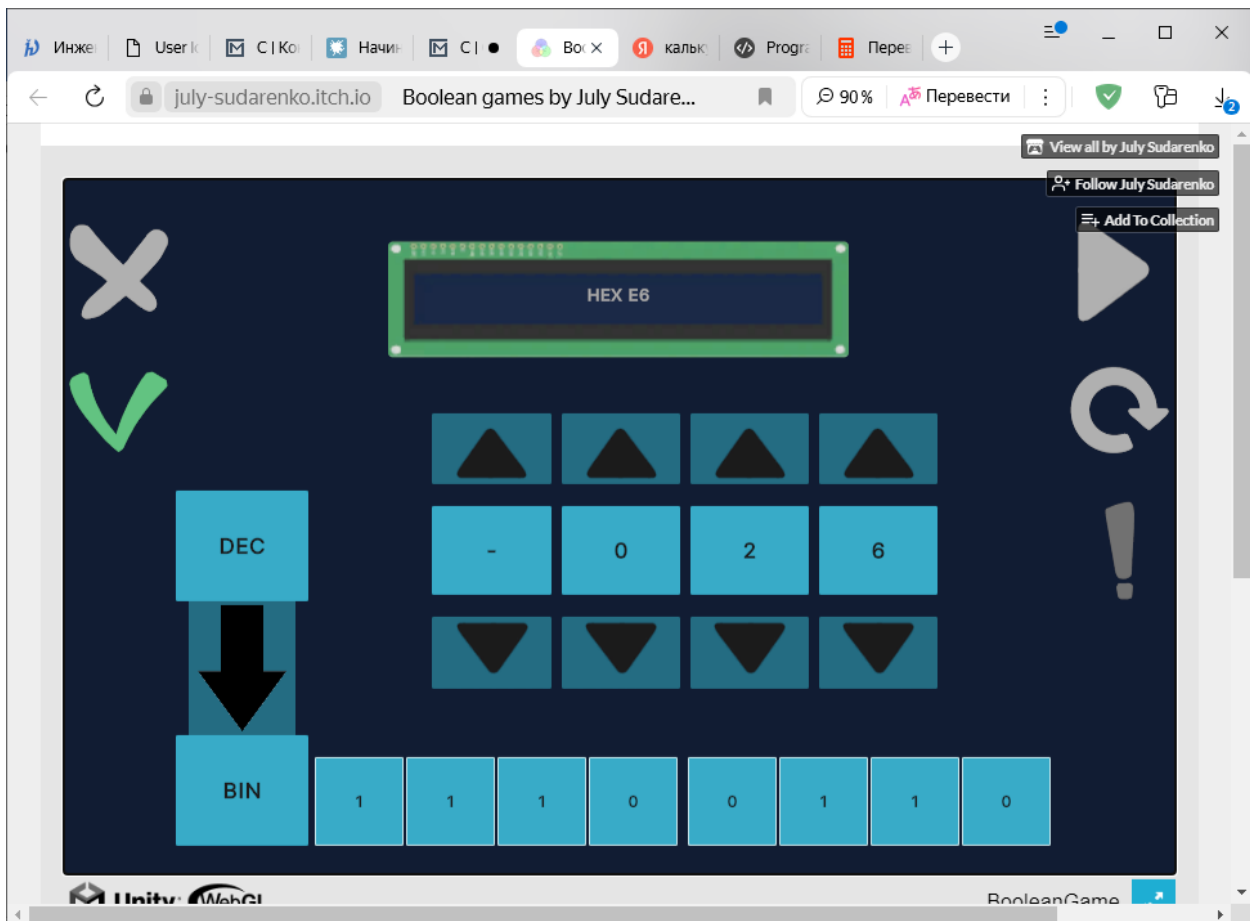
6. Упростить выражение :

$$X = (B \to A) \cdot \overline{(A + B)} \cdot (A \to C)$$

$B \to A = \overline{B} + A$

$\overline{A + B} = \overline{A} \cdot \overline{B}$

$A \to C = \overline{A} + C$

$(B \to A) \cdot \overline{(A + B)} \cdot (A \to C) = (\overline{B} + A) \cdot \overline{A} \cdot \overline{B} \cdot (\overline{A} + C) =$

у умножения приоритет выше =>

снагала выполняем $\overline{B} \cdot (\overline{B} + A) \cdot \overline{A} \cdot (\overline{A} + C)$

$\downarrow$ $\qquad$ $\downarrow$

$\overline{B}$ $\qquad$ $\overline{A}$

$= \overline{B} \cdot \overline{A}$