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РАСЧЁТНО-ГРАФИЧЕСКАЯ РАБОТА

по дисциплине «Логическое программирование»

Методы поиска решений в пространствве состояний

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Задание

Разработать программу для реализации доски размером 4х4 на которой случайным образом расположены фишки с номерами от 1 до 15. Одна клетка остается пустой. Перемещая соседние фишки, упорядочите их расположение (слева – направо и сверху – вниз). Например, первый ряд – 1, 2, 3, 4, второй – 5, 6, 7, 8 и т.д. «Вытаскивать» фишки и перескакивать через фишку не разрешается.

Содержание

[1 Теоретическое описание 4](#_Toc8331442)

[1.1 Типичные операции 4](#_Toc8331443)

[1.2 Стратегия поиска в глубину 5](#_Toc8331444)

[1.3 Стратегия поиска в ширину 5](#_Toc8331445)

[1.4 Граф состояний для данной программы 6](#_Toc8331446)

[2 Описание программы 8](#_Toc8331447)

[3 Текст программы 13](#_Toc8331448)

[4 Программа и методика испытаний 75](#_Toc8331449)

[4.1 Объект испытаний 75](#_Toc8331450)

[4.2 Цель испытаний 75](#_Toc8331451)

[4.3 Технические средства, используемые во время испытаний 75](#_Toc8331452)

[4.4 Программные средства, используемые во время испытаний 75](#_Toc8331453)

[4.5 Качественные характеристики, подлежащие оценке 76](#_Toc8331454)

[Список использованных источников 78](#_Toc8331456)

[ПРИЛОЖЕНИЕ А 79](#_Toc8331457)

1. **Теоретическое описание**

Граф – множество вершин вместе с множеством ребер. Каждое ребро задается парой вершин. Если ребра направлены, то называются дугами. Дуги задаются упорядоченными парами. Такие графы называются направленными. Ребрам можно приписывать имена или метки, в зависимости от конкретного приложения.

Каждое ребро – отдельное предложение:

link (a, b).

link (b, c).

Весь граф – как один объект, состоящий из двух множеств: множество вершин и множество ребер (дуг). Каждое множество - список

G = graf ( [ a, b, c, d, e ], [ p( a, b ), p( b, c ),…,p( d, e ) ] ).

Для направленного графа:

G1= graf ( [ a | \_ ], [ d( a, b, 1 ), d( b, c, 4 ) …] )

* 1. Типичные операции

а) Найти путь между двумя заданными вершинами.

б) Найти подграф, обладающий некоторыми заданными свойствами.

Пространство состояний – некоторое множество уникальных состояний системы, некоторые из которых связаны между собой. Если два состояния связаны, это значит, что возможен переход системы из одного состояния в другое. Пространство состояний может быть представлено в виде графа, в котором узлами являются состояния системы, а рёбра – возможными переходами. Рёбра могут быть направленными. Это значит, что возможен переход системы только от первого связанного состояния ко второму, но не наоборот. Поиск в пространстве состояний – это поиск пути в этом графе от начального состояния к конечному.

* 1. Стратегия поиска в глубину

«В глубину» - это порядок, в котором рассматриваются альтернативы в пространстве состояний. Всегда, когда алгоритму поиска в глубину надлежит выбрать из нескольких вершин ту, в которую следует перейти для продолжения поиска, он предпочитает самую «глубокую» из них. Самая глубокая вершина – это вершина, расположенная дальше других от стартовой вершины (рисунок 1.1).

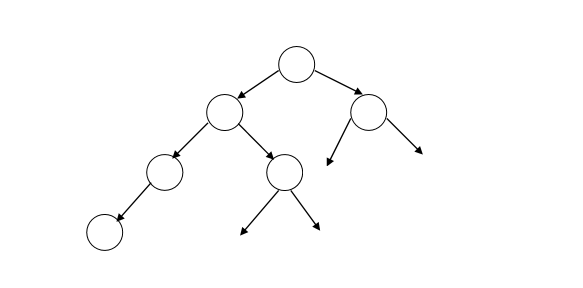


Рисунок 1.1 - Стратегия поиска в глубину

* 1. Стратегия поиска в ширину

В противоположность поиску в глубину стратегия поиска в ширину предусматривает переход в первую очередь к вершинам, ближайшим к стартовой вершине. В результате процесс поиска имеет тенденцию развиваться более в ширину, чем в глубину (рисунок 1.2). Поиск в ширину программируется не так легко, как поиск в глубину. Причина состоит в том, что нужно сохранить все множество альтернативных вершин-кандидатов, а не только одну вершину, как при поиске в глубину.

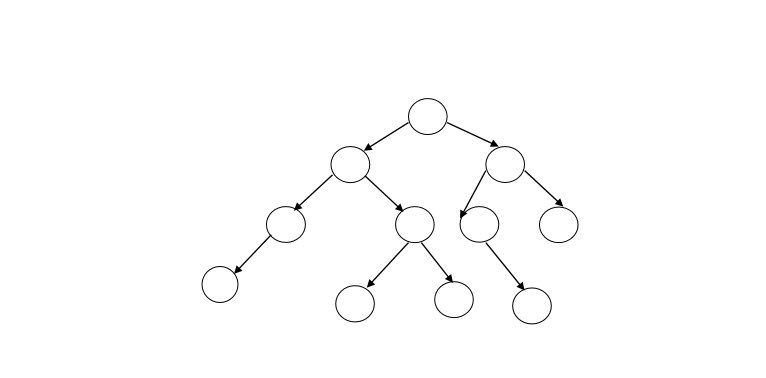
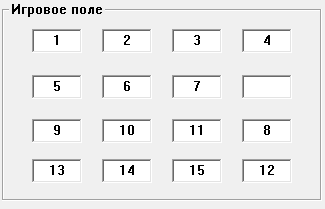


Рисунок 1.2 - Стратегия поиска в ширину

* 1. Граф состояний для данной программы

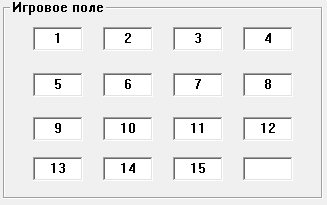
Граф пространства состояний представляет собой множество вершин и множество дуг. Вершиной графа пространства состояний является комбинация 16 элементов, из которых 15 элементов числа (от 1 до 15 без повторений), а один элемент пустое значение. Стартовой вершиной графа является шестнадцать элементов со значениями, заданными от пользователя. Финальной вершиной графой является комбинация 16 элементов, из которых первые 15 элементов это отсортированные в порядке возрастания числа от 1 до 15, а последний элемент пустое значение. Пример графа на рисунке 1.3. Рёбрами графа является условие перехода из состояния в состояние. Условия перехода между рёбрами графа зависят от текущего этапа сортировки чисел, от расположения пустого значения на игровом поле, от значения чисел, расположенных в непосредственной близости к пустому значению. Запрещенной ситуацией, на которую осуществляется проверка, является перемещение пустой клетки «в стену». Используется эврестический метод решения задачи - алгоритм А\*, стратегия поиска в ширину.





Стартовая вершина

графа



Финальная вершина

графа

Рисунок 1.3 - Граф пространства состояний

1. Описание программы

Пространством состояний в данной задаче является совокупность всевозможных комбинаций значений клеток на столе размером 4x4.

В данной программе используется метод обхода графа в ширину. При каждом запросе компьютера о «верном ходе» происходит соотнесение текущего состояния стола с базой данных Prolog. Если в база данных предполагает такое состояние стола, то происходит переход на другую вершину графа. Иначе состояние графа не меняется. Данный алгоритм является довольно продуктивным, но из-за слишком большого количество состояний игрового стола, требуется реализовывать множество алгоритмов перехода между вершинами графа.

После запуска программы игрок должен заполнить игровой стол значениями от 1 до 15, числа не должны повторяться, одна клетка останется пустая. Программа предусматривает два режима:

1 игрок самостоятельно перемещает пустую клетку;

2 за игрока играет компьютер.

В первом режиме игрок перемещает пустую клетку с помощью кнопок направления «влево», «вправо», «вниз», «вверх». Во втором режиме, когда за игрока играет компьютер, игрок должен нажать кнопку «сделать верный ход».

Условия победы: числа отсортированы от 1 до 15, последняя клетка останется пустой. Для решения поставленной задачи в программе определены следующие предикаты:

сheckWin(strList) – Проверка игровой ситуации на победу

1 - strList – Строковый список.

сheckWin(strList,integer) – Проверка игровой ситуации на победу

1 - strList – Строковый список.

2 - integer – Временное целочисленное значение для хранения номера элемента.

strList\_to\_string(strList, string) – Перевод строкового списка в строку

1 - strList – Строковый список.

