

```

1  #ifdef _WIN32
2      #pragma warning(disable:4996)
3      #include <tchar.h>
4      #include <windows.h>
5      #include <conio.h>
6      #include <direct.h>
7  #elif (defined __linux__ ) || (defined _AIX) || (defined __APPLE__)
8      #include <stdlib.h>
9      #include <sys/types.h>
10     #include <sys/stat.h>
11     #include <unistd.h>
12     typedef char _TCHAR;
13     #define _tmain main
14 #endif
15
16 #include <stdio.h>
17 #include <iostream>
18 #include <iomanip>
19 using namespace std;
20
21 #include "MaticaObdlznikova.h"
22 //-----
23 //Konstruktor inicializuje prvky matice
24 TMaticaObdlznikova::TMaticaObdlznikova ()
25 {
26     PocetRiadkov = MAXPOCET;
27     PocetStlpcov = MAXPOCET;
28     for (unsigned i = 0; i<PocetRiadkov; i++)
29         for (unsigned j = 0; j<PocetStlpcov; j++)
30             Matica[i][j] = 0;
31 }
32 //-----
33 TMaticaObdlznikova::TMaticaObdlznikova(TMaticaObdlznikova& X)
34 {
35     PocetRiadkov = X.PocetRiadkov;
36     PocetStlpcov = X.PocetStlpcov;
37     for (unsigned i = 0; i<PocetRiadkov; i++)
38         for (unsigned j = 0; j<PocetStlpcov; j++)
39             Matica[i][j] = X.Matica[i][j];
40 }
41 //-----
42 TMaticaObdlznikova::~TMaticaObdlznikova ()
43 {
44 }
45 //-----
46 TMaticaObdlznikova& TMaticaObdlznikova::operator=(const TMaticaObdlznikova& X)
47 {
48     PocetRiadkov = X.PocetRiadkov;
49     PocetStlpcov = X.PocetStlpcov;
50     for (unsigned i = 0; i<PocetRiadkov; i++)
51         for (unsigned j = 0; j<PocetStlpcov; j++)
52             Matica[i][j] = X.Matica[i][j];
53
54     return *this;
55 }
56 //-----
57 const TMaticaObdlznikova operator+(const TMaticaObdlznikova& LavaMatica,
58     const TMaticaObdlznikova& PravaMatica)
59 {
60     TMaticaObdlznikova VyslMatica;
61
62     VyslMatica.PocetRiadkov = LavaMatica.PocetRiadkov;
63     VyslMatica.PocetStlpcov = LavaMatica.PocetStlpcov;
64     for (unsigned i = 0; i<LavaMatica.PocetRiadkov; i++)
65         for (unsigned j = 0; j<LavaMatica.PocetStlpcov; j++)
66             VyslMatica.Matica[i][j] = LavaMatica.Matica[i][j]
67                 + PravaMatica.Matica[i][j];
68     return VyslMatica;
69 }
70 //-----
71 const TMaticaObdlznikova operator*(const TMaticaObdlznikova& LavaMatica,
72     const TMaticaObdlznikova& PravaMatica)
73 {

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```

74     TMaticaObdlznikova VyslMatica;
75     my_class xx;
76     unsigned i, j, k;
77     float Suma;
78
79     if (LavaMatica.PocetStlpcov != PravaMatica.PocetRiadkov) {
80         cout << "\n Matice sa nedaju nasobit!\n";
81         xx.my_getch();
82         exit(1);
83     }
84     VyslMatica.PocetRiadkov = LavaMatica.PocetRiadkov;
85     VyslMatica.PocetStlpcov = PravaMatica.PocetStlpcov;
86     for (i = 0; i<LavaMatica.PocetRiadkov; i++)
87         for (j = 0; j<PravaMatica.PocetStlpcov; j++) {
88             Suma = 0;
89             for (k = 0; k<LavaMatica.PocetStlpcov; k++)
90                 Suma += LavaMatica.Matica[i][k] * PravaMatica.Matica[k][j];
91             VyslMatica.Matica[i][j] = Suma;
92         }
93     return VyslMatica;
94 }
95 //-----
96 istream& operator>>(istream& is, TMaticaObdlznikova& X)
97 {
98     my_class xx;
99
100     is >> X.PocetRiadkov >> X.PocetStlpcov;
101     if (is.fail()) {
102         cout << "\n\n Vstupny subor sa nepodarilo otvorit.\n";
103         xx.my_getch();
104         exit(1);
105     }
106     for (unsigned i = 0; i<X.PocetRiadkov; i++)
107         for (unsigned j = 0; j<X.PocetStlpcov; j++)
108             is >> X.Matica[i][j];
109     return is;
110 }
111 //-----
112 ostream& operator<<(ostream& os, TMaticaObdlznikova& X)
113 {
114     os.setf(ios::fixed, ios::floatfield);
115     os.precision(2);
116     for (unsigned i = 0; i<X.PocetRiadkov; i++) {
117         os << "\n ";
118         for (unsigned j = 0; j<X.PocetStlpcov; j++)
119             os << setw(8) << X.Matica[i][j];
120     }
121     os << "\n";
122     return os;
123 }
124 //-----
125 void my_class::my_getch() const
126 {
127     #ifdef _WIN32
128         _getch();
129     #else
130         cout << endl;
131     #endif
132 }
133 //-----
134

```