

A Simple Mastermind in Second Life – TRABHCI 2011

The Main Button for checking the rows, restarting the game etc.:

```
integer hr1;integer hr2;integer hr3; integer hr4;
integer p1b;integer p2b;integer p3b; integer p4b;
integer p1w1;integer p2w1;integer p3w1; integer p4w1;integer p1w2;integer p2w2;
integer p3w2; integer p4w2;
list hr;
list rowtocheck;
list positionb;
list positionwi;
list positionwj;
integer row=1;
integer tempcolor_1;integer tempcolor_2;integer tempcolor_3;integer tempcolor_4;

default
{
    state_entry()
    {
        row=1;
        llsay(0, "entered default state");
        // state startgame;

    }
    touch_start(integer total_number)
    {

        llsay(0, "startgame");
        state startgame;
    }

}

state startgame{
    state_entry()
    {
        llWhisper( 667868, "RESET");
        llsay(0, "RESET");
        llsay(667868, "START");
        rowtocheck = [];
        hr1 = (integer)llFrnd(6); //random color index
        llWhisper( 667868, "hr1"+(string)hr1);//post it to the channel

        // llWhisper( 0, "hr1"+(string)hr1);//post it to the channel
        hr2 = (integer)llFrnd(6); //random color index
        llWhisper( 667868, "hr2"+(string)hr2);

        hr3 = (integer)llFrnd(6); //random color index
        llWhisper( 667868, "hr3"+(string)hr3 );

        hr4 = (integer)llFrnd(6); //random color index
        llWhisper( 667868, "hr4"+(string)hr4);

        hr = [hr1, hr2, hr3, hr4];
        llsay(0, "Game was restarted");
```

```

        state listenstate;
    }
}
state listenstate{
    state_entry(){
        IISay(0, "entered listenstate");
        rowtocheck = [];
        IIListen( 667868, "", NULL_KEY, "" );
    }
    listen( integer channel, string name, key id, string message )
    {
        // IISay(0, message);

        if (IIGetSubString(message, 1, 3) == "btn" ) // btn32423
        {
            if ( IIGetSubString(message, 4, 4) == "1" ) // get number of column
            {
                tempcolor_1 = (integer)IIGetSubString(message, 5, 5);
            }
            if ( IIGetSubString(message, 4, 4) == "2" ) // get number of column
            {
                tempcolor_2 = (integer)IIGetSubString(message, 5, 5);
            }
            if ( IIGetSubString(message, 4, 4) == "3" ) // get number of column
            {
                tempcolor_3 = (integer)IIGetSubString(message, 5, 5);
            }
            if ( IIGetSubString(message, 4, 4) == "4" ) // get number of column
            {
                tempcolor_4 = (integer)IIGetSubString(message, 5, 5);
            }

            // rowtocheck = [tempcolor_1,tempcolor_2,tempcolor_3,tempcolor_4];

        }
        if(message == "RESET"){
            state default;
        }
    }
}

touch_start(integer total_number){

    if((tempcolor_1>-1)&&(tempcolor_2>-1)&&(tempcolor_3>-1)&&(tempcolor_4>-1)){
        rowtocheck = [tempcolor_1,tempcolor_2,tempcolor_3,tempcolor_4]; //write colors to LIST
        tempcolor_1=-1;
        tempcolor_2=-1;
        tempcolor_3=-1;
        tempcolor_4=-1;
        state checkrow; //go to check
    }
    else{IISay(0, "please choose a Color for All!");}
}

}

state checkrow{
    state_entry()

```

```

{
    llSay(0, "entered checkrow state");
    //check:
    integer j;
    integer x;
    integer i;
    integer white = 0;
    integer black = 0;

    p1b=0;
    p2b=0;
    p3b=0;
    p4b=0;

    positionwi=[0, 0, 0, 0];
    positionwj=[0, 0, 0, 0];
    positionb=[0, 0, 0, 0];
    for (i = 0; i < 4; i++)
    {
        integer aux = llList2Integer(hr, i); //color of hidden Button
        integer aux2 = llList2Integer(rowtocheck, i); //color of selected Button
        if (aux==aux2){ // hr0=3, hr1=2, hr2=4, hr3=5; == rowtocheck1...
            black= black+1;
            if(i==0){
                p1b=1;}
            if(i==1){
                p2b=1;}
            if(i==2){
                p3b=1;}
            if(i==3){
                p4b=1;}
        }
    }

    positionb=[p1b, p2b, p3b, p4b];

    p1w1=0;
    p2w1=0;
    p3w1=0;
    p4w1=0;
    p1w2=0;
    p2w2=0;
    p3w2=0;
    p4w2=0;

    for (i=0; i<4; i++)
    {
        integer aux = llList2Integer(hr, i); //color of hidden Button
        if (llList2Integer(positionb, i) == 1)
        {
            jump getOut1;
        }
        for(j=0; j<4; j++)
        {
            integer aux2 = llList2Integer(rowtocheck, j); //color of selected Button
            if((llList2Integer(positionb, j) == 1) || (llList2Integer(positionwi, i) == 1) || (
llList2Integer(positionwj, j) == 1))