2 - string – Результирующая строка

get\_strList\_and\_checking\_for\_error(Window, strList) – Получить значения с игрового стола в строковый список и проверить его на наличие ошибок

1 - Window – Указатель на окно.

2 - strList – Строковый список, содержащий значения игрового стола

setStateTableFromStrList(Window, strList) – Установить значения игрового стола из строкового списка

1 - Window – Указатель на окно.

2 - strList – Строковый список, содержащий значения игрового стола

add\_to\_strList(strList,string,strList) – Добавить в строковый список значение

1 - strList – Входящий строковый список.

2 - string– Строка, которую нужно добавить.

3 - strList – Результирующий строковый список.

getVoidNumber(strList,integer) – Получить индекс пустой клетки

1 - strList – Входящий строковый список.

2 - integer – Целочисленное значение для хранения индекса пустой клетки.

getValueOfNumber(strList,integer,string) – Получить значение клетки по индексу

1 - strList – Входящий строковый список.

2 - integer – Индекс клетки для поиска.

3 - string – Полученное значение клетки.

getNumberOfValue(strList,integer,string) – Получить индекс клетки по значению

1 - strList – Входящий строковый список.

2 - integer – Значение клетки для поиска.

3 - string – Индекс клетки.

setValueByNumber(strList,integer,string,strList) – Установить значение клетки по индексу

1 - strList – Входящий строковый список.

2 - integer – Значение клетки.

3 - string – Индекс клетки.

4 - strList – Результирующий список.

getCurrentNotSortedСell(strList,integer) – Получить индекс текущей не отсортированной клетки

1 - strList – Входящий строковый список.

2 - integer – Индекс текущей не отсортированной клетки.

getCurrentNotSortedСell(strList,integer,integer) – Получить индекс текущей не отсортированной клетки

1 - strList – Входящий строковый список.

2 - integer – Индекс текущей не отсортированной клетки.

3 - integer – Временное целочисленное значение для хранения текущей клетки.

getSortingLine(strList,integer,integer) – Получить индекс текущей сортируемой строки

1 - strList – Входящий строковый список.

2 - integer – Индекс текущей сортируемой строки.

3 - integer – Временное целочисленное значение для хранения текущей строки.

trueMove(strList,strList,integer,integer,integer,Window,integer) – Сделать «правильный» ход

1 - strList – Входящий строковый список.

2 - strList – Результирующий строковый список.

3 - integer – Текущая не отсортированная клетка.

4 - integer – Текущее значение для сортировки.

5 - integer – Текущая не отсортированная строка.

6 - Window – Указатель на окно.

7 - integer – Номер пустой клетки.

moveLeft(strList,strList,strList) – Переместить пустую клетку влево

1 - strList – Входящий строковый список.

2 - strList – Результирующий строковый список.

3 - strList – Временный целочисленный список.

moveRight(strList,strList,strList) – Переместить пустую клетку вправо

1 - strList – Входящий строковый список.

2 - strList – Результирующий строковый список.

3 - strList – Временный целочисленный список.

moveUp(strList,strList) – Переместить пустую клетку вверх

1 - strList – Входящий строковый список.

2 - strList – Результирующий строковый список.

moveDown(strList,strList) – Переместить пустую клетку вниз

1 - strList – Входящий строковый список.

2 - strList – Результирующий строковый список.

checkValueToCell(strList,integer, string) – Проверка значения в клетке

1 - strList – Входящий строковый список.

2 - integer – Номер клетки.

3 - string – Строковое значение в клетки.

checkVertical(integer, integer) – Проверка чисел на вертикальность относительно друг друга

1 - integer – Первое целочисленное число.

2 - integer – Второе целочисленное число.

checkHorizontal(integer, integer) – Проверка чисел на горизонтальность относительно друг друга

1 - integer – Первое целочисленное число.

2 - integer – Второе целочисленное число.

1. Текст программы

Текст программы приведен в листингах 1,2.

Листинг 1 – Главное окно

|  |
| --- |
| %BEGIN\_DLG game  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Creation and event handling for dialog: game  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  domains  strList = string\*  constants  %BEGIN game, CreateParms, 19:35:22-29.4.2019, Code automatically updated!  dlg\_game\_ResID = idd\_game  dlg\_game\_DlgType = wd\_Modal  dlg\_game\_Help = idh\_contents  %END game, CreateParms  predicates  dlg\_game\_eh : EHANDLER  dlg\_game\_handle\_answer(INTEGER EndButton,DIALOG\_VAL\_LIST)  dlg\_game\_update(DIALOG\_VAL\_LIST)    сheckWin(strList)  сheckWin(strList,integer)    strList\_to\_string(strList, string)    get\_strList\_and\_checking\_for\_error(Window, strList)  setStateTableFromStrList(Window, strList)    add\_to\_strList(strList,string,strList)    getVoidNumber(strList,integer)  getValueOfNumber(strList,integer,string)  getNumberOfValue(strList,integer,string)  setValueByNumber(strList,integer,string,strList)    getCurrentNotSortedСell(strList,integer)  getCurrentNotSortedСell(strList,integer,integer)    getSortingLine(strList,integer,integer)    trueMove(strList,strList,integer,integer,integer,Window,integer)  moveLeft(strList,strList,strList)  moveRight(strList,strList,strList)  moveUp(strList,strList)  moveDown(strList,strList)    checkValueToCell(strList,integer, string)  checkVertical(integer, integer)  checkHorizontal(integer, integer)    clauses  checkValueToCell([Head|\_],Cell,Head):- Cell = 1,!.  checkValueToCell([\_|Tail],Cell,Value):- Cell > 1, CellTemp = Cell - 1, checkValueToCell(Tail,CellTemp,Value), !.  сheckWin(StrList):-сheckWin(StrList,1),!.  сheckWin([Head|[]],Number):-Number=16, Head = "", dlg\_Note("Поздравляем","Вы победили!"),!.  сheckWin([Head|Tail],Number):-str\_int(NumberStr,Number),Head = NumberStr, NumberTemp = Number + 1, сheckWin(Tail,NumberTemp), !.  сheckWin(\_,\_).    getVoidNumber([Head|Tail], Result):- Head <> "", getVoidNumber(Tail, TempResult), Result = TempResult + 1, !.  getVoidNumber(\_, TempResult):- TempResult = 1.  getValueOfNumber([Head|\_],Index,Head):- Index = 1,!.  getValueOfNumber([\_|Tail],Index,Result):- IndexTemp = Index - 1, getValueOfNumber(Tail,IndexTemp,Result),!.    getNumberOfValue([Head|\_],Index,Head):- Index = 1,!.  getNumberOfValue([\_|Tail],Index,Value):- getNumberOfValue(Tail,IndexTemp,Value),Index = IndexTemp + 1,!.  getNumberOfValue([Head|\_],Index, \_):- Head = "", Index = 1,!.    getCurrentNotSortedСell(StrList,Result):-getCurrentNotSortedСell(StrList,1,Result),!.  getCurrentNotSortedСell([Head|\_],Index,Index):- str\_int(StrIndex,Index), StrIndex <> Head,!.  getCurrentNotSortedСell([\_|Tail],Index,Result):- IndexTemp = Index + 1, getCurrentNotSortedСell(Tail,IndexTemp,Result),!.    getSortingLine([Head|Tail],Index,Result):- IndexTemp = Index + 1, str\_int(StrIndex,IndexTemp), StrIndex = Head, getSortingLine(Tail,IndexTemp,Result),!.  getSortingLine(\_,Index,Res):- Res = Index div 4 + 1,!.    setValueByNumber([Head|Z], Counter, Str,[Head|Y]):- Counter <> 1, CounterTemp = Counter - 1, setValueByNumber(Z,CounterTemp,Str,Y),!.  setValueByNumber([\_|Z], \_, Str,[Str|Z]).    moveLeft([Head,X|Z],[X,Head|Z], StrList):- X = "", getNumberOfValue(StrList,Number,Head), Number <> 4, Number <> 8, Number <> 12, !.  moveLeft([Head|Z],[Head|N],StrList):- moveLeft(Z,N,StrList), !.  moveLeft(StrList,StrList,\_).    moveRight([Head,X|Z],[X,Head|Z], StrList):- Head = "", getNumberOfValue(StrList,Number,X), Number <> 5, Number <> 9, Number <> 13, !.  moveRight([Head|Z],[Head|N], StrList):- moveRight(Z,N,StrList), !.  moveRight(StrList,StrList, \_).    moveUp(StrList,StrList\_Res):-  getVoidNumber(StrList, VoidNumber),  ValueNumberTemp = VoidNumber - 4, getValueOfNumber(StrList, ValueNumberTemp, Value),  setValueByNumber(StrList,VoidNumber,Value,StrList\_Res1),  setValueByNumber(StrList\_Res1,ValueNumberTemp,"",StrList\_Res),!.  moveUp(StrList,StrList).    moveDown(StrList,StrList\_Res):-  getVoidNumber(StrList, VoidNumber),  ValueNumberTemp = VoidNumber + 4, getValueOfNumber(StrList, ValueNumberTemp, Value),  setValueByNumber(StrList,VoidNumber,Value,StrList\_Res1),  setValueByNumber(StrList\_Res1,ValueNumberTemp,"",StrList\_Res),!.  moveDown(StrList,StrList).    strList\_to\_string([], "").  strList\_to\_string([H | T], S) :- T = [], strList\_to\_string(T, S1), !, concat(H, S1, S).  strList\_to\_string([H | T], S) :- H = "", strList\_to\_string(T, S1), !, concat("\_", ", ", H\_with\_space), concat(H\_with\_space, S1, S).  strList\_to\_string([H | T], S) :- strList\_to\_string(T, S1), !, concat(H, ", ", H\_with\_space), concat(H\_with\_space, S1, S).  add\_to\_strList([],V,[V]):- str\_int(V, V\_int), !, V\_int < 16, V\_int > 0.  add\_to\_strList([],V,[V]):-!, V = "".  add\_to\_strList([H|T],V,[H|T1]):- H <> V, add\_to\_strList(T,V,T1).    setStateTableFromStrList(Win, StrList):-  Value1\_Handle = win\_GetCtlHandle(Win,idc\_value1), getValueOfNumber(StrList, 1, Value1), win\_SetText(Value1\_Handle, Value1),  Value2\_Handle = win\_GetCtlHandle(Win,idc\_value2), getValueOfNumber(StrList, 2, Value2), win\_SetText(Value2\_Handle, Value2),  Value3\_Handle = win\_GetCtlHandle(Win,idc\_value3), getValueOfNumber(StrList, 3, Value3), win\_SetText(Value3\_Handle, Value3),  Value4\_Handle = win\_GetCtlHandle(Win,idc\_value4), getValueOfNumber(StrList, 4, Value4), win\_SetText(Value4\_Handle, Value4),  Value5\_Handle = win\_GetCtlHandle(Win,idc\_value5), getValueOfNumber(StrList, 5, Value5), win\_SetText(Value5\_Handle, Value5),  Value6\_Handle = win\_GetCtlHandle(Win,idc\_value6), getValueOfNumber(StrList, 6, Value6), win\_SetText(Value6\_Handle, Value6),  Value7\_Handle = win\_GetCtlHandle(Win,idc\_value7), getValueOfNumber(StrList, 7, Value7), win\_SetText(Value7\_Handle, Value7),  Value8\_Handle = win\_GetCtlHandle(Win,idc\_value8), getValueOfNumber(StrList, 8, Value8), win\_SetText(Value8\_Handle, Value8),  Value9\_Handle = win\_GetCtlHandle(Win,idc\_value9), getValueOfNumber(StrList, 9, Value9), win\_SetText(Value9\_Handle, Value9),  Value10\_Handle = win\_GetCtlHandle(Win,idc\_value10), getValueOfNumber(StrList, 10, Value10), win\_SetText(Value10\_Handle, Value10),  Value11\_Handle = win\_GetCtlHandle(Win,idc\_value11), getValueOfNumber(StrList, 11, Value11), win\_SetText(Value11\_Handle, Value11),  Value12\_Handle = win\_GetCtlHandle(Win,idc\_value12), getValueOfNumber(StrList, 12, Value12), win\_SetText(Value12\_Handle, Value12),  Value13\_Handle = win\_GetCtlHandle(Win,idc\_value13), getValueOfNumber(StrList, 13, Value13), win\_SetText(Value13\_Handle, Value13),  Value14\_Handle = win\_GetCtlHandle(Win,idc\_value14), getValueOfNumber(StrList, 14, Value14), win\_SetText(Value14\_Handle, Value14),  Value15\_Handle = win\_GetCtlHandle(Win,idc\_value15), getValueOfNumber(StrList, 15, Value15), win\_SetText(Value15\_Handle, Value15),  Value16\_Handle = win\_GetCtlHandle(Win,idc\_value16), getValueOfNumber(StrList, 16, Value16), win\_SetText(Value16\_Handle, Value16).    get\_strList\_and\_checking\_for\_error(Win, StrList\_Res):-  Value1\_Handle = win\_GetCtlHandle(Win,idc\_value1), Value1 = win\_GetText(Value1\_Handle), add\_to\_strList(\_, Value1, StrList\_Res1),  Value2\_Handle = win\_GetCtlHandle(Win,idc\_value2), Value2 = win\_GetText(Value2\_Handle), add\_to\_strList(StrList\_Res1, Value2, StrList\_Res2),  Value3\_Handle = win\_GetCtlHandle(Win,idc\_value3), Value3 = win\_GetText(Value3\_Handle), add\_to\_strList(StrList\_Res2, Value3, StrList\_Res3),  Value4\_Handle = win\_GetCtlHandle(Win,idc\_value4), Value4 = win\_GetText(Value4\_Handle), add\_to\_strList(StrList\_Res3, Value4, StrList\_Res4),  Value5\_Handle = win\_GetCtlHandle(Win,idc\_value5), Value5 = win\_GetText(Value5\_Handle), add\_to\_strList(StrList\_Res4, Value5, StrList\_Res5),  Value6\_Handle = win\_GetCtlHandle(Win,idc\_value6), Value6 = win\_GetText(Value6\_Handle), add\_to\_strList(StrList\_Res5, Value6, StrList\_Res6),  Value7\_Handle = win\_GetCtlHandle(Win,idc\_value7), Value7 = win\_GetText(Value7\_Handle), add\_to\_strList(StrList\_Res6, Value7, StrList\_Res7),  Value8\_Handle = win\_GetCtlHandle(Win,idc\_value8), Value8 = win\_GetText(Value8\_Handle), add\_to\_strList(StrList\_Res7, Value8, StrList\_Res8),  Value9\_Handle = win\_GetCtlHandle(Win,idc\_value9), Value9 = win\_GetText(Value9\_Handle), add\_to\_strList(StrList\_Res8, Value9, StrList\_Res9),  Value10\_Handle = win\_GetCtlHandle(Win,idc\_value10), Value10 = win\_GetText(Value10\_Handle), add\_to\_strList(StrList\_Res9, Value10, StrList\_Res10),  Value11\_Handle = win\_GetCtlHandle(Win,idc\_value11), Value11 = win\_GetText(Value11\_Handle), add\_to\_strList(StrList\_Res10, Value11, StrList\_Res11),  Value12\_Handle = win\_GetCtlHandle(Win,idc\_value12), Value12 = win\_GetText(Value12\_Handle), add\_to\_strList(StrList\_Res11, Value12, StrList\_Res12),  Value13\_Handle = win\_GetCtlHandle(Win,idc\_value13), Value13 = win\_GetText(Value13\_Handle), add\_to\_strList(StrList\_Res12, Value13, StrList\_Res13),  Value14\_Handle = win\_GetCtlHandle(Win,idc\_value14), Value14 = win\_GetText(Value14\_Handle), add\_to\_strList(StrList\_Res13, Value14, StrList\_Res14),  Value15\_Handle = win\_GetCtlHandle(Win,idc\_value15), Value15 = win\_GetText(Value15\_Handle), add\_to\_strList(StrList\_Res14, Value15, StrList\_Res15),  Value16\_Handle = win\_GetCtlHandle(Win,idc\_value16), Value16 = win\_GetText(Value16\_Handle), add\_to\_strList(StrList\_Res15, Value16, StrList\_Res).    dlg\_game\_Create(Parent):-  %MARK game, new variables  dialog\_CreateModal(Parent,dlg\_game\_ResID,"",  [  %BEGIN game, ControlList, 19:35:22-29.4.2019, Code automatically updated!    df(idc\_value1,editstr("",[]),nopr),  df(idc\_value2,editstr("",[]),nopr),  df(idc\_value3,editstr("",[]),nopr),  df(idc\_value4,editstr("",[]),nopr),  df(idc\_value5,editstr("",[]),nopr),  df(idc\_value6,editstr("",[]),nopr),  df(idc\_value7,editstr("",[]),nopr),  df(idc\_value8,editstr("",[]),nopr),  df(idc\_value9,editstr("",[]),nopr),  df(idc\_value10,editstr("",[]),nopr),  df(idc\_value11,editstr("",[]),nopr),  df(idc\_value12,editstr("",[]),nopr),  df(idc\_value13,editstr("",[]),nopr),  df(idc\_value14,editstr("",[]),nopr),  df(idc\_value15,editstr("",[]),nopr),  df(idc\_value16,editstr("",[]),nopr),  df(idc\_debug,listbox([],[0]),nopr)  %END game, ControlList  ],  dlg\_game\_eh,0,VALLIST,ANSWER),  dlg\_game\_handle\_answer(ANSWER,VALLIST).  dlg\_game\_handle\_answer(idc\_ok,VALLIST):-!,  dlg\_game\_update(VALLIST).  dlg\_game\_handle\_answer(idc\_cancel,\_):-!. % Handle Esc and Cancel here  dlg\_game\_handle\_answer(\_,\_):-  errorexit().  dlg\_game\_update(\_VALLIST):-  %BEGIN game, Update controls, 19:35:22-29.4.2019, Code automatically updated!  \_IDC\_VALUE1\_VALUE = dialog\_VLGetstr(idc\_value1,\_VALLIST),  \_IDC\_VALUE2\_VALUE = dialog\_VLGetstr(idc\_value2,\_VALLIST),  \_IDC\_VALUE3\_VALUE = dialog\_VLGetstr(idc\_value3,\_VALLIST),  \_IDC\_VALUE4\_VALUE = dialog\_VLGetstr(idc\_value4,\_VALLIST),  \_IDC\_VALUE8\_VALUE = dialog\_VLGetstr(idc\_value8,\_VALLIST),  \_IDC\_VALUE7\_VALUE = dialog\_VLGetstr(idc\_value7,\_VALLIST),  \_IDC\_VALUE6\_VALUE = dialog\_VLGetstr(idc\_value6,\_VALLIST),  \_IDC\_VALUE5\_VALUE = dialog\_VLGetstr(idc\_value5,\_VALLIST),  \_IDC\_VALUE13\_VALUE = dialog\_VLGetstr(idc\_value12,\_VALLIST),  \_IDC\_VALUE12\_VALUE = dialog\_VLGetstr(idc\_value11,\_VALLIST),  \_IDC\_VALUE10\_VALUE = dialog\_VLGetstr(idc\_value10,\_VALLIST),  \_IDC\_VALUE9\_VALUE = dialog\_VLGetstr(idc\_value9,\_VALLIST),  \_IDC\_VALUE18\_VALUE = dialog\_VLGetstr(idc\_value16,\_VALLIST),  \_IDC\_VALUE16\_VALUE = dialog\_VLGetstr(idc\_value15,\_VALLIST),  \_IDC\_VALUE15\_VALUE = dialog\_VLGetstr(idc\_value14,\_VALLIST),  \_IDC\_VALUE14\_VALUE = dialog\_VLGetstr(idc\_value13,\_VALLIST),  dialog\_VLGetListBox(idc\_debug,\_VALLIST,\_IDC\_DEBUG\_ITEMLIST,\_IDC\_DEBUG\_SELECT),  %END game, Update controls  true.  %MARK game, new events  checkVertical(Cell\_1, Cell\_2):- Cell\_1 mod 4 = Cell\_2 mod 4.  checkHorizontal(Cell\_1, Cell\_2):- (Cell\_1 - 1) div 4 = (Cell\_2 - 1) div 4.  %BEGIN game, trueMove  %Circle  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"14"), checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"), checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Circle1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 12,  checkValueToCell(StrList,10,"14"), checkValueToCell(StrList,11,"10"),  checkValueToCell(StrList,14,"15"), checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Circle2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 16,  checkValueToCell(StrList,10,"14"), checkValueToCell(StrList,11,"10"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"), checkValueToCell(StrList,15,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Circle3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"14"), checkValueToCell(StrList,11,"10"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"), checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Circle4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 14,  checkValueToCell(StrList,10,"14"), checkValueToCell(StrList,11,"10"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,15,"15"), checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Circle5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 10,  checkValueToCell(StrList,11,"10"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Circle6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"10"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Circle7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 12,  checkValueToCell(StrList,10,"10"), checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Circle8"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 10,  checkValueToCell(StrList,11,"11"), checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"), checkValueToCell(StrList,15,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"11"), checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"), checkValueToCell(StrList,15,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"11"), checkValueToCell(StrList,11,"12"),  checkValueToCell(StrList,14,"10"), checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение13"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 16,  checkValueToCell(StrList,10,"11"), checkValueToCell(StrList,11,"12"),  checkValueToCell(StrList,14,"10"), checkValueToCell(StrList,15,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение14"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  not(checkVertical(VoidCell, 10)),  checkValueToCell(StrList,14,"10"), checkValueToCell(StrList,15,"14"), checkValueToCell(StrList,16,"15"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 10,  checkValueToCell(StrList,11,"10"), checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"12"), checkValueToCell(StrList,15,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение21"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"10"), checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"12"), checkValueToCell(StrList,15,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение22"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"10"), checkValueToCell(StrList,11,"11"),  checkValueToCell(StrList,14,"12"), checkValueToCell(StrList,16,"14"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершени23"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 14,  checkValueToCell(StrList,10,"10"), checkValueToCell(StrList,11,"11"),  checkValueToCell(StrList,15,"12"), checkValueToCell(StrList,16,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение24"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 10,  checkValueToCell(StrList,11,"12"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"), checkValueToCell(StrList,15,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение31"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"12"), checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"), checkValueToCell(StrList,15,"10"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение32"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершени33"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 16,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение34"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 12,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение35"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение36"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 10,  checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение37"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 14,  VoidCell = 14,  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение38"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"12"), checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,16,"11"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение39"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  VoidCell = 10,  checkValueToCell(StrList,11,"15"), checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"), checkValueToCell(StrList,15,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение41"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 11,  checkValueToCell(StrList,10,"15"), checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"), checkValueToCell(StrList,15,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение42"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 15,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"), checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение43"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  VoidCell = 14,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,15,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение44"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  VoidCell = 10,  checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение45"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение51"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"10"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение52"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение53"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,""),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение54"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение55"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение56"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение57"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение58"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"11"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение59"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение510"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение511"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение512"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение513"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение514"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение515"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение516"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение71"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"10"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение72"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"10"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение73"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"10"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение74"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  VoidCell = 10,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение75"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  VoidCell = 10,  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение76"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение81"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение82"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение91"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение92"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение93"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение94"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение95"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение96"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение97"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение98"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение99"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение910"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение911"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение912"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"10"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение913"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"10"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение914"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"10"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение915"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение916"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"10"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"10"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,""),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_8"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_9"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_10"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_11"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение10\_12"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"11"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_8"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_9"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_10"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение11\_-"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_8"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_9"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_9.2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_10"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_11"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_12"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"15"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение12\_13"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение13\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение13\_1"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"15"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение14\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"15"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение14\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"15"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение14\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение14\_4"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_8"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"11"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_9"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_10"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_11"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"11"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_12"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение15\_13"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"11"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение16\_6"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"14"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение17\_1"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение18\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"15"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение18\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение18\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение18\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение18\_5"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"15"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение19\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"15"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение19\_2"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"12"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,""),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение20\_6"),  !.  %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"15"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"14"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение21\_6"),  !.    %2x3  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"12"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,""),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"14"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"14"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"2x3 завершение22\_6"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"11"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение61"),  !.    trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"12"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение61"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"14"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"15"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"12"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"11"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"14"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"10"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"12"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"15"),checkValueToCell(StrList,15,"10"),checkValueToCell(StrList,16,"12"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,""),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,"15"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"14"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,""),checkValueToCell(StrList,11,"14"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,"12"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"12"),checkValueToCell(StrList,15,"14"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,""),  dlg\_Note("При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,""),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"11"),checkValueToCell(StrList,16,"15"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"11"),checkValueToCell(StrList,11,"10"),checkValueToCell(StrList,12,""),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,"12"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"12"),checkValueToCell(StrList,11,"11"),checkValueToCell(StrList,12,"10"),  checkValueToCell(StrList,14,"14"),checkValueToCell(StrList,15,"15"),checkValueToCell(StrList,16,""),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.  trueMove(StrList,StrList,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine > 2,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,13,"13"),  checkValueToCell(StrList,10,"10"),checkValueToCell(StrList,11,"15"),checkValueToCell(StrList,12,"14"),  checkValueToCell(StrList,14,"11"),checkValueToCell(StrList,15,""),checkValueToCell(StrList,16,"12"),  dlg\_Note("Упс","При текущей ситуации стола победных ходов нет!"),  lbox\_Add(Lbox\_Handle,"2x3 завершение62"),  !.    %9 и 15  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 9,  CellSortingValue = 10,  VoidCell = 13,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка финал1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 13,  CellSortingValue = 10,  VoidCell = 9,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка финал2"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = VoidCell+ 1,  CellSortingValue = VoidCell + 2,  VoidCell mod 4<>0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = VoidCell - 1,  CellSortingValue = VoidCell + 1,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = VoidCell - 2,  CellSortingValue = VoidCell - 1,  VoidCell < 13,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,11,"13"),  VoidCell = 14,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка вверх"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,11,"13"),  VoidCell mod 4 = 1,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка право2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  CurrentNotSortedСell=VoidCell - 4,  VoidCell > 12,  checkValueToCell(StrList,9,"9"),  not(checkValueToCell(StrList,13,"13")),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа4 лев"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = CellSortingValue - 1,  VoidCell div 4 + 1 > 3,  VoidCell - 1 <> 12,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 = 10,  CellSortingValue = 11,  VoidCell - 1 = 12,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 вставка4"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  CellSortingValue = 12,  Сell13 = VoidCell - 4,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа?1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  CellSortingValue = 12,  Сell13 <> 13,  Сell13 = VoidCell - 5,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа?2"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  Сell13 <> 11,  CellSortingValue = 12,  Сell13 = VoidCell +1, C = Сell13 + 1, checkHorizontal(C,VoidCell),  VoidCell + 4 < 17,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа\_справа?2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  CellSortingValue = 12,  Сell13 = VoidCell - 3,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  CellSortingValue = 12,  Сell13 = VoidCell - 4,  VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  CellSortingValue = 12,  Сell13 <> 13,  Сell13 = VoidCell - 5,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа?4"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  Сell13 <> 10,  CellSortingValue=12,  not(checkHorizontal(VoidCell,Сell13)),  VoidCell mod 4 <> CellSortingValue mod 4,  CellSortingValue + 1 > Сell13,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 up"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  CellSortingValue=12,  checkHorizontal(VoidCell,CellSortingValue),  CellSortingValue + 1 > Сell13,  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 left"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  VoidCell = 12,  checkValueToCell(StrList,11,"9"),  checkHorizontal(VoidCell,CellSortingValue),  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 left2"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  getNumberOfValue(StrList,СellNine,"9"),  checkHorizontal(VoidCell,СellNine),  not(checkVertical(Сell13,СellNine)),  СellNine < VoidCell,  moveLeft(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,9,"13"),  checkValueToCell(StrList,13,"9"),  VoidCell = 14,  moveLeft(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_1\_+"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,15,"13"),  VoidCell = 16,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13\_3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,16,"9"),  checkValueToCell(StrList,15,"13"),  VoidCell = 12,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_4"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,16,"9"),  checkValueToCell(StrList,15,"13"),  VoidCell = 11,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13\_5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,16,"9"),  checkValueToCell(StrList,11,"13"),  VoidCell = 15,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_6"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,16,"9"),  checkValueToCell(StrList,11,"13"),  VoidCell = 14,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13\_7"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,16,"9"),  checkValueToCell(StrList,11,"13"),  VoidCell = 10,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_8"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  getNumberOfValue(StrList,СellNine,"9"),  СellNine > Сell13,  checkHorizontal(Сell13,СellNine),  not(checkVertical(VoidCell,Сell13)),  not(checkVertical(VoidCell,СellNine)),  VoidCell div 4 + 1 > 3,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13\_11"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,10,"13"),  VoidCell div 4 + 1 > 3,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13\_22"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  getNumberOfValue(StrList,Сell13,"13"),  Сell13 <> 13,  getNumberOfValue(StrList,СellNine,"9"),  9<>СellNine,  checkHorizontal(VoidCell,СellNine),  СellNine mod 4 <> 0,  СellNine > VoidCell + 1,  moveRight(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"9 and 13"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  CellSortingValue = VoidCell +1, C = CellSortingValue+1, checkHorizontal(C,VoidCell),  CellSortingValue div 4 + 1 < 4,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  CellSortingValue=VoidCell - 3,  VoidCell mod 4 <> 3,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  VoidCell = 13,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,10,"13"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа3.2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  CellSortingValue=VoidCell - 4,  VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  CellSortingValue=VoidCell - 5,  VoidCell div 4 + 1 > 3,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  VoidCell = 14,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,10,"13"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справа4.2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,9,"9"),  checkValueToCell(StrList,10,""),  not(checkValueToCell(StrList,13,"13")),  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота справаL"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  VoidCell = 11,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,16,"13"),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 поднятие 13\_1\_|\_v"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  VoidCell = 15,  checkValueToCell(StrList,12,"9"),  checkValueToCell(StrList,16,"13"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 поднятие 13\_1\_n"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  getNumberOfValue(StrList,Res13,"13"),  not(checkVertical(VoidCell,Res13)),  VoidCell - 1 <> Res13,  VoidCell mod 4 > Res13 mod 4,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 поднятие 13\_1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 3,  checkValueToCell(StrList,12,"9"),  getNumberOfValue(StrList,Res13,"13"),  checkVertical(VoidCell,Res13),  VoidCell div 4 + 1 = 3,  VoidCell - 1 <> Res13,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 поднятие 13\_2"),  !.  % Установка пустоты сверху при поле 2x4  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  VoidCell div 4 + 1 > 3,  VoidCell <> 12,  SortLine = 3, C = VoidCell + 1, checkValueToCell(StrList,C,"9"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_слева1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  VoidCell div 4 + 1 > 3,  SortLine = 3, C = VoidCell + 1, checkValueToCell(StrList,C,"13"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_слева1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  SortLine = 3, C = VoidCell + 5, checkValueToCell(StrList,C,"9"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_слева2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  CellSortingValue <> VoidCell + 4,  SortLine = 3, C = VoidCell + 5, checkValueToCell(StrList,C,"13"),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_слева2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")),  VoidCell div 4 + 1 > 3,  SortLine = 3, C = VoidCell - 1, checkValueToCell(StrList,C,"9"),  VoidCell > 12,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")),  VoidCell div 4 + 1 > 3,  VoidCell > 12,  SortLine = 3, C = VoidCell - 1, checkValueToCell(StrList,C,"13"),  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  SortLine = 3, C = VoidCell + 3, checkValueToCell(StrList,C,"9"),  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkValueToCell(StrList,9,"9")), not(checkValueToCell(StrList,13,"13")),  SortLine = 3, C = VoidCell + 3, checkValueToCell(StrList,C,"13"),  VoidCell + 4 <> CellSortingValue,  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"9 and 13 пустота сверху\_справа2"),  !.    %final move  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = VoidCell, CellSortingValue=VoidCell + 1, VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"final move"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = VoidCell, CellSortingValue=VoidCell - 1,  moveLeft(StrList,StrList\_Res, StrList),  lbox\_Add(Lbox\_Handle,"final move"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = VoidCell, CellSortingValue= VoidCell + 4, CurrentNotSortedСellOne = CurrentNotSortedСell + 1, CurrentNotSortedСellTwo = CurrentNotSortedСell + 2,  getValueOfNumber(StrList,CurrentNotSortedСellOne,StrResOne), str\_int(StrResOne,ResOne), CurrentNotSortedСellOne <> ResOne,  getValueOfNumber(StrList,CurrentNotSortedСellTwo,StrResTwo), str\_int(StrResTwo,ResTwo), CurrentNotSortedСellTwo <> ResTwo,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"final move"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = VoidCell, CellSortingValue=VoidCell - 4,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"final move"),  !.  %line completion  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell, VoidCell < 4,  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,2,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 3,  getValueOfNumber(StrList,4,StrRes7), str\_int(StrRes7,Res7), Res7 = 4,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение влево1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell < 4,  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,3,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 3,  getValueOfNumber(StrList,4,StrRes7), str\_int(StrRes7,Res7), Res7 = 4,  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение влево2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell, VoidCell = 1,  getValueOfNumber(StrList,2,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,3,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 3,  getValueOfNumber(StrList,4,StrRes7), str\_int(StrRes7,Res7), Res7 = 4,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Смещение влево3"),  !.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  getValueOfNumber(StrList,2,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,3,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 3,  getValueOfNumber(StrList,8,StrRes7), str\_int(StrRes7,Res7), Res7 = 4,  VoidCell < 4,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,3,StrRes3), str\_int(StrRes3,Res3), Res3 = 3,  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  VoidCell < 4,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkVertical(VoidCell,8)),  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,2,StrRes3), str\_int(StrRes3,Res3), Res3 = 3,  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 4,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  checkVertical(VoidCell,8),  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,2,StrRes3), str\_int(StrRes3,Res3), Res3 = 3,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 4,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  checkVertical(VoidCell,8),  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,2,StrRes3), str\_int(StrRes3,Res3), Res3 = 3,  getValueOfNumber(StrList,4,StrRes8), str\_int(StrRes8,Res8), Res8 = 4,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  getValueOfNumber(StrList,5,StrRes5), str\_int(StrRes5,Res5), Res5 = 1,  getValueOfNumber(StrList,1,StrResOne), str\_int(StrResOne,ResOne), ResOne = 2,  getValueOfNumber(StrList,2,StrRes3), str\_int(StrRes3,Res3), Res3 = 3,  getValueOfNumber(StrList,4,StrRes8), str\_int(StrRes8,Res8), VoidCell - Res8 = 3,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента3"),  !.  %line completion 2  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine <> 1,  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 5,  getValueOfNumber(StrList,6,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 6,  getValueOfNumber(StrList,7,StrRes7), str\_int(StrRes7,Res7), Res7 = 7,  VoidCell - 7 = CurrentNotSortedСell,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"завершение строки1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 2,  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 5,  getValueOfNumber(StrList,6,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 6,  getValueOfNumber(StrList,7,StrRes7), str\_int(StrRes7,Res7), Res7 = 7,  getValueOfNumber(StrList,12,StrRes12), str\_int(StrRes12,Res12), Res12 = 8,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"завершение строки2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 2,  CurrentNotSortedСell = CellSortingValue - 4,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 5,  getValueOfNumber(StrList,6,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 6,  getValueOfNumber(StrList,7,StrRes7), str\_int(StrRes7,Res7), Res7 = 7,  getValueOfNumber(StrList,12,StrRes12), str\_int(StrRes12,Res12), Res12 = 8,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"завершение строки3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 2,  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  getValueOfNumber(StrList,6,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,7,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 7,  getValueOfNumber(StrList,12,StrRes7), str\_int(StrRes7,Res7), Res7 = 8,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine = 2,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,7,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 7,  getValueOfNumber(StrList,12,StrRes7), str\_int(StrRes7,Res7), Res7 = 8,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkVertical(VoidCell,12)),  SortLine = 2,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,6,StrResTwo), str\_int(StrResTwo,ResTwo), ResTwo = 7,  getValueOfNumber(StrList,12,StrRes7), str\_int(StrRes7,Res7), Res7 = 8,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение вправо3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  checkVertical(VoidCell,12),  getValueOfNumber(StrList,9,StrRes5), str\_int(StrRes5,Res5), Res5 = 5,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,6,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,12,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  checkVertical(VoidCell,12),  getValueOfNumber(StrList,9,StrRes5), str\_int(StrRes5,Res5), Res5 = 5,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,6,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  not(checkHorizontal(VoidCell,CurrentNotSortedСell)),  getValueOfNumber(StrList,9,StrRes5), str\_int(StrRes5,Res5), Res5 = 5,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,6,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Установка последнего элемента3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,6,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение влево1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  getValueOfNumber(StrList,9,StrResOne), str\_int(StrResOne,ResOne), ResOne = 5,  getValueOfNumber(StrList,5,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,7,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение влево2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell, VoidCell = 5,  getValueOfNumber(StrList,9,StrResOne), str\_int(StrResOne,ResOne), ResOne = 5,  getValueOfNumber(StrList,6,StrResOne), str\_int(StrResOne,ResOne), ResOne = 6,  getValueOfNumber(StrList,7,StrRes3), str\_int(StrRes3,Res3), Res3 = 7,  getValueOfNumber(StrList,8,StrRes8), str\_int(StrRes8,Res8), Res8 = 8,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Смещение влево3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine < 3,  VoidCell = CurrentNotSortedСell,  VoidCell mod 4 <> 0,  not(checkHorizontal(VoidCell,CellSortingValue)),  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"Смещение вниз00"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  SortLine < 3,  VoidCell = CurrentNotSortedСell + 4,  CellSortingValue = CurrentNotSortedСell + 3,  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"Смещение влево00"),  !.  %bubble CellSortingValue move  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell,Lbox\_Handle, SortLine):-  checkVertical(VoidCell,CellSortingValue), VoidCell < CellSortingValue,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  checkHorizontal(VoidCell,CellSortingValue), VoidCell < CellSortingValue, checkHorizontal(CellSortingValue,CurrentNotSortedСell),  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move2"),  !.  %move VoidCell on void CellSortingValue  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell=VoidCell, CellSortingValue - 3 = CurrentNotSortedСell, SortLine = 1,  VoidCell + 4 < 17,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить значение на место пустоты1"),  !.  %move VoidCell on top CellSortingValue  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue = VoidCell +1, C = CellSortingValue+1, checkHorizontal(C,VoidCell),  VoidCell + 4 < 17,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 3, CellSortingValue div 4 + 1 <> SortLine, VoidCell mod 4 + 1 <> 4,  VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 4, CellSortingValue div 4 + 1 <> SortLine, VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 5, CellSortingValue div 4 + 1 <> SortLine,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху4"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue mod 4 <> 0,  CellSortingValue - 4 > CurrentNotSortedСell,  CellSortingValue=VoidCell - 1, CellSortingValue div 4 + 1 > SortLine, CellSortingValue - 3 <> CurrentNotSortedСell, VoidCell - 4 <> CurrentNotSortedСell,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell + 3, CurrentNotSortedСell <> VoidCell, CurrentNotSortedСell mod 4 <> 0, CellSortingValue div 4 + 1 > SortLine,  VoidCell mod 4 <> 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"поставить пустоту сверху6"),  !.  %line completion  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4, VoidCell-1<>CurrentNotSortedСell,  checkValueToCell(StrList, 8, "4"),  VoidCell div 4 < 2,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"завершение строки1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CurrentNotSortedСell = CellSortingValue - 4,  not(checkHorizontal(VoidCell,CurrentNotSortedСell)),  VoidCell div 4 < 2,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"завершение строки2"),  !.  %move VoidCell on left CellSortingValue  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue = VoidCell - 1, C = CellSortingValue - 1, checkHorizontal(C,VoidCell), CurrentNotSortedСell mod 4 < CellSortingValue mod 4,  CurrentNotSortedСell mod 4 <> 0,  SortLine<>4,  SortLine < 3,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить пустоту слева1"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 5,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"поставить пустоту слева2"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 4,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"поставить пустоту слева3"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue=VoidCell - 3,  VoidCell mod 4 <> 0,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"поставить пустоту слева4"),  !.  %bubble CellSortingValue move  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 = 0,  VoidCell = CurrentNotSortedСell,  SortLine < 3,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move вставка вниз"),!.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  CellSortingValue mod 4 = 0,  VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move3\_r"),!.    trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 = 0,  CellSortingValue mod 4 = 1,  VoidCell - CellSortingValue = 3,  CurrentNotSortedСell + 1 < VoidCell,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move3\_l+\_"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 <> CellSortingValue mod 4,  VoidCell div 4 > CellSortingValue div 4,  VoidCell div 4 <> SortLine,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move3\_d"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 > CellSortingValue mod 4,  CurrentNotSortedСell + 1 < VoidCell,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move3\_l"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 = 0,  CellSortingValue = VoidCell - 1,  CurrentNotSortedСell + 1 < VoidCell,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move3\_ll"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 > CellSortingValue mod 4,  CurrentNotSortedСell + 1 = VoidCell,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move3\_d"),  !.  %bubble CellSortingValue move  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 < CellSortingValue mod 4,  VoidCell mod 4 <> 0,  moveRight(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move4"),  !.  %bubble CellSortingValue move  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 > CellSortingValue mod 4,  CurrentNotSortedСell = VoidCell,  moveDown(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move5"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell > CurrentNotSortedСell,  VoidCell mod 4 = 0,  CellSortingValue mod 4 <> 0,  VoidCell div 4 <= CellSortingValue div 4 + 1,  moveLeft(StrList,StrList\_Res,StrList),  lbox\_Add(Lbox\_Handle,"bubble move3\_lll"),  !.  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue, VoidCell, Lbox\_Handle, SortLine):-  VoidCell mod 4 = CellSortingValue mod 4,  VoidCell div 4 > CellSortingValue div 4,  VoidCell - 4 <> CellSortingValue,  moveUp(StrList,StrList\_Res),  lbox\_Add(Lbox\_Handle,"bubble move3\_u"),  !.  trueMove(StrList,StrList,\_,\_,\_,\_,\_).    %END game, trueMove  %BEGIN game, idc\_nextmove \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_nextmove,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-  Lbox\_Handle = win\_GetCtlHandle(\_Win,idc\_debug),  lbox\_Clear(Lbox\_Handle),  get\_strList\_and\_checking\_for\_error(\_Win, StrList),  getCurrentNotSortedСell(StrList,CurrentNotSortedСell),  str\_int(StrCurrentNotSortedСell,CurrentNotSortedСell),  getNumberOfValue(StrList,CellSortingValue,StrCurrentNotSortedСell),  getVoidNumber(StrList, VoidCell),  getSortingLine(StrList,0,SortLine),  trueMove(StrList,StrList\_Res,CurrentNotSortedСell,CellSortingValue,VoidCell,Lbox\_Handle,SortLine),  setStateTableFromStrList(\_Win, StrList\_Res),  сheckWin(StrList\_Res),    getCurrentNotSortedСell(StrList\_Res,CurrentNotSortedСell2),  str\_int(StrCurrentNotSortedСell2,CurrentNotSortedСell2),  concat("Текущая неотсортированная ячейка: ", StrCurrentNotSortedСell2, Con1),  lbox\_Add(Lbox\_Handle,Con1),  getSortingLine(StrList,0,SortLine),  str\_int(StrSortLine,SortLine),  concat("Текущая сортируемая строка: ", StrSortLine, Con4),  lbox\_Add(Lbox\_Handle,Con4),  getNumberOfValue(StrList\_Res,CellSortingValue2,StrCurrentNotSortedСell2),  str\_int(StrCellSortingValue2,CellSortingValue2),  concat("Нужный элемент в ячейке: ", StrCellSortingValue2, FindCon),  lbox\_Add(Lbox\_Handle,FindCon),  getVoidNumber(StrList\_Res, VoidCell2),  str\_int(StrVoidCell2,VoidCell2),  concat("Пустая ячейка: ", StrVoidCell2, VoidCellCon),  lbox\_Add(Lbox\_Handle,VoidCellCon),  !.  dlg\_game\_eh(\_Win,e\_Control(idc\_nextmove,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_Error("Ошибка", "Проверьте состояние стола!"),  !.  %END game, idc\_nextmove \_CtlInfo  %BEGIN game, idc\_table\_clean \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_table\_clean,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  Value1\_Handle = win\_GetCtlHandle(\_Win,idc\_value1), win\_SetText(Value1\_Handle, ""),  Value2\_Handle = win\_GetCtlHandle(\_Win,idc\_value2), win\_SetText(Value2\_Handle, ""),  Value3\_Handle = win\_GetCtlHandle(\_Win,idc\_value3), win\_SetText(Value3\_Handle, ""),  Value4\_Handle = win\_GetCtlHandle(\_Win,idc\_value4), win\_SetText(Value4\_Handle, ""),  Value5\_Handle = win\_GetCtlHandle(\_Win,idc\_value5), win\_SetText(Value5\_Handle, ""),  Value6\_Handle = win\_GetCtlHandle(\_Win,idc\_value6), win\_SetText(Value6\_Handle, ""),  Value7\_Handle = win\_GetCtlHandle(\_Win,idc\_value7), win\_SetText(Value7\_Handle, ""),  Value8\_Handle = win\_GetCtlHandle(\_Win,idc\_value8), win\_SetText(Value8\_Handle, ""),  Value9\_Handle = win\_GetCtlHandle(\_Win,idc\_value9), win\_SetText(Value9\_Handle, ""),  Value10\_Handle = win\_GetCtlHandle(\_Win,idc\_value10), win\_SetText(Value10\_Handle, ""),  Value11\_Handle = win\_GetCtlHandle(\_Win,idc\_value11), win\_SetText(Value11\_Handle, ""),  Value12\_Handle = win\_GetCtlHandle(\_Win,idc\_value12), win\_SetText(Value12\_Handle, ""),  Value13\_Handle = win\_GetCtlHandle(\_Win,idc\_value13), win\_SetText(Value13\_Handle, ""),  Value14\_Handle = win\_GetCtlHandle(\_Win,idc\_value14), win\_SetText(Value14\_Handle, ""),  Value15\_Handle = win\_GetCtlHandle(\_Win,idc\_value15), win\_SetText(Value15\_Handle, ""),  Value16\_Handle = win\_GetCtlHandle(\_Win,idc\_value16), win\_SetText(Value16\_Handle, ""),  !.  %END game, idc\_table\_clean \_CtlInfo  %BEGIN game, idc\_button\_right \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_right,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-  get\_strList\_and\_checking\_for\_error(\_Win, StrList),  moveRight(StrList, StrList\_Res, StrList),  setStateTableFromStrList(\_Win, StrList\_Res),  сheckWin(StrList\_Res),  !.  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_right,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_Error("Ошибка", "Проверьте состояние стола!"),  !.  %END game, idc\_button\_right \_CtlInfo  %BEGIN game, idc\_button\_left \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_left,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-  get\_strList\_and\_checking\_for\_error(\_Win, StrList),  moveLeft(StrList, StrList\_Res, StrList),  setStateTableFromStrList(\_Win, StrList\_Res),  сheckWin(StrList\_Res),  !.  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_left,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_Error("Ошибка", "Проверьте состояние стола!"),  !.  %END game, idc\_button\_left \_CtlInfo  %BEGIN game, idc\_button\_down \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_down,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-  get\_strList\_and\_checking\_for\_error(\_Win, StrList),  moveDown(StrList, StrList\_Res),  setStateTableFromStrList(\_Win, StrList\_Res),  сheckWin(StrList\_Res),  !.  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_down,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_Error("Ошибка", "Проверьте состояние стола!"),  !.  %END game, idc\_button\_down \_CtlInfo  %BEGIN game, idc\_button\_up \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_up,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-  get\_strList\_and\_checking\_for\_error(\_Win, StrList),  moveUp(StrList, StrList\_Res),  setStateTableFromStrList(\_Win, StrList\_Res),  сheckWin(StrList\_Res),  !.  dlg\_game\_eh(\_Win,e\_Control(idc\_button\_up,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_Error("Ошибка", "Проверьте состояние стола!"),  !.  %END game, idc\_button\_up \_CtlInfo  %BEGIN game, idc\_help \_CtlInfo  dlg\_game\_eh(\_Win,e\_Control(idc\_help,\_CtrlType,\_CtrlWin,\_CtlInfo),0):-!,  dlg\_rules\_Create(\_Win),  !.  %END game, idc\_help \_CtlInfo  dlg\_game\_eh(\_,\_,\_):-!,fail.  %END\_DLG game |