```

```

        {
            jump getOut;
        }
    if(aux == aux2)
    {
        white=white+1;
        if(i==0){
            p1w1=1;}
        if(i==1){
            p2w1=1;}
        if(i==2){
            p3w1=1;}
        if(i==3){
            p4w1=1;}
        if(j==0){
            p1w2=1;}
        if(j==1){
            p2w2=1;}
        if(j==2){
            p3w2=1;}
        if(j==3){
            p4w2=1;}
    }
    positionwi=[p1w1, p2w1, p3w1, p4w1];
    positionwj=[p1w2, p2w2, p3w2, p4w2];
    @getOut;

}
@getOut1;

}

for(i=0; i<black; i++){
    llWhisper( 667868, (string)row+"black"+(string)i);
}
for(i=black; i<white+black; i++){

    llWhisper(667868, (string)row+"white"+(string)i);
}


if(black == 4){
    /// You have won!
    llSay(0, "WINNER!");

    llWhisper( 667868, "ELEVATOR");
    state default;
}

row=row+1;
if (row ==6)
{
    state lose;

```

```

    }

    state listenstate;

} //eof state_entry

} // eof checkrow

state lose
{
    state_entry()
    {
        IISay(0, "YOU LOSE!");
        IIWhisper( 667868, "LOSE");
        state default;
    }
}

```

The Reset Button:

```

default
{
    state_entry()
    {
        // IISay(0, "Hello, Avatar!");
    }

    touch_start(integer total_number)
    {
        IIWhisper( 667868, "RESET");
        // IISay(0, "RESET THIS GAME");
    }
}

```

The Blackbox containing the hidden combination:

```

default {
    state_entry()

    {
        IIListen( 667868, "", NULL_KEY, "" );
    }

    listen( integer channel, string name, key id, string message )
    {

        if ((message == "ELEVATOR") || (message == "LOSE")){

            IISetAlpha(0.1, ALL_SIDES);
        }

        if (message == "START"){
            IISetAlpha(1.0, ALL_SIDES);
        }

    }
}

```

```
}
```

Example for the Script running on the Color-changing spheres:

```
vector color_default = <1.0, 1.0, 1.0>; //white / default
vector color_blue = <0.0, 0.0, 1.0>; // blue
vector color_red = <1.0, 0.0, 0.0>; // red
vector color_yellow = <1.0, 1.0, 0.0>; // yellow
vector color_green = <0.0, 1.0, 0.0>; // green
vector color_purple = <1.0, 0.0, 1.0>; // purple
vector color_cyan = <0.0, 1.0, 1.0>; // cyan

default
{
    state_entry()

    {
        // llSay(0, "Hello, Avatar!");
        llSetColor(color_default, ALL_SIDES);
    }

    touch_start(integer total_number)
    {
        llSetColor(color_blue, ALL_SIDES);
        llSay(667868, "1btn10"); // here is the value to identify the Button
        state blue;
    }
}
state blue
{
    state_entry()

    {
        llListen( 667868, "", NULL_KEY, "" );
    }

    listen( integer channel, string name, key id, string message )
    {
        if (message == "RESET"){
            // llSay(0, "works!");
            state default;
        }
    }
    touch_start(integer total_number)
    {
        llSetColor(color_red, ALL_SIDES);
        llSay(667868, "1btn11"); // (row)"btn"(column)(color)
        // llSay(667868, "TEST red");
        state red;
    }
}
state red
{
    state_entry()
```

```

{
    IListen( 667868, "", NULL_KEY, "" );
}

listen( integer channel, string name, key id, string message )
{

    if (message == "RESET"){
        //ISay(0, "works!");
        state default;
    }
}
touch_start(integer total_number)
{
    ISetColor(color_yellow, ALL_SIDES);
    ISay(667868, "1btn12");
    state yellow;
}
state yellow
{
    state_entry()

    {
        IListen( 667868, "", NULL_KEY, "" );
    }

listen( integer channel, string name, key id, string message )
{

    if (message == "RESET"){
        //ISay(0, "works!");
        state default;
    }
}
touch_start(integer total_number)
{
    ISetColor(color_green, ALL_SIDES);
    ISay(667868, "1btn13");
    state green;
}
}
state green
{
    state_entry()

    {
        IListen( 667868, "", NULL_KEY, "" );
    }

listen( integer channel, string name, key id, string message )
{

    if (message == "RESET"){
        //ISay(0, "works!");
        state default;
    }
}

```

```

    }
}
touch_start(integer total_number)
{
    IISetColor(color_purple, ALL_SIDES);
    IISay(667868, "1btn14");
    state purple;
}
}
state purple
{
    state_entry()

    {
        IISetColor( 667868, "", NULL_KEY, "" );
    }

    listen( integer channel, string name, key id, string message )
    {

        if (message == "RESET"){
            //IISay(0, "works!");
            state default;
        }
    }
    touch_start(integer total_number)
    {
        IISetColor(color_cyan, ALL_SIDES);
        IISay(667868, "1btn15");
        state cyan;
    }
}
state cyan
{
    state_entry()

    {
        IISetColor( 667868, "", NULL_KEY, "" );
    }

    listen( integer channel, string name, key id, string message )
    {

        if (message == "RESET"){
            //IISay(0, "works!");
            state default;
        }
    }
    touch_start(integer total_number)
    {
        IISetColor(color_blue, ALL_SIDES);
        IISay(667868, "1btn10");
        state blue;
    }
}
}

```


Example of the Script running on each Pyramide:

```
vector red =<1.0,0.0,0.0>;
vector black =<0.0,0.0,0.0>;
vector white =<1.0,1.0,1.0>;

default
{
    state_entry()
    {
        llListen(667868,"",NULL_KEY,"");
    }
    listen(integer channel, string name, key id, string msg){

        if(msg == "1white0"){
            llSetColor(red, ALL_SIDES);
        }
        if(msg == "1black0"){
            llSetColor(black, ALL_SIDES);
        }
        if(msg == "RESET"){
            llSetColor(white, ALL_SIDES);
        }
    }
}
```

Whole Project can be found and played here:

<http://maps.secondlife.com/secondlife/Salpaus%20Nature/250/5/24>