Листинг 2 – Правила игры

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| --- |
| constants  %BEGIN rules, CreateParms, 15:24:18-3.5.2019, Code automatically updated!  dlg\_rules\_ResID = idd\_rules  dlg\_rules\_DlgType = wd\_Modal  dlg\_rules\_Help = idh\_contents  %END rules, CreateParms  predicates  dlg\_rules\_eh : EHANDLER  dlg\_rules\_handle\_answer(INTEGER EndButton,DIALOG\_VAL\_LIST)  dlg\_rules\_update(DIALOG\_VAL\_LIST)  clauses  dlg\_rules\_Create(Parent):-  %MARK rules, new variables  dialog\_CreateModal(Parent,dlg\_rules\_ResID,"",  [  %BEGIN rules, ControlList, 15:24:18-3.5.2019, Code automatically updated!  %END rules, ControlList  ],  dlg\_rules\_eh,0,VALLIST,ANSWER),  dlg\_rules\_handle\_answer(ANSWER,VALLIST).  dlg\_rules\_handle\_answer(idc\_ok,VALLIST):-!,  dlg\_rules\_update(VALLIST).  dlg\_rules\_handle\_answer(idc\_cancel,\_):-!. % Handle Esc and Cancel here  dlg\_rules\_handle\_answer(\_,\_):-  errorexit().  dlg\_rules\_update(\_VALLIST):-  %BEGIN rules, Update controls, 15:24:18-3.5.2019, Code automatically updated!  %END rules, Update controls  true.  %MARK rules, new events  dlg\_rules\_eh(\_,\_,\_):-!,fail.  %END\_DLG rules |

1. Программа и методика испытаний
   1. Объект испытаний

Испытуемая программа KR.exe предназначена для прохождения игры «Пятнашки» силами игрока или компьютера.

* 1. Цель испытаний

Испытание проводилось с целью выявления корректности выполнения программы; отсутствия ошибочных, либо неопределенных ситуаций, возникающих в результате выполнения программы; отсутствия сбоев систем компьютера в результате работы программы.

* 1. Технические средства, используемые во время испытаний

Во время испытаний использовались технические средства:

1. процессор Intel I7 с тактовой частотой 3200 MHz;
2. оперативная память 512 Mб;
3. видеокарта и монитор, поддерживающие разрешение 1024x768 точек и больше;
4. свободное дисковое пространство 1.9 Гб;
5. клавиатура;
6. манипулятор мышь.
   1. Программные средства, используемые во время испытаний

Во время испытаний использовалось программное обеспечение:

1. Операционная система Microsoft Windows 7;
2. VisualProlog 5.2.

Испытание программы проводились в следующем порядке:

1. испытание на корректность (адекватно ли программа реагирует на действия игрока);
2. испытание на правильность;
3. испытание на надежность (процент отказа системы).

Если итог проведения испытаний удовлетворяет заданным критериям, то проведение испытаний считается успешным.

* 1. Качественные характеристики, подлежащие оценке

В ходе проведения испытаний оценке подлежат качественные (функциональные) характеристики программы. Для проверки программы необходимо провести следующие тесты:

а) Проверка на корректность.

Порядок выполнения теста:

Запускаем на выполнение программный модуль KR.exe (рисунок 6.1).

При запуске программы появляются правила игры (рисунок 6.1). После нажатия кнопки «Играть» открывается главное окно игры (рисунок 6.2). Сначала заполняем игровой стол произвольными значениями, не нарушая правила (рисунок 6.3). Далее перемещаем пустую клетку контроллером игрока пока не достигнем победы. Достигнуть победы можно и с помощью AI нажимая кнопку «Сделать верный ход». После достижения победной ситуации появляется окно с уведомление (рисунок 6.4). Если победной ситуции достичь невозможно AI сообщит об этом (рисунок 6.5).

Результат работы AI программы всегда приводит к нахождению верного (не всегда максимально быстрого) хода.

Если пользователь вводит несколько раз одинаковые значения клеток, или пропустил клентку, то будет выведено сообщение об ошибке (рисунок 6.5). Если пользователь вводит значения клеток, не входящие в допустимый диапазон, так же будет выведено сообщение об ошибке (рисунок 6.5).

Поэтому можно сказать, что программа работает корректно.

## в) Проверка на правильность работы программы.

При выполнении программы результат должен совпадать с результатами, полученными на основе эмпирических закономерностей. В процессе тестирования программа отреагировала правильно, результат ввода решений совпал с ожидаемым.

При проверке на правильность, результат не отличался от ожидаемого, поэтому можно сказать, что программа работает правильно.

## г) Проверка на надежность системы.

Программа должна быть протестирована на разных компьютерах в течение нескольких дней. В ходе тестирования не должно быть сбоев программы или операционной системы.

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ПРИЛОЖЕНИЕ А

(обязательное)

Снимки экранных форм приведены на рисунках 6.1-6.6.

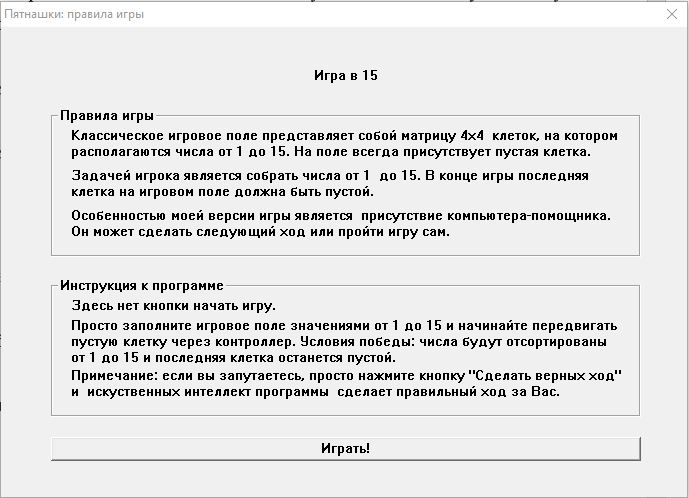
****

Рисунок 6.1 - Правила игры

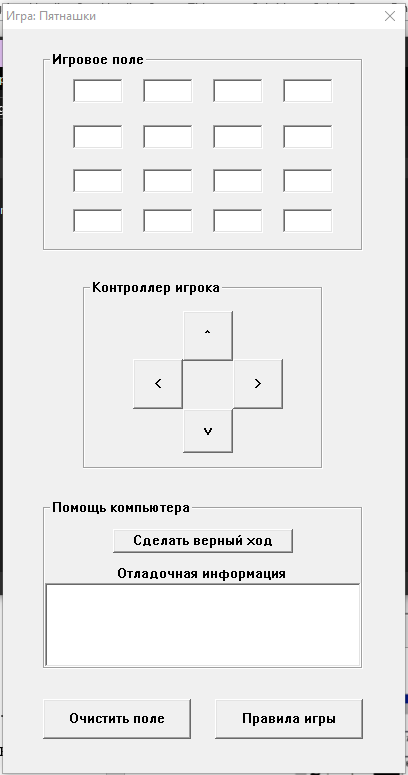


Рисунок 6.2 - Первый запуск «Главное окно»

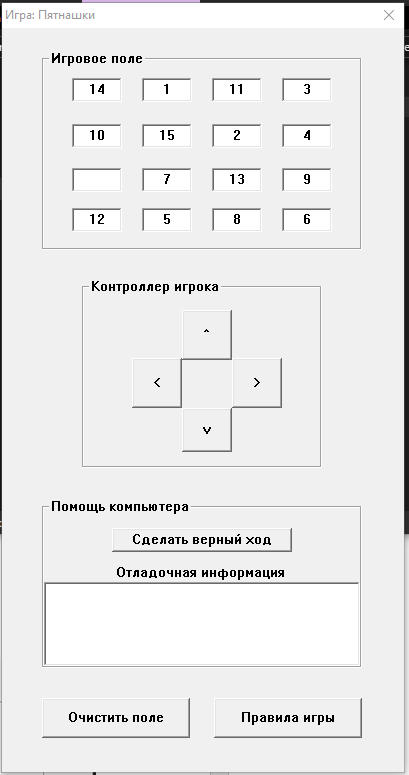


Рисунок 6.3 – Заполнение «Игрового стола»

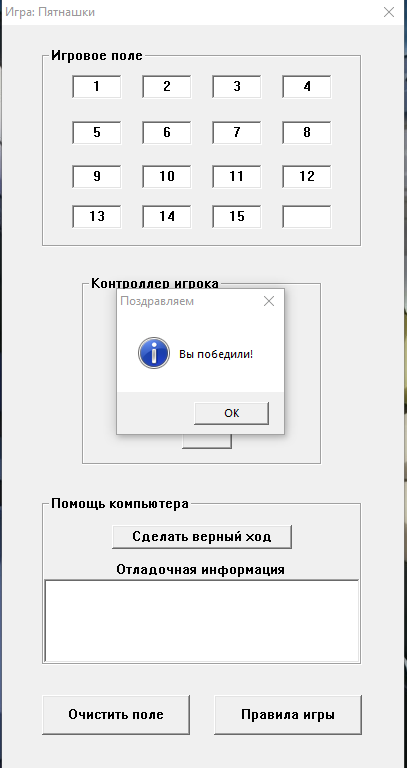


Рисунок 6.4 - Сообщение о победе

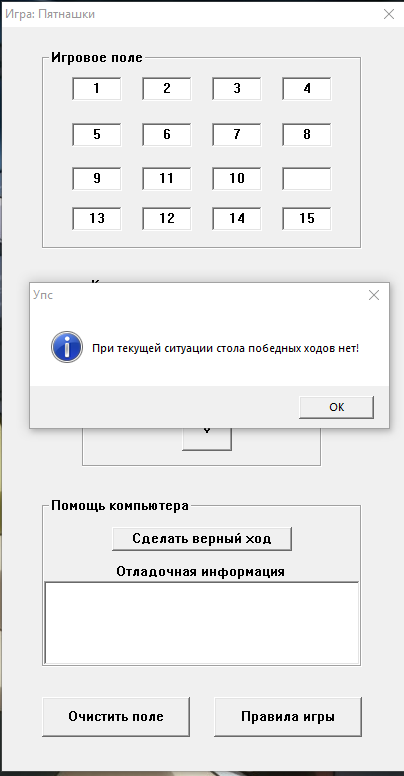


Рисунок 6.5 - Сообщение о нерешаемой последовательности

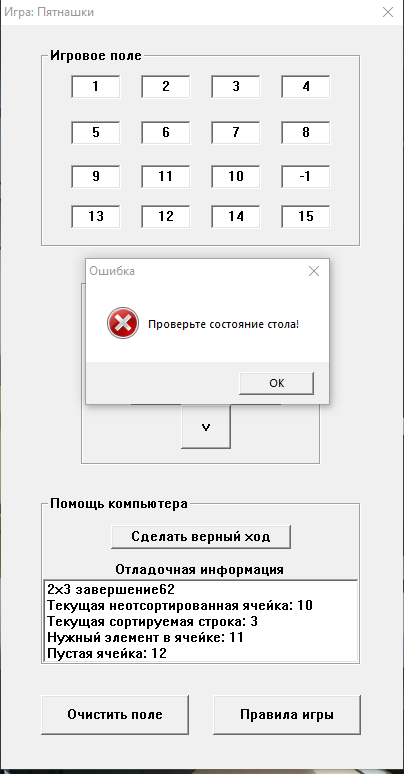


Рисунок 6.6 – Сообщение об ошибках